Borough Council Meeting Work Session
August 18, 2026 @ 6:30 PM
This meeting is recorded for public record.

Nicole Scimone, President	Member, 4th Ward	Term Expires: 12/31/27
Bernie Flynn, Vice President	Member, 6th Ward	Term Expires: 12/31/27
Bryan Travis	Member, 2nd Ward	Term Expires: 12/31/27
Brian McGinnis	Member, 3rd Ward	Term Expires: 12/31/29
Stephen Marvin	Member, 5th Ward	Term Expires: 12/31/29
Lisa Kearns	Member, 7th Ward	Term Expires: 12/31/29
Jerome Szczepaniak	Member, 1st Ward	Term Expires: 12/31/29

Mayor: Lillian L. DeBaptiste

Borough Manager: Sean Metrick
Assistant Borough Manager: Ramsey Reiner

Borough Council Meeting:

I. Call to Order

II. Pledge of Allegiance

III. Announcements

A. Announce the purpose of the July 27, 2026 Executive Session

B. Announce the purpose of the August 6, 2026 Executive Session

C. Announce Public Hearing: August 19, 2026 at 6:30 p.m
An Ordinance of the Borough of West Chester, Chester County, Pennsylvania, amending the Code of the Borough of West Chester, Chapter 112 titled "Zoning" to amend Section 112-202 to amend the definition for retail store or shop and to add a definition for tobacco store/smoke shop; Section 112-304.c to add a tobacco store/smoke shop as a use permitted by Conditional Use in the TC Town Center and CS Commercial Service Districts; and to add a new Section 112-917 to adopt regulations for tobacco store/smoke shops. (attachment)

D. Announce Public Hearing: August 19, 2026 at 6:30 PM
An Ordinance of the Borough of West Chester, Chester County, Pennsylvania, to prohibit the sale, manufacture and public use of kratom, kratom-derived products and concentrated 7-OH substances within the Borough.

E. Announce Public Hearing: August 19, 2026 at 6:30 PM
Amendments to Chapter 104

F. The West Chester Borough is participating in a friendly "Food Fight" with East &

West Bradford Townships from July 1st to August 31, to collect non-perishable food items. Collection site is in the lobby at West Chester Borough Hall

G. The Borough of West Chester will be closed on September 7, 2026 for the Labor Day Holiday. Note: trash, recycling and yard waste collection will be pushed back one day from normal collection

H. Acknowledgment of Employee/s years of service:
Josh Moran 5 years- Taylor Run

IV. Comments

Comments, suggestions, petitions by residents, taxpayers and visitors in attendance regarding items that are not on the agenda. Please be advised there is a 5-minute time limit which is at the discretion of the Council President and/or Chair.

V. Reports/Presentations

A. Borough Manager Report

VI. Old Business

A. Approve July 14 and 15, 2026 Borough Council Meeting Minutes

B. Discuss the use of Gas-powered leaf blowers in the West Chester Borough (attachment)

VII. New Business

A. Public Works Committee

1) Motion to approve Code Elevator maintenance rates (attachment)
Issue: Approve rates for the elevator located at the West Chester Public Library
Committee Recommendation: 3-0

2) Motion to approve Goose Creek Connection Management Plan amendment (attachment)
Issue: Discuss management plan amendment
Committee Recommendation: 3-0

B. Public Safety

1) Motion to approve Special Event Applications (SEAs) (attachments)
Issue: Approve Special Event Permits (attachments)

i. Unite for HER Run/Walk - 10/17/2026
ii. Veterans Parade - 11/08/2026
iii. Christmas Parade - 12/4/2026

Committee Recommendation: 3-0

2) Motion to adopt Resolution to approve the Chester County Hazard Mitigation Plan (attachments)
Issue: Hazard Mitigation Plan for Chester County. This plan is updated every five years

Committee Recommendation: 3-0

C. Parking Committee

1) Motion to approve changes to Special Event Parking Policy (attachment)
Issue: Move start time to 2-hours prior to start of the event, not including the Christmas Parade.
Committee Recommendation: 3-0

2) Motion to continue the inclusion of 222 N Walnut Street in the Residential Parking Permit Program
Issue: Allow the inclusion of 222 N Walnut Street in the Residential Parking Permit Program until the residential permit parking study is concluded.
Committee Recommendation 3-0

3) Motion to approve a Resolution to update the fee schedule; and, approve the policy for New Street Lot (lot 3) (attachment)
Issue: Update policy to allow for monthly parking permits in lot from 8am-5pm Monday-Friday at current monthly daytime rate (currently $95). Allow two vehicles per property address to apply. Permits will be sold first come, first served online.
Committee Recommendation: 3-0

4) Motion to renew 2-year lease at Gay Street Lot with County.(attachment)
Issue: Current lease ends October 31, 2026 for Chester County to lease 79 spaces at current rate.
Committee Recommendation: 3-0

D. Finance & Revenue Committee

1) Consider public safety tax (attachment)
Issue: Raise funding for emergency medical services with a specific tax
Committee Recommendation: Further Discussion

2) Motion to approve Code Elevator repair rates for the West Chester Library (attachment)
Issue: Approve repair rates for Code Elevator for repairs at the West Chester Public Library
Committee Recommendation: 3-0

3) Motion to approve five-year contract with Granicus (SmartGov) to provide licensing, enforcement, and permit information management and services (attachment)
Issue: Approve five-year contract with Granicus
Committee Recommendation: 3-0

4) Consider approving bid award for Brick Sewer Relining (Attachment)
Issue: Approve bid for Brick Sewer Relining 2026 capital project
Committee Recommendation: Further Discussion

5) Consider approving the bid for the paving project at Taylor Run Wastewater Treatment Plant and the following parking lots: Green Field and the Market Street Lot. (attachment)
Issue: Approve bid for paving projects
Committee Recommendation: Further discussion

6) Motion to approve extension of Brendan Stanton Inc. (Electrical Substation upgrade) contract for 60 days to complete change order work and punch list items for Yale Electric
Committee Recommendation: 3-0

7) Motion to adopt budget modification for the Fire Fund and purchase of dedicated blocking vehicle for WCFD (attachment)
Committee Recommendation: 3-0

8) Motion to approve grant resolution for PA DCED Main Street Matters program for the South High Street Streetscape Improvements Project (attachment)
Issue: Public resolution required for grant application
Committee Recommendation: 3-0

9) Motion to approve the request for sponsorship from West Chester Foundation (attachment)
Issue: Approve $900 Serpentine donation for the October 15, 2026, West Chester Downtown Foundation 2026 Preservation Awards Event

10) Motion to approve purchasing requests (attachment):
Issue: Review and recommend the approval of qualifying purchase orders

a. Code Elevator for $10,000.00

b. Cody Computer Services, Inc for $20,815.11

c. McClure Company for $41,793.00

d. Pennoni for $37,750.00

e. Petroleum Traders for $42,081.60

f. Pix4DSA for $17,079.00

g. RW Communications for $64,432.02

h. CDW-G for $39,082.46

Committee Recommendation: 3-0

E. Smart Growth

1) Motion to approve a Resolution to approve preliminary land development plan for 410 S High St – townhouses (attachment)
Committee Recommendation: 3-0

2) Motion to direct the Solicitor to attend Zoning Hearing Board for 615/617 S Walnut St– variance for parking in the front yard setback. (attachment)
Issue: Staff recommendation to NOT direct the Solicitor
Committee Recommendation: 0-3

3) Motion to direct the Solicitor to attend the Zoning Hearing for 500 W Lafayette St– dimensional variance for side yard setback (attachment)
Issue: Staff recommendation to NOT direct the Solicitor

Committee Recommendation: 0-3

4) Motion to approve minor edits to Chapter 66 Ordinance; and, direct the Solicitor to draft an amendment to the Ordinance
Issue: Current ordinance has minor issues with deadlines that need to be rectified for more efficient enforcement.
Committee Recommendation: 3-0

5) Motion to approve HARB applications (attachments)
Issue: Consider a Motion to approve the July HARB Certificate of Appropriateness
1. 2026-15: 122 S. High St-Railing
2. 2026-16: 143 W. Gay St-Sign
3. 2026-17: 200 N. High St-Awning
4. 2026-18: 20 W. Market St-HVAC Equipment
5. 2026-19: 16 E. Gay St-Sign & Façade painting
Committee Recommendation: 3-0 COAs number 1, 2, 3, 4
Committee Recommendation: Further Discussion COA number 5

F. Administration, Communication & Technology

1) Motion to approve amendments to the employee policy manual (attachment)
Committee Recommendation: 3-0

2) Motion to approve increasing the Borough Council and Mayor salaries to $6,915.00 to become effective 2030.
Committee Recommendation: 3-0

G. Discuss Repeal of Stream Protection Fee Ordinance

H. Motion to approve Klingenberg Variance - Settlement Agreement

VIII. Other Business

IX. Adjournment

Visit www.west-chester.com for access to all attachments.
Agendas are posted to www.west-chester.com by noon 3 business days prior to the meeting.

ORDINANCE NO. ___ – 2026

BOROUGH OF WEST CHESTER

CHESTER COUNTY, PENNSYLVANIA

AN ORDINANCE OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, AMENDING THE CODE OF THE BOROUGH OF WEST CHESTER, CHAPTER 112 TITLED "ZONING" TO AMEND SECTION 112-202 TO AMEND THE DEFINITION FOR RETAIL STORE OR SHOP AND TO ADD A DEFINITION FOR TOBACCO STORE/SMOKE SHOP; SECTION 112-304.C TO ADD A TOBACCO STORE/SMOKE SHOP AS A USE PERMITTED BY CONDITIONAL USE IN THE TC TOWN CENTER AND CS COMMERCIAL SERVICE DISTRICTS; AND TO ADD A NEW SECTION 112-917 TO ADOPT REGULATIONS FOR TOBACCO STORE/SMOKE SHOPS.

EXHIBIT LIST

Hearing Date: Wednesday, August 19, 2026 at 6:30 PM

B-1: Proof of Publication in the *Daily Local News* on August 4, 2026 and August 11, 2026

B-2: Email dated July 16, 2026 from Jill Kirk to the *Daily Local News* and Chester County Law Library providing the proposed Ordinance for public inspection

B-3: Review Letter from the Borough of West Chester Planning Commission dated July 16, 2026

B-4: Review Letter from the Chester County Planning Commission dated July 16, 2026

Daily Local News

Publication Name:
Daily Local News

Publication URL:

Publication City and State:
West Chester, PA

Publication County:
Chester

Notice Popular Keyword Category:

Notice Keywords:
Borough of West Chester

Notice Authentication Number:
202608110836155748957
2905709331

Notice URL:

Back

Notice Publish Date:
Tuesday, August 11, 2026

Notice Content

NOTICE IS GIVEN that on August 19, 2026 at 6:30 p.m., prevailing time, Council for the Borough of West Chester, Chester County, Pennsylvania, will hold a public hearing as part of the regularly scheduled public meeting at the Borough of West Chester's municipal building located at 401 East Gay Street, West Chester, Pennsylvania, to consider the adoption of, and if approved, Borough Council will adopt the following ordinance with the following title and summary: AN ORDINANCE OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, AMENDING THE CODE OF THE BOROUGH OF WEST CHESTER, CHAPTER 112 TITLED "ZONING" TO AMEND SECTION 112-202 TO AMEND THE DEFINITION FOR RETAIL STORE OR SHOP AND TO ADD A DEFINITION FOR TOBACCO STORE/SMOKE SHOP; SECTION 112-304.C TO ADD A TOBACCO STORE/SMOKE SHOP AS A USE PERMITTED BY CONDITIONAL USE IN THE TC TOWN CENTER AND CS COMMERCIAL SERVICE DISTRICTS; AND TO ADD A NEW SECTION 112-917 TO ADOPT REGULATIONS FOR TOBACCO STORE/SMOKE SHOPS. The full text of the Ordinance is available on the Borough's website www.west-chester.com. In addition, a certified copy of the proposed Ordinance is on file at the offices of the Daily Local News by calling (215) 648-1066 and the Chester County Law Library, Chester County Justice Center, Suite 2400, 201 West Market Street, West Chester, Pennsylvania 19380. Those individuals with disabilities and ADA accommodations for effective participation in the meeting should call 610-692-7574 at least two days prior to the meeting. All attempts will be made for reasonable accommodations. Kristin S. Camp, Esquire Borough Solicitor DLN 8/4, 8/11; 1a

Back

Daily Local News

Publication Name:
Daily Local News

Publication URL:

Publication City and State:
West Chester, PA

Publication County:
Chester

Notice Popular Keyword Category:

Notice Keywords:
Borough of West Chester

Notice Authentication Number:
202608040859124937783
2905709331

Notice URL:

Back

Notice Publish Date:
Tuesday, August 04, 2026

Notice Content

NOTICE IS GIVEN that on August 19, 2026 at 6:30 p.m., prevailing time, Council for the Borough of West Chester, Chester County, Pennsylvania, will hold a public hearing as part of the regularly scheduled public meeting at the Borough of West Chester's municipal building located at 401 East Gay Street, West Chester, Pennsylvania, to consider the adoption of, and if approved, Borough Council will adopt the following ordinance with the following title and summary: AN ORDINANCE OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, AMENDING THE CODE OF THE BOROUGH OF WEST CHESTER, CHAPTER 112 TITLED "ZONING" TO AMEND SECTION 112-202 TO AMEND THE DEFINITION FOR RETAIL STORE OR SHOP AND TO ADD A DEFINITION FOR TOBACCO STORE/SMOKE SHOP; SECTION 112-304.C TO ADD A TOBACCO STORE/SMOKE SHOP AS A USE PERMITTED BY CONDITIONAL USE IN THE TC TOWN CENTER AND CS COMMERCIAL SERVICE DISTRICTS; AND TO ADD A NEW SECTION 112-917 TO ADOPT REGULATIONS FOR TOBACCO STORE/SMOKE SHOPS. The full text of the Ordinance is available on the Borough's website www.west-chester.com. In addition, a certified copy of the proposed Ordinance is on file at the offices of the Daily Local News by calling (215) 648-1066 and the Chester County Law Library, Chester County Justice Center, Suite 2400, 201 West Market Street, West Chester, Pennsylvania 19380. Those individuals with disabilities and ADA accommodations for effective participation in the meeting should call 610-692-7574 at least two days prior to the meeting. All attempts will be made for reasonable accommodations. Kristin S. Camp, Esquire Borough Solicitor DLN 8/4, 8/11; 1a

Back

Jill Kirk

From: Jill Kirk
Sent: Thursday, July 16, 2026 12:01 PM
To: 'Daily Local Legals'; 'Law Library'
Cc: Kristin Camp; 'Dana DiDomenico'
Subject: Borough of West Chester - Proposed Ordinance -NOT FOR ADVERTISEMENT
Attachments: Borough of WC Ordinance - Tobacco Strore-Smoke Shop.pdf

Good afternoon. Enclosed for filing with the Daily Local News and Law Library is a true and correct copy of an ordinance for the Borough of West Chester which must be filed with your office and made available for public inspection prior to adoption by the Borough.

Please confirm receipt of this email, and that the ordinance has been placed on file. Please let me know if you have any questions.

Thank you,
Jill

BUCKLEY BRION McGUIRE & MORRIS LLP

Jill Kirk, Legal Assistant
BUCKLEY BRION McGUIRE & MORRIS LLP
118 W. Market Street, Suite 300
West Chester, PA 19382-2928
D: 610-235-0049 | M: 610.436.4400 Ext. 1410
F: 610.436.8305
www.buckleyllp.com

This e-mail and any attachments may contain legally privileged and confidential information solely for the intended recipient. If you received this message in error, please notify the sender and delete it. Any unauthorized reading, distribution, copying, or other use of this e-mail and attachments is strictly prohibited. Although the sender has taken precautions to minimize the risk of transmitting computer viruses, you should scan attachments for viruses and other malicious threats; we are not liable for any loss or damage caused by viruses or other malicious threats.

ORDINANCE NO. ___ – 2026

BOROUGH OF WEST CHESTER

CHESTER COUNTY, PENNSYLVANIA

AN ORDINANCE OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, AMENDING THE CODE OF THE BOROUGH OF WEST CHESTER, CHAPTER 112 TITLED "ZONING" TO AMEND SECTION 112-202 TO AMEND THE DEFINITION FOR RETAIL STORE OR SHOP AND TO ADD A DEFINITION FOR TOBACCO STORE/SMOKE SHOP; SECTION 112-304.C TO ADD A TOBACCO STORE/SMOKE SHOP AS A USE PERMITTED BY CONDITIONAL USE IN THE TC TOWN CENTER AND CS COMMERCIAL SERVICE DISTRICTS; AND TO ADD A NEW SECTION 112-917 TO ADOPT REGULATIONS FOR TOBACCO STORE/SMOKE SHOPS.

BE IT ENACTED AND ORDAINED and it is hereby enacted by authority of the Council of the Borough of West Chester that Chapter 112 of the Code of the Borough of West Chester, titled "Zoning" shall be amended as follows:

SECTION 1. Section 112-202, titled "Definitions", shall be amended to amend the following definition:

RETAIL STORE OR SHOP
An enterprise engaged in the sale of goods or merchandise to the general public, and the rendering of services incidental to such sale, for items such as antiques, books, beverages, confections, dry goods, flowers and plants, foodstuffs, gifts, garden supplies, hardware, household appliances, jewelry, notions, paint, periodicals, stationary, or wearing apparel, including a dispensary. A retail store or shop which maintains 20% or more of its total display area for the sale of tobacco, tobacco products, Delta (8, 9, 10) or THC products, kratom, ingestible CBD products or materials, or vaping products shall be considered a tobacco store/smoke shop for the purposes of this Chapter.

SECTION 2. Section 112-202, titled "Definitions", shall be amended to add the following definition:

TOBACCO STORE/SMOKE SHOP- A retail store or shop primarily engaged in selling tobacco and/or tobacco products, CBD, THC, kratom, and/or vaping products. A retail store or shop which maintains 20% or more of its total display area for the sale of tobacco and/or tobacco products and vaping products shall be considered a tobacco store/smoke shop for the purposes of this Chapter. A retail store or shop which holds itself out as a "tobacco store", a "smoke shop", a "vape shop" or similar establishment, shall also be considered a "tobacco store/smoke shop" for the purposes of this Chapter. Examples of

vaping products referred to in this Chapter include, without limitation, vaporizers, vape pens, vapor products, hookah pens, electronic cigarettes, e-cigarettes, e-cigs, e-pipes and any other electronic nicotine delivery systems ("ENDS"). ENDS shall be deemed noncombustible tobacco products. Tobacco products as referred to in this Chapter shall include, without limitation, matches, lighters, hookahs, pipes, chewing tobacco, cigarette rolling machines, ashtrays, pipe tools, pipe supplies and pipe accessories.

SECTION 3. Section 112-304.C and the table of uses permitted by conditional use in the TC Town Center and CS Commercial Service District shall be amended to add the following use:

8. Tobacco Store/Smoke Shop.

SECTION 4. A new Section 112-917 titled, "Standards for tobacco store/smoke shop" shall be added and provide as follows:

"**§112-917. Standards for tobacco store/smoke shop.**

A. In addition to the requirements in § **112-1008** that apply to all uses permitted by conditional use, tobacco stores/smoke shops shall also comply with the standards and criteria in this section.

B. The following standards shall apply to a tobacco store/smoke shop which is permitted by conditional use in the TC Town Center and CS Commercial Service District.

(1) A tobacco store/smoke shop shall be located a minimum of 500 feet from another lot where there is a building or structure used as a tobacco store/smoke shop, as measured from the property line.

(2) A tobacco store/smoke shop shall be located a minimum of 500 feet from another lot where there is a building or structure or a lot that is used as a school, religious use, public recreation facility, day care center, school bus stop or library, as measured from the property line.

(3) A tobacco store/smoke shop shall not be permitted on a lot or within a building that is improved with a residential dwelling or dwellings.

(4) Persons under the age of 18 shall not be permitted to enter a tobacco store/smoke shop without a parent or legal guardian. Businesses shall be responsible for verifying the age of consumers. Exterior signage shall be provided stating that minors are prohibited from entering the facility without a parent or legal guardian.

(5) Tobacco stores/smoke shops shall not employ persons under the age of 18.

(6) The sale of tobacco and vape products through self-service displays in a tobacco store/smoke shop shall be prohibited.

(7) Food sales shall be prohibited within a tobacco store/smoke shop.

SECTION 5. SEVERABILITY. If any sentence, clause, section or part of this Ordinance is for any reason found to be unconstitutional, illegal or invalid, such unconstitutionality, illegality or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections or parts hereof. It is hereby declared as the intent of Council of the Borough of West Chester that this Ordinance would have been adopted had such unconstitutional, illegal or invalid sentence, clause, section or part thereof not been included therein.

SECTION 6. REPEALER. All Ordinances or parts of Ordinances conflicting with any provision of this Ordinance are hereby repealed insofar as the same affects this Ordinance.

SECTION 7. EFFECTIVE DATE. This Ordinance shall become effective upon enactment as provided by law.

ENACTED AND ORDAINED THIS _____ DAY OF _____, 2026.

ATTEST:

COUNCIL FOR THE BOROUGH OF WEST CHESTER

_____
Sean Metrick, Secretary

By: _____
Nicole Scimone, President

APPROVED THIS _____ DAY OF _____, 2026.

_____
Lillian L. DeBaptiste, Mayor

3

CHESTER COUNTY Planning COMMISSION

COUNTY COMMISSIONERS
Josh Maxwell
Marian D. Moskowitz
Eric M. Roe

PLANNING COMMISSION
601 Westtown Road, Suite 270
West Chester, PA 19380
610-344-6285
www.chescoplanning.org

Matthew J. Edmond, AICP
Executive Director

July 16, 2026

Sean Metrick, Borough Manager
West Chester Borough
401 East Gay Street
West Chester, PA 19380

Re: Zoning Ordinance Amendment - Tobacco Store/Smoke Shops
West Chester Borough – ZA-06-26-18990

Dear Mr. Metrick:

The Chester County Planning Commission has reviewed the proposed Zoning Ordinance Amendment as submitted pursuant to the provisions of the Pennsylvania Municipalities Planning Code, Section 609(e). The referral for review was received by this office on June 18, 2026. We offer the following comments to assist in your review of the proposed amendment.

DESCRIPTION:

1. The Borough proposes the following amendments to its Zoning Ordinance:

   A. Amend the existing definition of "Retail Store or Shop" in Section 112-202;
   B. Add a definition for the term "Tobacco Store/Smoke Shop" to Section 112-202;
   C. Add "Tobacco Store/Smoke Shop" to the list of uses permitted by conditional use in the TC Town Center and CS Commercial Service zoning districts; and
   D. Add a new Section 112-917 titled "Standards for tobacco store/smoke shop."

LANDSCAPES:

2. The Borough's TC Town Center and CS Commercial Service zoning districts are located within the **Urban Center Landscape** designation of ***Landscapes3***, the 2018 County Comprehensive Plan. The vision for the **Urban Center Landscape** is historic downtown and established neighborhoods serving as civic, economic, and population centers with a traditional town character, accommodating substantial future growth at a medium to high intensity. The proposed zoning ordinance amendment is consistent with the objectives of the **Urban Center Landscape.**

COMMENT:

3. While the proposed ordinance language appears to be appropriate, the Borough should consider including a definition for the term hookah. While this term is included within the definition of tobacco store/smoke shop, it is not currently defined in the Borough Code that is available online at: https://ecode360.com/WE0442.

RECOMMENDATION: The Borough should consider the comment in this letter before acting on the proposed zoning ordinance amendment.

We request an official copy of the decision made by Borough Council, as required by Section 609(g) of the Pennsylvania Municipalities Planning Code. This will allow us to maintain a current file copy of your ordinance.

Sincerely,

Paul Farkas

Paul Farkas
Senior Review Planner

4

CHESTER COUNTY Planning COMMISSION

COUNTY COMMISSIONERS
Josh Maxwell
Marian D. Moskowitz
Eric M. Roe

PLANNING COMMISSION
601 Westtown Road, Suite 270
West Chester, PA 19380
610-344-6285
www.chescoplanning.org

Matthew J. Edmond, AICP
Executive Director

July 16, 2026

Sean Metrick, Borough Manager
West Chester Borough
401 East Gay Street
West Chester, PA 19380

Re: Zoning Ordinance Amendment - Tobacco Store/Smoke Shops
West Chester Borough – ZA-06-26-18990

Dear Mr. Metrick:

The Chester County Planning Commission has reviewed the proposed Zoning Ordinance Amendment as submitted pursuant to the provisions of the Pennsylvania Municipalities Planning Code, Section 609(e). The referral for review was received by this office on June 18, 2026. We offer the following comments to assist in your review of the proposed amendment.

DESCRIPTION:

1. The Borough proposes the following amendments to its Zoning Ordinance:

   A. Amend the existing definition of "Retail Store or Shop" in Section 112-202;
   B. Add a definition for the term "Tobacco Store/Smoke Shop" to Section 112-202;
   C. Add "Tobacco Store/Smoke Shop" to the list of uses permitted by conditional use in the TC Town Center and CS Commercial Service zoning districts; and
   D. Add a new Section 112-917 titled "Standards for tobacco store/smoke shop."

LANDSCAPES:

2. The Borough's TC Town Center and CS Commercial Service zoning districts are located within the **Urban Center Landscape** designation of ***Landscapes3***, the 2018 County Comprehensive Plan. The vision for the **Urban Center Landscape** is historic downtown and established neighborhoods serving as civic, economic, and population centers with a traditional town character, accommodating substantial future growth at a medium to high intensity. The proposed zoning ordinance amendment is consistent with the objectives of the **Urban Center Landscape.**

COMMENT:

3. While the proposed ordinance language appears to be appropriate, the Borough should consider including a definition for the term hookah. While this term is included within the definition of tobacco store/smoke shop, it is not currently defined in the Borough Code that is available online at: https://ecode360.com/WE0442.

RECOMMENDATION: The Borough should consider the comment in this letter before acting on the proposed zoning ordinance amendment.

We request an official copy of the decision made by Borough Council, as required by Section 609(g) of the Pennsylvania Municipalities Planning Code. This will allow us to maintain a current file copy of your ordinance.

Sincerely,

Paul Farkas

Paul Farkas
Senior Review Planner

ORDINANCE NO. ____- 2026

BOROUGH OF WEST CHESTER

CHESTER COUNTY, PENNSYLVANIA

AN ORDINANCE OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, TO PROHIBIT THE SALE, MANUFACTURE AND PUBLIC USE OF KRATOM, KRATOM-DERIVED PRODUCTS AND CONCENTRATED 7-OH SUBSTANCES WITHIN THE BOROUGH.

BE IT ENACTED AND ORDAINED and it is hereby enacted by authority of the Council of the Borough of West Chester as follows:

WHEREAS, the Borough of West Chester (the “Borough”) is a home-rule municipality organized under the laws of the Commonwealth of Pennsylvania and governed by an elected Borough Council (“Council”) vested with legislative authority over municipal policy, appropriations, and the use of Borough resources pursuant to the Borough's Home Rule Charter; and

WHEREAS, the United States Food and Drug Administration (“FDA”) has labeled kratom as "the next wave of the opioid epidemic" and stated, ‘There are no FDA-approved uses for kratom [and the FDA] continues to warn consumers not to use any products labeled as containing the botanical substance kratom or its psychoactive compounds, mitragynine and 7-hydroxymitragynine.”; and

WHEREAS, kratom is not lawfully marketed in the United States as a drug product, a dietary supplement, or a food additive; and

WHEREAS, the United States Drug Enforcement Administration (“DEA”) has listed kratom as a “drug of concern”; and

WHEREAS, there has been a 1,200% jump in kratom-related calls to poison control centers over the last decade, according to the United States Centers for Disease Control, with 167 cases reported to Pennsylvania poison control centers between January 1, 2022 and June 30, 2025; and

WHEREAS, coroners in multiple counties in Pennsylvania, including Chester County, have confirmed kratom-related fatalities; and

WHEREAS, all branches of the United States military completely ban kratom use in all forms – active duty or reserves – on or off duty; and

WHEREAS, 7-OH is a concentrated synthetic version of kratom and is at least 13 times more potent than morphine, acts on the same brain receptors as opioids, and is engineered to be addictive; and

WHEREAS, there are no prescription or over-the-counter drug products containing kratom or its known alkaloids that are legally on the market in the United States; and

WHEREAS, kratom affects babies during pregnancy and may lead to a baby being born with symptoms of withdrawal and in need of treatment; and

WHEREAS, the Council has always prioritized public safety, responsible commerce, and the well-being of its residents;

NOW THEREFORE, BE IT ENACTED AND ORDAINED and it is hereby enacted by authority of the Council of the Borough of West Chester as follows:

SECTION 1. DEFINITIONS.

For the purpose of this chapter, the following definitions shall apply:

KRATOM PRODUCT
Any product, compound, mixture, preparation, extract, derivative, concentrate, resin, or substance containing any part of the plant Mitragyna speciosa, including its leaves, alkaloids, extracts, or synthesized equivalents, whether marketed for human consumption or otherwise.

7-HYDROXYMITRAGYNINE PRODUCT or 7-OH PRODUCT
Any product containing 7-hydroxymitragynine, whether naturally derived, chemically synthesized, converted, concentrated, isolated, or otherwise produced, including analogs, derivatives, salts, isomers, or compounds substantially similar in chemical structure or effect.

SELL or SALE
To offer for sale, barter, exchange, transfer, distribute, deliver, furnish, provide, advertise for sale, or otherwise dispense for consideration or without consideration.

POSSESSION WITH INTENT TO DISTRIBUTE
Possession of a prohibited product in quantities, packaging, labeling, marketing, or circumstances indicating an intent to sell, transfer, distribute, or deliver the product to another person.

MANUFACTURE
To produce, prepare, process, compound, convert, package, repack, label, or otherwise create a prohibited product.

PERSON
Any individual, firm, partnership, corporation, company, association, business entity, organization, estate, trust, governmental entity, or other legal entity.

USE
To ingest, inhale, smoke, vape, chew, consume, apply, or otherwise introduce a prohibited product into the human body.

BOROUGH
The Borough of West Chester.

SECTION 2. PROHIBITED ACTS.

It shall be unlawful for any person within the Borough to:

A. Sell or offer for sale any Kratom Product or 7-Hydroxymitragynine Product;

B. Manufacture, process, package, distribute, or deliver any Kratom Product or 7-Hydroxymitragynine Product;

C. Possess any Kratom Product or 7-Hydroxymitragynine Product with intent to distribute;

D. Use or consume any Kratom Product or 7-Hydroxymitragynine Product in any public place or private property open to the public; and

E. Maintain, operate, or knowingly permit any establishment or premises to be used for the purpose of selling or distributing Kratom Products or 7-Hydroxymitragynine Products.

SECTION 3. EXEMPTIONS.

This Ordinance shall not apply to:

A. Any federally approved pharmaceutical product lawfully prescribed and dispensed by a licensed healthcare provider or pharmacy;

B. Possession or handling of prohibited products by law enforcement personnel, emergency responders, forensic laboratories, or government agencies acting within the scope of official duties; or

C. Research activities conducted by accredited educational or scientific institutions in compliance with applicable federal and state law.

SECTION 4. ENFORCEMENT.

A. This Ordinance may be enforced by the Borough Police Department, Code Enforcement Officers, or any other official authorized by Borough Council.

B. Authorized officials may inspect commercial premises open to the public during normal business hours to ensure compliance with this Ordinance.

C. Any prohibited products found in violation of this Ordinance may be seized and destroyed in accordance with applicable law.

D. The Borough may seek injunctive relief or any other remedy authorized by law.

SECTION 5. VIOLATION AND PENALTIES.

Any person who violates or permits the violation of any provision of this Ordinance shall, upon conviction thereof in a summary proceeding brought before a District Justice, be guilty of a summary offense and shall be subject to the payment of a fine of not less than $100 and not more than $1,000, plus the costs of prosecution. Upon default of payment thereof, the defendant may be sentenced to imprisonment in the county prison for a period of not more than 30 days. Each section or provision of this Ordinance that is violated shall constitute a separate offense, and each day or portion thereof in which a violation of this chapter is found to exist shall constitute a separate offense, each of which violations shall be punishable by a separate fine imposed by the District Justice of not less than $100 and not more than $1,000, plus the costs of prosecution, and upon default of payment thereof, the defendant may be sentenced to imprisonment in the county prison for a term not more than 30 days.

SECTION 6. NUISANCE DECLARATION.

Any property, business, establishment, or premises used in violation of this Ordinance is hereby declared to be a public nuisance and may be subject to abatement proceedings and other lawful remedies.

SECTION 7. NON-PREEMPTION.

This Ordinance shall be interpreted and applied to the fullest extent permitted under state and federal law. Nothing herein shall be construed to permit conduct prohibited by state or federal law.

SECTION 8. SEVERABILITY.

If any provision of this Ordinance, or the application thereof to any person or circumstance is held invalid it shall not affect the remaining provisions of this Ordinance, which shall remain in full force and effect.

SECTION 9. EFFECTIVE DATE.

This Ordinance shall take effect within sixty (60) days of enactment.

ENACTED AND ORDAINED THIS _____ DAY OF _____, 2026.

ATTEST:

COUNCIL FOR THE BOROUGH OF WEST CHESTER

_____
Sean Metrick, Secretary

By: _____
Nicole Scimone, President

APPROVED THIS _____ DAY OF _____, 2026.

_____
Lillian L. DeBaptiste, Mayor

ORDINANCE NO. ___ – 2026

BOROUGH OF WEST CHESTER

CHESTER COUNTY, PENNSYLVANIA

AN ORDINANCE OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, AMENDING THE CODE OF THE BOROUGH OF WEST CHESTER, TO REPEAL AND REPLACE CHAPTER 104 TITLED "VEHICLES AND TRAFFIC" IN ITS ENTIRETY.

BE IT ENACTED AND ORDAINED and it is hereby enacted by authority of the Council of the Borough of West Chester as follows:

SECTION 1. Chapter 104 of the Borough of West Chester Code, titled "Vehicles and Traffic" is hereby repealed and replaced in its entirety with the following:

CHAPTER 104-VEHICLES AND TRAFFIC
ARTICLE I
General Regulations

§ 104-1. Definitions and interpretation.

A. Words and phrases, when used in this chapter, shall have the meanings ascribed to them in the Vehicle Code of Pennsylvania, as now in force, or as hereafter amended, enacted or reenacted, except where the context clearly indicates a different meaning.

B. For the purposes of this chapter, the following terms shall have the meanings indicated:

ALLEY- Land over which there is a right-of-way, municipally or privately owned, ordinarily serving as a secondary means of access to two or more lots. "Alleys" in the Borough are typically located to the rear of a building, occasionally on the side of a building, and rarely in the front of a building.

BOOT or BOOTED — The act of immobilizing a motor vehicle in such a manner as to prevent its operation with a device or by means which will cause no damage to such a vehicle unless it is moved while such device is in place or such means are employed.

LEGAL HOLIDAYS — New Year's Day, Martin Luther King's Birthday, President's Day, Good Friday, Memorial Day, Juneteenth, Independence Day, Labor Day, Thanksgiving Day, Christmas Eve, Christmas Day and New Year's Eve.

OUTSTANDING PARKING CITATION — A citation issued for a violation of any parking regulation in this Chapter 104 of the Borough Code or the Pennsylvania Motor Vehicle Code for which a citation has been issued and the fine has not been paid.

OVERSIZED VEHICLE — Any motor vehicle with a gross vehicle weight ("GVW") of 10,000 pounds or more. This definition also includes the following vehicles as defined by the Pennsylvania Motor Vehicle Code, (75 Pa.C.S.A. § 102): articulated bus, bus, combination, food trailer, house trailer, mobile home, motor home, recreation trailer, semitrailer, recreational vehicle, as well as any automobile or boat transporter or trailer, truck camper, truck tractor, utility trailer, boat, snow mobile, all-terrain vehicle, pick-up campers, tent trailers or similar vehicles or trailers.

PARKING METER - "Parking meter" shall include a multicompartment parking control device.

TRUCK - A vehicle over 45 feet in length and/or with a gross vehicle weight rating or gross combination weight rating in excess of 17,000 pounds.

C. In this chapter, the singular shall include the plural, the plural shall include the singular and the masculine shall include the feminine and the neuter.

§ 104-2. Manner of adopting permanent traffic and parking regulations.

All traffic and parking regulations of a permanent nature shall be enacted as ordinances or as parts of ordinances or as amendments to ordinances of the Borough of West Chester.

§ 104-3. Temporary and emergency regulations.

A. The Mayor and Parking Services Department shall have the following powers to regulate traffic and parking temporarily:

(1) In the case of fire, flood, storm or other emergency, to establish temporary traffic and/or parking regulations.

(2) In other occasions where temporary regulation of traffic and parking may be necessary, including but not limited to public works, funerals, parades, and other public events.

B. Such temporary and emergency regulations shall be enforced by the Mayor and/or the Police Department in the same manner as permanent regulations. Any person who shall operate or park a vehicle or tractor in violation of any such regulation or who shall move, remove, destroy, injure or deface any sign or marking erected, posted or made to give notice of any such regulations shall, upon conviction thereof, be liable for the penalty set forth in the law or elsewhere in this chapter for a violation of such nature and, in case of a violation for which no specific penalty is set forth in the law or elsewhere in this chapter, to a fine of not more than $35, unless the fine is paid to the Borough of West Chester within 14 days of the issuance of notice from the Borough, in which case the fine amount shall be reduced to $20.

§ 104-4. Experimental regulations.

The Borough Council may, from time to time, designate places upon and along the highways in the Borough where, for a period of not more than 90 days, specific traffic and/or parking regulations, prohibitions and restrictions shall be in force and effect and shall designate such locations by proper signs and markings. Such regulations, prohibitions and restrictions shall be effective just as if they had been specified in this chapter. No person shall operate or park a vehicle or tractor in violation of any such regulation, prohibition or restriction, and no person shall move, remove, destroy or deface any sign or marking erected, posted or made by authority of this section. Any person who shall violate any provision of this section shall, upon conviction thereof, be liable to the penalty set forth in the law or elsewhere in this chapter for a violation of such nature and, in case of a violation for which no specific penalty is set forth in the law or elsewhere in this chapter, to a fine of not more than $35 unless the fine is paid to the Borough of West Chester within 14 days of the issuance of notice from the Borough, in which case the fine amount shall be reduced to $20.

§ 104-5. Use of speed-timing devices.

A. Approval of use. The use of speed-timing devices, as defined and set forth in the Pennsylvania Vehicle Code and the regulations promulgated pursuant thereto, is hereby approved in and for the Borough of West Chester to aid in the enforcement of speed restrictions applicable within the borders of the Borough. The police officers of the Borough are hereby authorized and directed to use approved speed-timing devices to aid in the enforcement of speed restrictions applicable within the borders of the Borough of West Chester.

B. Statutory authority. All types of speed-timing devices permitted by the Pennsylvania Vehicle Code and regulations promulgated pursuant thereto, as the same may be amended from time to time, are hereby approved for use by all Borough police officers. The speed-timing devices hereby approved include mechanical, electrical and electronic devices as set forth in the Vehicle Code, provided that those devices shall be of the type approved by the Pennsylvania Department of Transportation as provided in the Act of June 17, 1976, P.L. 162, No. 81, Section 81, 75 Pa.C.S.A. §3368, and the regulations promulgated thereunder.

ARTICLE II
Traffic Regulations

§ 104-6. Traffic signals at certain intersections.

A. At the following intersections official traffic signals shall be erected (or if heretofore erected are hereby ratified), and traffic at such intersections shall be directed by such signals:

Bradford Avenue and Strasburg Road

Chestnut Street, Wayne Street and Hannum Avenue

Church Street and Chestnut Street

Darlington Street and Chestnut Street

Gay Street and Adams Street

Gay Street and Church Street

Gay Street and Darlington Street

Gay Street and Matlack Street

Gay Street and Walnut Street

Hannum Avenue and Strasburg Road

High Street and Chestnut Street

High Street and Gay Street

High Street and Linden Street

High Street and Market Street

High Street and Marshall Street

High Street and Miner Street

High Street and Price Street

High Street and Rosedale Avenue
High Street and Union Street
Market Street and Adams Street
Market Street and Bolmar Street
Market Street and Church Street
Market Street and Matlack Street
Market Street and New Street
Market Street and Walnut Street
Market Street and Worthington Street
Matlack Street and Chestnut Street
New Street and Price Street
New Street and Rosedale Avenue.
Walnut Street and Chestnut Street

§ 104-7. One-way highways established.

The following are hereby established as one-way highways.

Highway	From	To	Direction of Travel
Adams Street	Rosedale Street	Joseph Street	Northbound
Adams Street	Washington Street	Chestnut Street	Southbound
Barnard Street	Brandywine Street	Matlack Street	Eastbound
Biddle Street	Evans Street	Franklin Street	Westbound
Biddle Street	Franklin Street	Evans Street	Westbound
Biddle Street	Matlack Street	Brandywine Street	Westbound
Brandywine Street	Miner Street	Market Street	Northbound
Chestnut Street	Matlack Street	Hannum Avenue	Westbound
Church Street	Chestnut Street	Rosedale Avenue	Southbound
Darlington Street	Price Street	Virginia Avenue	Northbound
Dean Street	Brandywine Street	High Street	Eastbound
Franklin Street	Chestnut Street	Biddle Street	Southbound
Gay Street	Bolmar Street	New Street	Westbound
Gay Street	New Street	Wayne Street	Westbound
Hannum Avenue	Wayne Street	New Street	Eastbound
Lacey Street	Matlack Street	High Street	Westbound
Lafayette Street	Matlack Street	Walnut Street	Westbound
Lafayette Street	New Street	High Street	Eastbound

Law Alley	North side of west exit from Borough Parking Garage	Chestnut Street	Northbound
Linden Street	Franklin Street	High Street	Westbound
Locust Alley	Sharon Alley	Walnut Street	Eastbound
Magnolia Street	High Street	Matlack Street	Eastbound
Maple Alley	Rosedale Avenue	Nields Street	Northbound
Market Street	New Street	Bolmar Street	Eastbound
Matlack Street	Gay Street	Chestnut Street	Northbound
Matlack Street	Market Street	Rosedale Avenue	Southbound
Middle Alley	Walnut Street	Matlack Street	Eastbound
Miner Street	Bolmar Street	Franklin Street	Westbound
Miner Street	Matlack Street	Wayne Street	Westbound
Miner Street	Railroad Alley	Matlack Street	Westbound
New Street	Virginia Avenue	Union Street	Southbound
Nields Street	High Street	Franklin Street	Eastbound
Penn Street	Joseph Street	Rosedale Avenue	Southbound
Poplar Street	Market Street	Barnard Street	Southbound
Prescott Street	Church Street	Walnut Street	Eastbound
Rosedale Avenue	Penn Street	Adams Street	Westbound
Union Street	Brandywine Street	Bradford Avenue	Westbound
Union Street	Matlack Street	Brandywine Street	Westbound
Walnut Street	Rosedale Avenue	Miner Street	Northbound
Washington Street	Wayne Street	Franklin Street	Eastbound
Wilmont Street	Market Street	Pearl Street	Southbound
Wollerton Street	Wayne Street	Brandywine Street	Westbound
Worthington Street	Barnard Street	Market Street	Northbound

§ 104-8. Speed limit zones established.

Speed limit zones are established on the following streets or parts of streets.

Highway	Direction of Travel	Speed Limit (mph)	Location
Ashbridge Street	Both	25	From High Street to Pa. Route 322
Bolmar Street	Southerly	25	Between Market Street and Nields Street
Bradford Avenue	North	25	From Price Street to Strasburg Road
Chestnut Street	Westerly	25	From Matlack Street to Hannum Avenue

Church Street	Both	25	Between Sharpless Street and Rosedale Avenue
Franklin Street	Both	25	Between Nields Street and Rosedale Avenue
Hillside Drive	Both	25	From Marshall Street to Goshen Road
Marshall Drive	Both	25	From Marshall Street to Goshen Road
Marshall Street	Both	25	From New Street to the western Borough boundary
New Street	Both	25	From Ashbridge Street north to the Borough boundary line
New Street	Both	25	Between Rosedale Avenue and Sharpless Street
North Franklin Street	Both	25	Between Goshen Road and Marshall Street
University Avenue	Both	25	Between High Street and Church Street

§ 104-9. Stop intersections established.

A. The following intersections are hereby established as stop intersections, and official stop signs shall be erected (or are hereby confirmed if heretofore erected) in such a position as to face traffic approaching the second-named highway upon the first-named highway, in the direction or directions hereby indicated. All vehicles and tractors approaching any such intersection upon the first-named highway, in the direction or directions hereby indicated in each case, shall come to a full stop, within a reasonable distance, before entering any such intersection:

Highway	Through Highway	Direction of Travel
Adams Street	Barnard Street	Northbound and southbound
Adams Street	Chestnut Street	Northbound and southbound
Adams Street	Gay Street	Northbound and southbound
Adams Street	Linden Street	Northbound
Adams Street	Market Street	Northbound and southbound
Adams Street	Miner Street	Northbound and southbound
Adams Street, South, new extension of	Nields Street	Southbound
Adams Street	Union Street	Northbound and southbound
Ashbridge Street	Franklin Street	Eastbound and westbound
Ashbridge Street	High Street	Eastbound and westbound
Ashbridge Street	New Street	Eastbound and westbound
Ashbridge Street	Walnut Street	Eastbound and westbound
Barnard Street	Adams Street	Eastbound and westbound
Barnard Street	Bolmar Street	Eastbound

Barnard Street	Church Street	Eastbound
Barnard Street	Darlington Street	Eastbound
Barnard Street	Franklin Street	Eastbound and westbound
Barnard Street	High Street	Eastbound
Barnard Street	Matlack Street	Eastbound and westbound
Barnard Street	New Street	Eastbound
Barnard Street	Penn Street	Eastbound and westbound
Barnard Street	Walnut Street	Eastbound
Barnard Street	Wayne Street	Eastbound
Barnard Street	Worthington Street	Eastbound, northbound, and southbound and westbound (four-way)
Biddle Street	Church Street	Westbound
Biddle Street	Darlington Street	Westbound
Biddle Street	Everhart Street	Westbound
Biddle Street	Franklin Street	Eastbound and westbound
Biddle Street	High Street	Westbound
Biddle Street	Matlack Street	Westbound
Biddle Street	New Street	Westbound
Biddle Street	Penn Street	Eastbound
Biddle Street	Walnut Street	Westbound
Biddle Street	Wayne Street	Eastbound and westbound
Bolmar Street	Barnard Street	Southbound
Bolmar Street	Market Street	Southbound
Bolmar Street	Nields Street	Southbound
Bolmar Street	Union Street	Southbound
Bradford Avenue	Chestnut Street	Northbound
Bradford Avenue	Gay Street	Northbound
Bradford Avenue	Market Street	Northbound
Bradford Avenue	Miner Street	Northbound
Bradford Avenue	Price Street	Northbound
Bradford Avenue	Route No. 162	Northbound
Brandywine Street	Ashbridge Street	Northbound
Brandywine Street	Gay Street	Northbound and southbound
Brandywine Street	Lafayette Street	Southbound
Brandywine Street	Market Street	Northbound and southbound
Brandywine Street	Marshall Street	Northbound and southbound

Brandywine Street	Miner Street	Northbound and southbound
Brandywine Street	Nields Street	Southbound
Brandywine Street	Price Street	Northbound and southbound
Brandywine Street	Union Street	Northbound and southbound
Chestnut Street	Adams Street	Eastbound and westbound
Chestnut Street	Bradford Avenue	Westbound
Chestnut Street	Everhart Street	Eastbound
Chestnut Street	New Street	Westbound
Chestnut Street	Penn Street	Eastbound and westbound
Church Street	Ashbridge Street	Northbound
Church Street	Barnard Street	Southbound
Church Street	Miner Street	Southbound
Church Street	Price Street	Southbound
Church Street	Sharpless Street	Southbound
Church Street	Union Street	Southbound
Church Street	Washington Street	Northbound and southbound
Church Street, South	University Avenue	Southbound
Convent Alley	Maple Street	Southbound
Convent Avenue	Marshall Street	Northbound
Darlington Street	Ashbridge Street	Northbound
Darlington Street	Barnard Street	Northbound
Darlington Street	Biddle Street	Northbound
Darlington Street	Chestnut Street	Northbound
Darlington Street	Dean Street	Northbound
Darlington Street	Lafayette Street	Northbound
Darlington Street	Market Street	Northbound
Darlington Street	Marshall Street	Northbound
Darlington Street	Miner Street	Northbound
Darlington Street	Price Street	Northbound
Darlington Street	Sharpless Street	Southbound
Darlington Street	Virginia Avenue	Northbound
Darlington Street	Washington Street	Northbound
Dean Street	Church Street	Eastbound
Dean Street	Darlington Street	Eastbound
Dean Street	High Street	Eastbound
Dean Street	New Street	Eastbound

Dean Street	Wayne Street	Eastbound
Elizabeth Street	Franklin Street	Eastbound
Elizabeth Street	Matlack Street	Westbound
Evans Street	Biddle Street	Eastbound
Evans Street	Franklin Street	Southwestbound
Evans Street	Matlack Street	Eastbound
Evans Street	Walnut Street	Westbound
Everhart Street	Chestnut Street	Northbound and southbound
Everhart Street	Gay Street	Northbound and southbound
Everhart Street	Miner Street	Southbound
Everhart Street	Price Street	Northbound
Everhart Street	Route No. 322	Southbound
Everhart Street	Sharpless Street	Northbound and southbound
Franklin Street	Ashbridge Street	Northbound and southbound
Franklin Street	Barnard Street	Northbound and southbound
Franklin Street	Biddle Street	Southbound
Franklin Street	Chestnut Street	Southbound
Franklin Street	Gay Street	Northbound
Franklin Street	Market Street	Northbound and southbound
Franklin Street	Marshall Street	Northbound and southbound
Franklin Street	Nields Street	Northbound and southbound
Franklin Street	Rosedale Avenue	Southbound
Franklin Street	Union Street	Southbound
Franklin Street	Virginia Avenue	Northbound and southbound
Franklin Street	Washington Street	Southbound
Gay Street	Bradford Avenue	Westbound
Gay Street	Brandywine Street	Eastbound and westbound
Gay Street	Everhart Street	Eastbound and westbound
Gay Street	New Street	Westbound
Gay Street	Wayne Street	Eastbound and westbound
Hickory Alley	Holly Alley	Northbound and southbound
Hillside Drive	Marshall Drive	Northwestbound
Hillside Drive	Marshall Drive (700 Block)	Northwestbound
Hillside Drive	Marshall Drive (500 Block)	Southwestbound

Hoopes Park Lane	Ashbridge Street	Southbound
Lacey Street	High Street	Westbound
Lacey Street	Matlack Street	Westbound
Lacey Street	Walnut Street	Westbound
Lafayette Street	Church Street	Eastbound
Lafayette Street	Darlington Street	Eastbound
Lafayette Street	High Street	Eastbound
Lafayette Street	New Street	Eastbound
Law Alley	Prescott Alley	Southbound
Linden Street	High Street	Westbound
Linden Street	Matlack Street	Westbound
Linden Street	Walnut Street	Westbound
Locust Street	Sharon Street	Westbound
Magnolia Street	Matlack Street	Eastbound and westbound
Magnolia Street	Walnut Street	Eastbound
Maple Avenue	Lacey Street	Southbound
Market Street	Bradford Avenue	Westbound
Market Street	Brandywine Street	Eastbound and westbound
Market Street	Everhart Street	Eastbound and westbound
Market Street	New Street	Eastbound
Market Street	Wayne Street	Eastbound and westbound
Marshall Drive	Marshall Street	Southbound
Marshall Drive	Hillside Drive	Northbound and southbound
Marshall Street	Brandywine Street	Westbound
Marshall Street	Church Street	Eastbound and westbound
Marshall Street	Darlington Street	Eastbound and westbound
Marshall Street	New Street	Eastbound and westbound
Marshall Street	Route No. 322	Southbound
Marshall Street	Brandywine Street	Eastbound and westbound
Marshall Street (north of Route No. 322)	Marshall Street	Northbound and westbound
Maryland Avenue, North	Brandywine Street	Eastbound
Maryland Avenue, South	Brandywine Street	Eastbound
Matlack Street	Ashbridge Street	Northbound
Matlack Street	Barnard Street	Southbound
Matlack Street	Biddle Street	Northbound and southbound

Matlack Street	Lacey Street	Southbound
Matlack Street	Linden Street	Southbound
Matlack Street	Marshall Street	Northbound and southbound
Matlack Street	Miner Street	Southbound
Matlack Street	Nields Street	Southbound
Matlack Street	Rosedale Avenue	Southbound
Matlack Street	Union Street	Southbound
Matlack Street	Virginia Avenue	Northbound and southbound
Matlack Street	Washington Street	Northbound and southbound
Miner Street	Darlington Street	Westbound
Miner Street	Franklin Street	Westbound
Miner Street	Matlack Street	Westbound
Miner Street	New Street	Westbound
Miner Street	Penn Street	Westbound
Miner Street	Poplar Street	Westbound
Miner Street	Walnut Street	Westbound
Miner Street	Wayne Street	Westbound
Miner Street	Worthington Street	Westbound
New Street	Ashbridge Street	Northbound and southbound
New Street	Barnard Street	Southbound
New Street	Biddle Street	Southbound
New Street	Chestnut Street	Southbound
New Street	Dean Street	Northbound and southbound
New Street	Hannum Avenue	Southbound
New Street	Marshall Street	Southbound
New Street	Miner Street	Southbound
New Street	Price Street	Northbound and southbound
New Street	Union Street	Southbound and northbound
New Street	Virginia Avenue	Southbound
New Street	Washington Street	Southbound
Nields Street	Adams Street	Westbound
Nields Street	Bolmar Street	Eastbound
Nields Street	Bradford Avenue	Westbound
Nields Street	Everhart Street	Eastbound and westbound
Nields Street	Matlack Street	Eastbound
Nields Street	New Street	Eastbound

Nields Street	Walnut Street	Eastbound
Nields Street	Wayne Street	Eastbound and westbound
Patton Alley	Church Street	Eastbound and westbound
Patton Street	Chestnut Street	Northbound
Patton Street	Gay Street	Southbound
Penn Street	Barnard Street	Southbound
Penn Street	Chestnut Street	Northbound and southbound
Penn Street	Gay Street	Southbound
Penn Street	Miner Street	Northbound
Penn Street	Rosedale Avenue	Southbound
Poplar Street	Market Street	Northbound
Poplar Street	Miner Street	Northbound and southbound
Potter Alley	Wollerton Street	Northbound and southbound
Prescott Alley	Law Alley	Eastbound
Rosedale Avenue	Church Street	Westbound
Rosedale Avenue	College Avenue	Westbound
Rosedale Avenue	Franklin Street	Westbound
Rosedale Avenue	New Street	Westbound
Route No. 162	Hannum Avenue	Eastbound
Sharpless Street	Bradford Avenue	Westbound
Sharpless Street	Brandywine Street	Eastbound and westbound
Sharpless Street	Church Street	Eastbound and westbound
Sharpless Street	Everhart Street	Eastbound and westbound
Sharpless Street	High Street	Eastbound
Sharpless Street	New Street	Eastbound and westbound
Sharpless Street	Wayne Street	Eastbound and westbound
Union Street	Adams Street	Eastbound and westbound
Union Street	Bolmar Street	Eastbound
Union Street	Bradford Avenue	Westbound
Union Street	Brandywine Street	Eastbound and westbound
Union Street	Darlington Street	Westbound
Union Street	High Street	Westbound
Union Street	Matlack Street	Westbound
Union Street	New Street	Westbound
Union Street	Walnut Street	Westbound
Union Street	Wayne Street	Westbound

Union Street	Worthington Street	Eastbound and westbound
University Avenue	Church Street	Westbound
Virginia Avenue	Brandywine Street	Westbound
Virginia Avenue	Church Street	Eastbound and westbound
Virginia Avenue	Darlington Street	Eastbound and westbound
Virginia Avenue	Franklin Street	Eastbound
Virginia Avenue	High Street	Eastbound and westbound
Virginia Avenue	Matlack Street	Eastbound and westbound
Virginia Avenue	New Street	Eastbound and westbound
Virginia Avenue	Walnut Street	Eastbound and westbound
Walden Drive	Ashbridge Street	Northbound
Walnut Street	Ashbridge Street	Northbound and southbound
Walnut Street	Barnard Street	Northbound
Walnut Street	Biddle Street	Northbound and southbound
Walnut Street	Lacey Street	Northbound
Walnut Street	Linden Street	Northbound
Walnut Street	Magnolia Street	Northbound
Walnut Street	Miner Street	Northbound and southbound
Walnut Street	Nields Street	Northbound
Walnut Street	Union Street	Northbound
Walnut Street	Virginia Avenue	Northbound and southbound
Walnut Street	Washington Street	Northbound and southbound
Washington Street	Church Street	Eastbound
Washington Street	Darlington Street	Eastbound
Washington Street	Franklin Street	Eastbound and westbound
Washington Street	High Street	Eastbound
Washington Street	Matlack Street	Eastbound and westbound
Washington Street	New Street	Eastbound
Washington Street	Penn Street	Eastbound
Washington Street	Walnut Street	Eastbound
Washington Street	Wayne Street	Eastbound
Wayne Street	Barnard Street	Northbound and southbound
Wayne Street	Biddle Street	Southbound
Wayne Street	Dean Street	Northbound and southbound
Wayne Street	Gay Street	Northbound and southbound
Wayne Street	Lafayette Street	Northbound

Wayne Street	Market Street	Northbound and southbound
Wayne Street	Miner Street	Northbound and southbound
Wayne Street	Nields Street	Southbound
Wayne Street	Price Street	Northbound and southbound
Wayne Street	Rosedale Avenue	Southbound
Wayne Street	Union Street	Northbound and southbound
Wayne Street	Washington Street	Northbound and southbound
Wollerton Street	Potter Alley	Eastbound and westbound
Wollerton Street	New Street	Westbound
Woodbine Alley	Wollerton Street	Northbound and southbound
Worthington Street	Barnard Street	Northbound
Worthington Street	Miner Street	Northbound
Worthington Street	Union Street	Southbound

§ 104-10. Truck Route Restrictions.

A. Designated Truck Routes.

Except as otherwise provided in this section, trucks, truck tractors and semitrailers may be operated through the Borough only upon the following designated truck routes:

Street Name	From	To
Downingtown Pk/Hannum Ave	New Street	Borough Line
Chestnut Street	Matlack Street	Wayne Street
E. Gay Street	Bolmar Street	Matlack Street
Market Street	New Street	Bolmar Street
E. Marshall Street	High Street	Borough Line
E. Nields Street	Borough Line	Adams Street
E. Union Street	Bolmar Street	Franklin Street
N. Bolmar Street	Market Street	Gay Street
N. Bradford Avenue	Strasburg Road	Hannum Avenue
High Street	Goshen Road/Borough Line	Rosedale Avenue/Borough Line
N. Matlack Street	Gay Street	Chestnut Street
N. New Street	Hannum Avenue	Market Street
Price Street	Bradford Avenue/Borough Line	High Street
S. Adams Street	Nields Street	Union Street
S. Bolmar Street	Union Street	Borough Line

S. Bradford Avenue	Miner Street	College Avenue/Borough Line
E. Miner Street	Bolmar Street	High Street
W. Strasburg Road	Bradford Avenue/Borough Line	Hannum Avenue

B. Prohibition on Other Borough Streets.

No person shall operate any truck, truck tractor, or semitrailer on any Borough street not listed in Subsection A above.

C. Exceptions.

The restrictions in this Section shall not apply to:

(1) School buses;

(2) Emergency vehicles;

(3) Pickup trucks;

(4) Borough, municipal, county, state, or federal vehicles;

(5) Vehicles performing work on behalf of a municipality, public utility, or communications provider; or

(6) Trucks, truck tractors, or semitrailers that must travel on a non-designated Borough street for the sole purpose of making a local pickup, local delivery, or providing a service at a destination located on that street or otherwise within the Borough.

Vehicles operating pursuant to Section 104-10.C(6) shall use the designated truck routes identified in Section 104-10.A to the maximum extent practicable and shall travel on non-designated streets only for the portion of the trip reasonably necessary to reach or depart from the local pickup, delivery, or service location.

D. Truck restriction signs shall be posted at the nearest intersections to each road listed in Section 104-10.A. The specifications for the signs shall be in accordance with state laws and regulations.

E. Any person who violates any provision of this section shall be prosecuted under the Vehicle Code (75 Pa.C.S.A. § 4902) and, upon conviction, be sentenced to pay a penalty provided therein.

ARTICLE III
Parking Regulations

§ 104-11. Vehicles to be parked within marked spaces.

Wherever a space shall be marked off on any highway for the parking of an individual vehicle, every vehicle there parked shall be parked within the lines bounding such space.

§ 104-12. Parking prohibited at all times in certain locations.

Parking shall be prohibited at all times in the following locations:

Highway	Side	Location
Adams Street	Both	From Gay Street to Chestnut Street
Adams Street	East	Between signs as erected from East Nields Street to the curve in the road approximately 100 feet away
Adams Street	East	From the intersection at East Nields Street for a distance of approximately 1,115 feet.
Adams Street	East	Elmer Street, north of, between signs as erected, approximately 150 feet
Adams Street	East	From Market Street to Union Street
Adams Street	West	From 100 South Adams Street to East Barnard Street
Ashbridge Street	Both	From New Street to High Street
Barnard Street	North	From Bolmar Street to a point approximately 25 feet west thereof
Barnard Street	North	From High Street to Franklin Street
Barnard Street	North	From New Street to Church Street
Barnard Street	North	From Worthington Street to Poplar Street
Barnard Street	South	From Church Street to High Street
Barnard Street	South	From Darlington Street west to sign as erected
Barnard Street	South	From Matlack Street to the east side of Pennsylvania R.R. overpass
Biddle Street	Both	From High Street to Walnut Street, between signs as erected, approximately 50 feet at entrance to and across from Memorial Hospital Dispensary driveway
Biddle Street	Both	From Walnut Street to Brinton's Way
Biddle Street	North	From Adams Street to the Pennsylvania R.R. crossing
Biddle Street	North	From Franklin Street to Matlack Street
Biddle Street	North	From Wayne Street to the west end of Biddle Street
Biddle Street	South	Darlington Street, east of, between signs as erected
Biddle Street	South	From Franklin Street to Nields Street
Biddle Street	South	From Pear Alley to a point 22 feet north
Biddle Street	South	From Walnut Street to Matlack Street
Bolmar Street	West	From Market Street to Miner Street
Bolmar Street	West	Nields Street, north of, between signs as erected, approximately 35 feet
Bolmar Street	West	Nields Street, south of, between signs as erected, approximately 35 feet
Bradford Avenue	East	From Hoopes Alley to Miner Street
Bradford Avenue	East	From the south Borough line to Price Street
Brandywine Street	West	From Miner Street to Union Street

Chestnut Street	Both	From Church Street to New Street
Chestnut Street	North	From Evans Street to Matlack Street
Chestnut Street	North	From New Street to Hannum Avenue
Chestnut Street	South	From Church Street to a point approximately 60 feet east
Chestnut Street	South	From Matlack Street to a point approximately 80 feet west
Chestnut Street	South	From a point approximately 85 feet east of Patton Avenue between signs as erected
Chestnut Street	South	From Walnut Street to a point approximately 225 feet east thereof
Church Street	Both	Gay and Market Streets, between signs as erected in front of and across from property of First West Chester Fire Company
Church Street	East	From Market Street to Miner Street
Church Street	East	90 feet south of Market Street and 230 feet south of Market Street
Church Street	East	Washington Square driveway entrance as signed
Church Street	West	From Patton Alley to a point approximately 30 feet north thereof
Church Street	West	From Sharpless Street to a point 45 feet south thereof
College Avenue	South	North of Rosedale Avenue between signs as erected
College Avenue	South	West of Wayne Street between signs as erected
Convent Avenue	Both	From Maple Avenue to Marshall Street
Darlington Street	East	From Barnard Street to Virginia Avenue
Darlington Street	East	From Dean Street to Price Street
Darlington Street	East	From Sharpless Street to Price Street
Darlington Street	West	From Gay Street to Evans Street
Darlington Street	West	From Price Street to Barnard Street
Dean Street	North	From Darlington Street to High Street
Dean Street	South	From Church Street east for a distance of 20 feet
Dean Street	South	Between signs as erected at 22 Dean Street
DeBaptiste Lane	South	From the south driveway of DeBaptiste Lane south for a distance of 51 feet
East Miner Street	North	East of Adams Street in the no-parking-here-to- corner zone
Elmer Street	North	From Worthington Street to Adams Street
Emma's Way	Both	From Willows Alley to the southerly end of Emma's Way
Evans Street	Both	From Walnut Street to Matlack Street
Evans Street	North	From High Street to Church Street

Evans Street	South	From High Street to west curb of School Alley
Evans Street	West	From the Evans Court driveway to Chestnut Street
Franklin Street	East	From Evans Street to Union Street
Franklin Street	East	From Marshall Drive to a point 65 feet north thereof
Franklin Street	East	From Nields Street to the south property line of 733 South Franklin Street
Franklin Street	East	From Rosedale Avenue to a point 70 feet north thereof
Franklin Street	West	From Linden Street to Rosedale Avenue
Franklin Street	West	From Market Street to Miner Street
Franklin Street	West	From Marshall Street to Nields Street approximately 25 feet west thereof
Franklin Street	West	From Nields Street to a point 80 feet south thereof
Gay Street	Both	From High Street to Walnut Street between property lines in front of and across from the Good Will Fire Company
Gay Street	North	From Adams Street to a sign as erected west thereof
Gay Street	North	From a point 46 feet east of Everhart Street for a distance of 112 feet between signs as erected
Gay Street	North	From New Street to Wayne Street
Gay Street	North	From Penn Street to a point 100 feet east
Gay Street	North	From Wayne Street to a point approximately 50 feet west thereof
Gay Street	South	From Darlington Street to New Street; from New Street to a point 280 feet east thereof
Gay Street	South	From Matlack Street to a point approximately 175 feet east thereof
Gay Street	South	From Matlack Street to a sign as erected east thereof
Gay Street	South	From New Street to Potter Alley
Gay Street	South	From Potter Alley west to sign as erected
Gay Street	South	From the entrance to the exit of the Southeast National Bank parking lot
Gay Street and at triangle	North, south and west	At New Street
Hannum Avenue	North	From Gay Street to New Street
Hannum Avenue	South	From the west corner ISC to Route No. 162
Hannum Avenue	South	From Wayne Street to a point approximately 50 feet west thereof
Hannum Avenue	South	From Wayne Street to New Street
Harmony Alley	Both	From Wayne Street to Potter Alley, behind Joe's Sportsmen Lounge
High Street	Both	From Market Street to Gay Street

High Street	Both	From the north curb of Price Street to the south curb of Lacey Street
High Street	East	From Biddle Street to a point 55 feet north thereof
High Street	East	From Biddle Street to a point 65 feet south thereof
High Street	East	North of Magnolia Street for a distance of 25 feet
High Street	East	From Magnolia Street to Price Street
High Street	East	From Marshall Street to a point approximately 80 feet south therefrom
High Street	East	From Marshall Street to Virginia Avenue
High Street	East	From Miner Street to Barnard Street
High Street	East	From Miner Street to Market Street
High Street	East	From Prescott Alley to Chestnut Street
High Street	East	From Rosedale Avenue to Lacey Street
High Street	West	From Dean Street to Price Street
High Street	West	From Gay Street to a point 50 feet north thereof
High Street	West	From Gay Street to a point approximately 120 feet north thereof
High Street	West	From Lafayette Street to a point 55 feet north thereof
High Street	West	From Lafayette Street to a point 65 feet south thereof
High Street	West	From Linden Street to a point approximately 62 feet south therefrom
High Street	West	From Market Street to a point 120 feet south of Pearl Alley
High Street	West	From Marshall Street to a point 100 feet south thereof
High Street	West	From Prescott Alley to a point 50 feet north thereof
High Street	West	From Sharpless Street to a point approximately 55 feet to the south
High Street	West	From Union Street to a sign as erected north thereof
High Street	West	From Washington Street to a point approximately 100 feet north thereof
High Street	West	From Washington Street for a distance of 63 feet south thereof
High Street, South	West	At the 700 Block between signs as erected
High Street, South	West	From Price Street to Sharpless Street
Hoopes Park Lane	Both	From Ashbridge Street to Locust Lane North
Hoopes Park Lane	West	From Locust Lane to Ashbridge Street
Lacey Street	North	From Matlack Street to a point 75 feet east thereof
Lacey Street	North	From Matlack Street to Franklin Street
Lacey Street	South	From Matlack Street to Maple Alley
Lafayette Street	South	From High Street to New Street
Lafayette Street	South	From Matlack Street to Church Street

Magnolia Street	North	Between signs from a point 107 feet east of Walnut Street for a distance of 63 feet
Maple Avenue	Both	From Biddle Street to Lincoln Avenue
Market Street	Both	From Darlington Street to New Street
Market Street	North	High Street to a point 200 feet east of Franklin Street
Market Street	North	From Potter Alley to a point approximately 20 feet to the east
Market Street	South	From Railroad Alley to a point approximately 25 feet west thereof
Market Street	South	From Franklin Street east to the Tolsdorf Oil exit drive
Market Street	South	From Railroad to Franklin Street
Market Street	South	From Sharon Alley to a point approximately 15 feet east thereof
Market Street	South	From Wayne Street to New Street
Marshall Drive	East	From Marshall Street for a distance of 117 feet
Marshall Drive	West	From Franklin Street to a point 200 feet north thereof
Marshall Drive	West	North of Marshall Street between signs as erected
Marshall Street (Boot Road)	Both	From Convent Avenue to the east Borough line
Marshall Street	North	From High Street to Houge Alley
Marshall Street	North	From High Street to a point 65 feet west thereof
Marshall Street	North	From Walnut Street to Matlack Street
Marshall Street	South	From Convent Lane to a point approximately 180 feet west thereof
Marshall Street	South	From Franklin Street to a point approximately 65 feet east thereof
Marshall Street	South	Between signs as erected on both sides of the 2 entrances to the Metropolitan Apartment Complex east of Franklin Street
Marshall Street	South	From New Street to Franklin Street
Matlack Street	Both	From Chestnut Street to Evans Street
Matlack Street	East	Opposite the entrance to Ash Alley between signs as erected
Matlack Street	East	Opposite the entrance to Beech Alley between signs as erected
Matlack Street	East	Opposite the entrance to Elm Alley between signs as erected
Matlack Street	East	From Gay Street to Chestnut Street
Matlack Street	East	From Gay Street to Market Street
Matlack Street	East	From the north curbline of Lacey Street to a point 35 feet north thereof
Matlack Street	East	From Linden Street to Rosedale Avenue
Matlack Street	East	From Magnolia Street to Linden Street

Matlack Street	East	From Marshall Street to Ford Circle
Matlack Street	East	From Miner Street to Magnolia Street
Matlack Street	East	Opposite the entrance to Mulberry Alley between signs as erected
Matlack Street	East	Opposite Nos. 620 and 622 South Matlack Street between signs as erected
Matlack Street	East	Opposite the entrance to Willow Alley between signs as erected
Matlack Street	West	From Barnard Street to a point approximately 75 feet south thereof
Matlack Street	West	From Barnard Street north to a sign as erected
Matlack Street	West	From Gay Street to Miner Street
Matlack Street	West	At No. 418 South Matlack Street, approximately 290 feet north of Lacey Street between signs as erected
Miner Street	Both	From Brandywine Street to Bradford Avenue
Miner Street	North	From Church Street to a point 65 feet east thereof
Miner Street	North	From High Street to a point 52 feet east thereof
Miner Street	North	From High Street to a point 157 feet west thereof
Main Street	North	Between signs at entrance to John O. Green Park gate
Miner Street	North	From the entrance to John O. Green Park to a point approximately 20 feet to the east
Miner Street	North	From the entrance to John O. Green Park to a point approximately 20 feet to the west
Miner Street	North	From New Street to a point 50 feet east thereof
Miner Street	North	From Poplar Street to Worthington Street
Miner Street	North	From Potter Alley to a point 19 feet west thereof
Miner Street	North	From Railroad Alley to a point approximately 25 feet west thereof
Miner Street	South	From Brandywine Street to a point 45 feet east thereof
Miner Street	South	From Darlington Street to a point 90 feet east thereof
Miner Street	South	From High Street to a point 77 feet west thereof
Miner Street	South	From the entrance to John O. Green Park to a point approximately 20 feet to the east
Miner Street	South	From the entrance to John O. Green Park to a point approximately 20 feet to the west
Miner Street	South	From Walnut Street to High Street
New Street	East	From Ashbridge Street north to the Borough boundary line
New Street	East	From Chestnut Street to Union Street
New Street	East	From Sanderson Hall driveway exit to Lawrence Center driveway entrance
New Street	East	From Virginia Avenue to Evans (Patton) Street

New Street	West	From Barnard Street north to a sign as erected
New Street	West	From Chestnut Street to a point approximately 50 feet south thereof as designated by signage
New Street	West	From Evans (Patton) Street to Chestnut Street
New Street	West	From Hannum Avenue to a point 45 feet north thereof
New Street	West	From Market Street to a point 50 feet north thereof
New Street	West	From Miner Street to a point approximately 35 feet south thereof as indicated on a sign
New Street	West	From Washington Street to Chestnut Street
Nields Street	Both	From the entrance to Wyeth Laboratories to the Pennsylvania R.R. crossing
Nields Street	North	From Franklin Street to Bolmar Street
Nields Street	North	Between signs as erected between Walnut Street and Mechanics' Alley
Nields Street	South	From Franklin Street east to the railroad
Nields Street	South	From Worthington Street to Bolmar Street
Oak Place (as described in the Deed of Dedication dated April 1, 1972, and found in Deed Book Y-40, Page 537)	Both	From Hannum Avenue to the end of the cul-de-sac
Penn Street	East	From Chestnut Street to Biddle Street
Penn Street	West	From Gay Street to Chestnut Street
Penn Street	West	From Gay Street to the Police Department parking lot driveway
Poplar Street	West	From Market Street to a point 158 feet south thereof
Price Street	Both	From Brandywine Street to a point 45 feet west thereof
Price Street	Both	From New Street to a point 100 feet east and west thereof
Price Street	North	From Darlington Street to a point 35 feet west thereof
Price Street	North	From Darlington Street to Church Street
Price Street	North	From High Street to a point 95 feet west thereof
Price Street	South	From Church Street to a point 25 feet east thereof
Price Street	South	From Church Street to a point 90 feet west thereof
Price Street	South	From Darlington Street to a point 50 feet west thereof
Price Street	South	From Everhart Street to a point approximately 86 feet to the west thereof
Price Street	South	From High Street to Boxwood Alley
Railroad Street	West	From Market Street to Cedar Alley
Rosedale Avenue	North	From Maple Alley to Franklin Street

Rosedale Avenue	North	From Maple Alley to Matlack Street
Rosedale Avenue	North	Between signs as erected adjacent to the pedestrian crosswalk signal located between New Street and Church Street
Rosedale Avenue	North	From New Street to 403 West Rosedale Avenue
Rosedale Avenue	North	From the Schmidt Hall driveway for a distance of 189 feet to the intersection of South New Street
Rosedale Avenue	North	30 feet east of Wayne Hall driveway
Rosedale Avenue	North	From the Wayne Hall driveway of West Chester University west for a distance of 19 feet
Rosedale Avenue	South	From Franklin Street to Worthington Street
Sharpless Street	North	From Church Street to a point 335 feet to the east thereof
Sharpless Street	South	From High Street to a point 60 feet west thereof
Union Street	North	From Franklin Street to Adams Street
Union Street	North	From High Street to a point approximately 30 feet to the east
Union Street	North	From High Street to a point approximately 35 feet to a sign as erected
Union Street	North	From Matlack Street to a sign as erected east thereof
Union Street	South	From Bolmar Street to Church Street
University Avenue	South	From High Street to Church Street to a point approximately 90 feet to a sign as erected
Walnut Street	Both	From Chestnut Street to Evans Street
Walnut Street	East	South of Birch Alley between signs as erected
Walnut Street	East	From Chestnut Street to Washington Street at signs as erected
Walnut Street	East	From Evans Street to a point approximately 50 feet south thereof
Walnut Street	East	From Gay Street to a point 75 feet north thereof
Walnut Street	East	From Gay Street to Prescott Alley
Walnut Street	West	From Barnard Street to a point 25 feet south thereof
Walnut Street	West	From Biddle Street to a point approximately 15 feet north thereof
Walnut Street	West	From Market Street to Gay Street
Walnut Street	West	From Miner Street to Market Street
Walnut Street	West	From Prospect Alley to a point 32 feet north thereof
Washington Street	North	30 feet east and west of the driveway into Elks Home
Washington Street	North	From Pear Alley to a point 200 feet east thereof as indicated on a sign
Washington Street	South	From Adams Street to Penn Street
Washington Street	South	Between signs as erected approximately 100 feet between Matlack Street and Walnut Street

Washington Street	South	From the west entrance to the school parking lot westward 20 feet
Wayne Street	Both	From Price Street to Hannum Avenue
Wayne Street	West	From Price Street to Nields Street 20 feet to the north and south sides of Mulberry and Juniper Alleys
Wayne Street	West	From Hannum Avenue to Washington Street
West Marshall Street	North	30 feet to the west and 40 feet to the east of the driveway of 513 West Marshall Street
West Miner Street	North	10 feet west of the east entrance to Borough Parking Lot No. 9, between signs as erected
Wollerton Street	South	Between Darlington Street and New Street
Wollerton Street	South	From New Street to a point approximately 61 feet east therefrom
Worthington Street	Both	From Gay Street to Market Street
Worthington Street	West	From Market Street to Miner Street
Worthington Street, South	West	From Miner Street to Union Street

§ 104-13. Parking prohibited in named and unnamed alleys between signs.

Parking shall be prohibited at all times between signs as erected in all named and unnamed alleys of the Borough of West Chester.

§ 104-14. Parking prohibited during certain hours.

The parking of motor vehicles is prohibited at the following locations on the highways designated below and during the times designated below:

Highway	Side	Days/Hours	Location
Adams Street	East	Mon./8:00 a.m. - 11:00 a.m.	From Chestnut Street to Washington Street
Adams Street	East	Wed./8:00 a.m. - 11:00 a.m.	From Joseph Alley to Rosedale Avenue
Adams Street	East	Wed./8:00 a.m. - 11:00 a.m.	From Union Street to Market Street
Adams Street	West	Thur./8:00 a.m. - 11:00 a.m.	From Cedar Alley to East Nields Street
Adams Street	West	Tue./8:00 a.m. - 11:00 a.m.	From Chestnut Street to Washington Street
Adams Street	West	Thur./8:00 a.m. - 11:00 a.m.	From Joseph Alley to Rosedale Avenue
Barnard Street	North	Wed./8:00 a.m. - 11:00 a.m.	From Brandywine Street to New Street
Barnard Street	North	Wed./8:00 a.m. - 11:00 a.m.	From Franklin Street to Worthington Street

Barnard Street	North	Mon./2:00 a.m. - 5:00 a.m.	From High Street to Church Street
Barnard Street	South	Thur./8:00 a.m. - 11:00 a.m.	From Brandywine Street to Matlack Street
Barnard Street	South	Mon. - Fri./8:00 a.m. - 4:00 p.m.	200 block from the bridge to Franklin Street
Barnard Street	South	All times, except Wed. 8:00 a.m. - 11:00 a.m.	From Franklin Street to Worthington Street
Barnard Street	South	Thur. 8:00am-11:00 a.m.	From Worthington to Bolmar
Barnard Street	North	Wed. 8:00 a.m. - 11:00 a.m.	From Worthington to Bolmar
Biddle Street	North	Mon./8:00 a.m. - 11:00 a.m.	From Walnut Street to Wayne Street
Biddle Street	North	Mon./8:00 a.m. - 11:00 a.m.	From Franklin Street to Adams Street
Biddle Street	South	Tue./8:00 a.m. - 11:00 a.m.	From Everhart Street to High Street
Biddle Street	South	Tue./8:00 a.m. - 11:00 a.m.	From Walnut Street to Franklin Street
Brandywine Street	East	Tue./8:00 a.m. - 11:00 a.m.	From Chestnut Street to Market Street
Brandywine Street	East	Wed./8:00 a.m. - 11:00 a.m	From Miner Street to Union Street
Brandywine Street	East	Wed./8:00 a.m. - 11:00 a.m.	From West Union Street to Price Street
Brandywine Street	West	Mon./8:00 a.m. - 11:00 a.m.	From Chestnut Street to Market Street
Brandywine Street	West	Thur./8:00 a.m. - 11:00 a.m.	From West Union Street to Price Street
Chestnut Street	Both	All/2:00 a.m. - 5:00 a.m.	From Church Street to Walnut Street
Chestnut Street	Both	Mon. and Thurs./2:00 a.m. - 5:00 a.m.	From Walnut Street to Matlack Street
Chestnut Street	North	Mon./8:00 a.m. - 11:00 a.m.	From Bradford Avenue to Everhart Street
Chestnut Street	North	Mon./8:00 a.m. - 11:00 a.m.	From Brandywine Street to New Street
Chestnut Street	North	Mon./8:00 a.m. - 11:00 a.m.	From Matlack Street to Stadium Alley
Chestnut Street	South	Tue./8:00 a.m. - 11:00 a.m.	From Bradford Avenue to Everhart Street
Chestnut Street	South	Tue./8:00 a.m. -	From Brandywine Street to

		11:00 a.m.	New Street
Chestnut Street	South	Tue./8:00 a.m. - 11:00 a.m.	From Matlack Street to Penn Street
Chestnut Street	South	Mon./2:00 a.m. to 5:00 a.m.	From New Street to Church Street
Church Street	Both	All/2:00 a.m. - 5:00 a.m.	From Chestnut Street to Miner Street
Church Street	East	Wed./8:00 a.m. - 11:00 a.m.	From Barnard Street to Sharpless Street
Church Street	West	Tues./8:00 a.m. – 11:00 a.m.	From Biddle Street to Lafayette Street
Church Street	East	Fri./2:00 a.m. - 5:00 a.m.	From Miner Street to Barnard Street
Church Street	East	Mon./8:00 a.m. - 11:00 a.m.	From Patton Alley to West Ashbridge Street
Church Street	East	Wed./2:00 a.m. - 5:00 a.m.	From Sharpless Street to Rosedale Avenue
Church Street	West	Sun./8:30 a.m. - 1:00 p.m.	From Barnard Street south to signs as erected
Church Street	West	Thur./8:00 a.m. - 11:00 a.m.	From Barnard Street to Sharpless Street
Church Street	West	Mon./2:00 a.m. - 5:00 a.m.	From Miner Street to Barnard Street
Church Street	West	Tue./2:00 a.m. - 5:00 a.m.	From Sharpless Street to Rosedale Avenue
Church Street	West	Tue./8:00 a.m. - 11:00 a.m.	From West Marshall Street to West Ashbridge Street
Church Street	West	Tue./8:00 a.m. - 11:00 a.m.	From West Patton Alley to West Ashbridge Street
Darlington Street	Both	All/2:00 a.m. - 5:00 a.m.	From Prescott Alley to Market Street
Darlington Street	East	Wed./8:00 a.m. - 11:00 a.m.	From Barnard Street to Price Street
Darlington Street	West	Tue./8:00 a.m. - 11:00 a.m.	From Chestnut Street to Marshall Street
Darlington Street	West	Mon. and Thurs./2:00 a.m. - 5:00 a.m.	From Chestnut Street to Prescott Alley
Darlington Street	West	Mon. and Thurs./2:00 a.m. - 5:00 a.m.	From Evans (Patton) Street to Chestnut Street
Darlington Street	West	Mon. and Thurs./2:00 a.m. - 5:00 a.m.	From Market Street to Miner Street
Darlington Street	West	Thur./8:00 a.m. - 11:00 a.m.	From Miner Street to Barnard Street
Darlington Street	West	Mon. - Fri./8:30 a.m.	From Miner Street to Hemlock

		-12:30 p.m. (Sept. - May)	Alley
Darlington Street	West	Thur./8:00 a.m. - 11:00 a.m.	From Price Street to Sharpless Street
Dean Street	North	Wed./8:00 a.m. - 11:00 a.m.	From Bradford Avenue to Darlington Street
Dean Street	South	Thur./8:00 a.m. - 11:00 a.m.	From Bradford Avenue to High Street
Dean Street	South	Thur./7:00 a.m. - 5:00 p.m.	Opposite Hickory Avenue between signs as indicated
Everhart Avenue	East	Wed./8:00 a.m. - 11:00 a.m.	From Market Street to Miner Street
Everhart Avenue	East	Mon./8:00 a.m. - 11:00 a.m.	From Strasburg Road to Market Street
Everhart Avenue	West	Thur./8:00 a.m. - 11:00 a.m.	From Market Street to Miner Street
Everhart Avenue	West	Tue./8:00 a.m. - 11:00 a.m.	From Strasburg Road to Market Street
Franklin Street	East	Wed./8:00 a.m. - 11:00 a.m.	From Linden Street to Rosedale Avenue
Franklin Street	East	Mon./8:00 a.m. - 11:00 a.m.	From Washington Street to Marshall Street
Franklin Street	West	Thur./8:00 a.m. - 11:00 a.m.	From Barnard Street to Union Street
Franklin Street	West	Tue./8:00 a.m. - 11:00 a.m.	From Chestnut Street to Biddle Street
Franklin Street	West	Mon. - Fri./9:00 a.m. - 5:00 p.m.	From Gay Street to Miner Street
Franklin Street	West	Thur./8:00 a.m. - 11:00 a.m.	From Lacey Street to Nields Street
Franklin Street	West	Mon. - Sat./8:00 a.m.- 5:00 p.m.	From Market Street to Barnard Street
Franklin Street	West	Mon. - Fri./11:00 a.m.- 5:00 p.m.	From Miner to Barnard Street
Franklin Street	West	Thur./8:00 a.m. - 11:00 a.m.	From Nields Street to Linden Street
Gay Street	Both	All/2:00 a.m. - 5:00 a.m.	From New Street to Matlack Street
Gay Street	North	Mon./8:00 a.m. - 11:00 a.m.	From Brandywine Street to Everhart Street
Gay Street	North	Mon./8:00 a.m. - 11:00 a.m.	From Wayne Street to Brandywine Street
Gay Street	North	All/8:00 a.m. - 11:00	From Everhart Street to

		a.m.	Bradford Avenue
Gay Street	South	Tue./8:00 a.m. - 11:00 a.m.	From Bradford Avenue to Wayne Street
Gay Street	South	Mon./2:00 a.m. - 5:00 a.m.	From Matlack Street to Franklin Street
Hannum Avenue	North	Mon./8:00 a.m. - 11:00 a.m.	From New Street to Chestnut Street
High Street	Both	All/2:00 a.m. - 5:00 a.m.	From Chestnut Street to Barnard Street
High Street	East	Wed./2:00 a.m. - 5:00 a.m.	From Barnard Street to Union Street
High Street	West	Thur./2:00 a.m. - 5:00 a.m.	From Barnard Street to Union Street
High Street	West	Tue./2:00 a.m. - 5:00 a.m.	From Sharpless Street to Rosedale Avenue
Lacey Street	North	Wed./8:00 a.m. - 11:00 a.m.	From High Street to Matlack Street
Lacey Street	South	Thur./8:00 a.m. - 11:00 a.m.	From High Street to Matlack Street
Lacey Street	South	Thur./8:00 a.m. - 11:00 a.m.	From Maple Avenue to Franklin Street
Lafayette Street	North	Mon./10:00 a.m. - 2:00 p.m.	From Dewes Alley eastward for 45 feet
Lafayette Street	North	Mon./8:00 a.m. - 11:00 a.m.	From Matlack Street to Walnut Street
Lafayette Street	North	Mon./8:00 a.m. - 11:00 a.m.	From New Street to High Street
Lafayette Street	South	Tue./8:00 a.m. - 11:00 a.m.	From Wayne Street to New Street
Linden Street	Both	Tue./2:00 a.m. - 5:00 a.m.	From High Street to Sharon Alley
Linden Street	North	Fri./7:00 a.m. - 5:00 p.m.	From Adams Street to Penn Street between signs as erected
Linden Street	North	Wed./8:00 a.m. - 11:00 a.m.	From Sharon Alley to Maple Alley
Linden Street	South	Thur./8:00 a.m. - 11:00 a.m.	From Sharon Alley to Franklin Street
Locust Lane North	Both	Mon./7:00 a.m. - 5:00 p.m.	In the cul-de-sac
Magnolia Street	North	Wed./8:00 a.m. - 11:00 a.m.	From High Street to Fasnaught Alley
Magnolia Street	South	Thur./8:00 a.m. - 11:00 a.m.	From High Street to Maple Alley

Maple Avenue	West	Mon. – Fri. 7:00 a.m. – 3:30 p.m. when school is in session	From the north Borough line to the north curb of Lincoln Avenue
Market Street	Both	Mon. - Fri./2:00 a.m. - 5:00 a.m.	From Matlack Street to Franklin Street
Market Street	Both	All/2:00 a.m. - 5:00 a.m.	From New Street to Matlack Street
Market Street	North	Mon./8:00 a.m. - 11:00 a.m.	Potter Alley to Everhart Street
Market Street	South	Thurs./8:00 a.m. - 11:00 a.m.	Bradford Avenue to Wayne Street
Market Street	South	All/9:00 p.m. - 6:00 a.m.	From Everhart Street eastward to the eastern boundary of the Borough playground
Marshall Street	North	Mon. - Fri./8:00 a.m. - 5:00 p.m.	From Houge Alley to Walnut Street
Marshall Street	South	Tues. 8:00 a.m.-11:00 a.m.	From Convent Alley to Franklin Street
Matlack Street	Both	All/2:00 a.m. - 5:00 a.m.	From Chestnut Street to Market Street
Matlack Street	East	Mon./8:00 a.m. -11:00 a.m.	From East Chestnut to East Ashbridge Street
Matlack Street	East	Wed./8:00 a.m. - 11:00 a.m.	From Magnolia Street to Nields Street
Matlack Street	East	Mon./2:00 a.m. - 5:00 a.m.	From Market Street to Miner Street
Matlack Street	East	Wed./8:00 a.m. - 11:00 a.m.	From Nields Street to Linden Street
Matlack Street	West	Tues./8:00 a.m. - 11:00 a.m.	From East Marshall Street to East Ashbridge Street
Matlack Street	West	Tue./8:00 a.m. -11:00 a.m.	From Evans Street to Marshall Street
Matlack Street	West	Thur./8:00 a.m. -11:00 a.m.	From Miner Street to Rosedale Avenue
Miner Street	North	Wed./8:00 a.m. - 11:00 a.m.	From Bolmar Street to Poplar Street
Miner Street	North	Wed./8:00 a.m. - 11:00 a.m.	From Brandywine Street to New Street
Miner Street	North	Wed./8:00 a.m. - 11:00 a.m.	From Franklin Street to Worthington Street
Miner Street	North	Mon./2:00 a.m. - 5:00 a.m.	From High Street to New Street

Miner Street	North	Mon./2:00 a.m. - 5:00 a.m.	From High Street to Walnut Street
Miner Street	North	Wed./8:00 a.m. - 11:00 a.m.	From Walnut Street to Penn Central Railroad
Miner Street	South	Thur./8:00 a.m. - 11:00 a.m.	From Bolmar Street to Poplar Street
Miner Street	South	Thur./8:00 a.m. -11:00 a.m.	From Brandywine Street to New Street
Miner Street	South	Thur./8:00 a.m. -11:00 a.m.	From Franklin Street to Worthington Street
Miner Street	South	Thur./2:00 a.m. - 5:00 p.m.	From High Street to New Street
Miner Street	South	Thur./8:00 a.m. - 11:00 a.m.	From Matlack Street to Walnut Street
New Street	Both	Mon./2:00 a.m. - 5:00 a.m.	From Miner Street to Market Street
New Street	Both	Sun./2:00 a.m. - 7:00 a.m.	From Rosedale Avenue to College Avenue
New Street	East	Mon./8:00 a.m. - 11:00 a.m.	From Chestnut Street to Washington Street
New Street	East	Wed./2:00 a.m. - 5:00 a.m.	From Sharpless Street to Rosedale Avenue
New Street	East	Wed./8:00 a.m. - 11:00 a.m.	From Union Street to Price Street
New Street	West	Mon./2:00 a.m.- 5:00 a.m.	Between Chestnut Street and Hannum Avenue
New Street	West	Mon. and Thur./2:00 a.m.- 5:00 a.m.	From Gay Street to Market Street
New Street	West	Thur./8:00 a.m. -11:00 a.m.	From Miner Street to Sharpless Street
New Street	West	Tue./2:00 a.m. - 5:00 a.m.	From Sharpless Street to Rosedale Avenue
New Street	West	Tue./8:00 a.m. -11:00 a.m.	From Washington Street to Marshall Street
Nields Street	North	Wed./8:00 a.m. - 11:00 a.m.	From High Street to Franklin Street
Nields Street	North	Tue./2:00 a.m. - 5:00 a.m.	From New Street to the west boundary of the Nields Street playground
Nields Street	North	Wed./8:00 a.m. - 11:00 a.m.	From the west boundary of the Nields Street playground to Everhart Street
Nields Street	South	Thur./8:00 a.m. -11:00	From High Street to Franklin

		a.m.	Street
Nields Street	South	Tue./2:00 a.m. - 5:00 a.m.	From New Street to the entrance to the West Chester University parking lot
Nields Street	South	Thur./8:00 a.m. - 11:00 a.m.	From the entrance to the West Chester University parking lot to Everhart Street
North Brandywine Street	East	Wed./8:00 a.m. - 11:00 a.m.	West Gay Street to West Chestnut Street
North Brandywine Street	West	Thur./8:00 a.m. - 11:00 a.m.	West Gay Street to West Chestnut Street
North Walnut Street	East	Mon./8:00 a.m. - 11:00 a.m.	From Biddle Street to Marshall Street
North Walnut Street	West	Tue./8:00 a.m. - 11:00 a.m.	From Biddle Street to Marshall Street
Oak Place	Both	Tue./8:00 a.m. - 11:00 a.m.	—
Penn Street	East	Wed./8:00 a.m. - 11:00 a.m.	From Joseph Alley to Rosedale Avenue
Penn Street	West	Tue./8:00 a.m. -11:00 a.m.	From Chestnut Street to Maple Avenue
Penn Street	West	Thur./8:00 a.m. -11:00 a.m.	From Joseph Alley to Rosedale Avenue
Poplar Street	West	Thur./8:00 a.m. -11:00 a.m.	Market Street to Barnard Street
Poplar Street	East	All times	Between Barnard Street and Market Street
Price Street	North	Wed./8:00 a.m. - 11:00 a.m.	Between Bradford Avenue and Darlington Street
Price Street	North	Wed./2:00 a.m. - 5:00 a.m.	From Church Street to Boxwood Alley
Price Street	South	Thur./8:00 a.m. - 11:00 a.m.	Between Bradford Avenue and Church Street
Price Street	South	Tues./2:00 a.m. - 5:00 a.m.	From Church Street to Boxwood Alley
Rosedale Avenue	North	Wed./8:00 a.m. - 11:00 a.m.	From Franklin Street to the east end of Rosedale Avenue
Rosedale Avenue	North	Wed./8:00 a.m. - 11:00 a.m.	From High Street to Matlack Street
Rosedale Avenue	North	Wed./2:00 a.m. - 5:00 a.m.	From High Street to New Street
Rosedale Avenue	North	All/10:00 a.m. - 5:00 a.m.	From New Street to a point 680 feet east thereof
Rosedale Avenue	South	Wed./8:00 a.m. -	From South Adams Street to

		11:00 a.m.	Joseph Alley where signs indicate
Sharpless Street	North	Wed./8:00 a.m. - 11:00 a.m.	From Church Street to Bradford Street
Sharpless Street	North	Tue./2:00 a.m. - 5:00 a.m.	From High Street to Church Street
Sharpless Street	South	Tue./2:00 a.m. - 5:00 a.m.	From New Street to High Street
Sharpless Street	South	Thur./8:00 a.m. -11:00 a.m.	From Wayne Street to Bradford Avenue
Sharpless Street	South	Thur./8:00 a.m. - 11:00 a.m.	From Wayne Street to New Street
South Matlack Street	East	All times except Thur./8:00 a.m. - 11:00 a.m.	From East Miner Street to East Barnard Street
Union Street	North	Wed./8:00 a.m. - 11:00 a.m.	From Bradford Avenue to High Street
Union Street	North	Wed./8:00 a.m. - 11:00 a.m.	From Sharon Alley to Matlack Street
Union Street	South	Thurs./8:00 a.m. - 11:00 a.m.	From Bradford Avenue to Clinton Alley
Union Street	South	Thur./8:00 a.m. - 11:00 a.m.	From High Street to Sharon Alley
University Avenue	South	Tue./2:00 a.m. - 5:00 a.m.	From High Street to Church Street
University Avenue	South	Wed. 2:00 a.m. - 5:00 p.m.	From High Street to Church Street
Walnut Street	Both	All/2:00 a.m. - 5:00 a.m.	From Gay Street to Chestnut Street
Walnut Street	East	Mon./8:00 a.m. - 11:00 a.m.	From Evans Alley to Biddle Street
Walnut Street	East	Thurs./8:00 a.m. to 11:00 a.m.	From Cedar Alley to Miner Street
Walnut Street	East	Mon. and Thur./2:00 a.m. - 5:00 a.m.	From Market Street to Cedar Alley
Walnut Street	East	Wed./8:00 a.m. - 11:00 a.m.	From Miner Street to Rosedale Avenue
Walnut Street	West	Tue./8:00 a.m. - 11:00 a.m.	From Chestnut Street to Biddle Street
Walnut Street	West	Thur./8:00 a.m. - 11:00 a.m.	From Miner Street to Rosedale Avenue
Washington Street	North	Mon./8:00 a.m. - 11:00 a.m.	From Adams Street to Penn Street
Washington Street	North	Mon./8:00 a.m. -	From Veit Alley to Franklin

		11:00 a.m.	Street
Washington Street	South	Tue./8:00 a.m. - 11:00 a.m.	From Adams Street to Penn Street
Washington Street	South	Tues./8:00 a.m. - 11:00 a.m.	From Wayne Street to Franklin Street
Wayne Street	East	Wed./8:00 a.m. - 11:00 a.m.	From Price Street to Sharpless Street
Wayne Street	West	Tue./2:00 a.m. - 5:00 a.m.	From New Street to Rosedale Avenue
Wayne Street	West	Thur./8:00 a.m. - 11:00 a.m.	From Price Street to Sharpless Street
West Lafayette	North	Mon./8:00 a.m. - 11:00 a.m.	From North Brandywine Street to North New Street
Wollerton Street	North	Mon. and Thurs. / 2:00 am – 5:00 am	From Darlington Street to South New Street
Worthington Street	East	Wed./8:00 a.m. - 11:00 a.m.	From Market Street to Union Street

§ 104-15. Parking time limited at certain locations.

A. Three-hour zone.

(1) Except for such spaces as are or shall be designated as bus spaces, entrances to hotels and theaters, fireplugs or other places where parking is now or may hereafter be prohibited, it shall be unlawful and a violation of this Section for the owner or operator of any motor vehicle, between the hours of 8:00 a.m. and 10:00 p.m. on Monday, Tuesday and Wednesday, between the hours of 8:00 a.m. and 12:00 midnight on Thursdays and Fridays, and between the hours of 5:00 p.m. and 12:00 midnight on Saturdays (except holidays), to park such vehicle for more than three hours at any time upon the streets in the Borough of West Chester hereinafter described, which are hereby established as three-hour parking zones:

Highway	Side	Location
Chestnut Street	Both	From Darlington Street to Matlack Street
Church Street	Both	From Barnard Street to Union Street
High Street	Both	From Gay Street to Biddle Street
High Street	West	From Dean Street to a point approximately 45 feet south of Union Street as signed
Lafayette Street	North	From Church Street to High Street
Matlack Street	East	From Market Street to Cedar Alley
Miner Street	Both	From Darlington Street to New Street

Miner Street	Both	From High Street to Church Street
Miner Street	Both	From Railroad Avenue to Matlack Street
Railroad Alley	West	Cedar Alley to E Miner Street
Walnut Street	West	From Prescott Alley to the end of 222 N Walnut Street

§104-16. Public parking spaces for charging of electric vehicles.

A. Definitions. For purposes of this section, the following word shall have the meaning indicated below:

ELECTRIC VEHICLE — A vehicle that operates, either partially or exclusively, on electric energy from a charging station or other electric energy source that is stored in the vehicle's battery for propulsion purposes. "Electric vehicle" includes: a battery electric vehicle; a plug-in hybrid electric vehicle; a neighborhood electric vehicle; and electric scooters or electric motorcycles.

B. Designation and use of public parking spaces for charging of electric vehicles.

(1) Public parking spaces for charging of electric vehicles. The Borough may designate parking spaces for use as electric vehicle charging stations.

(2) Use of said charging stations. Use of said charging station spaces shall be limited and restricted as follows:

(a) It shall be unlawful for any person to park or leave standing a vehicle in a stall or space in the designated space unless the vehicle is an electric vehicle and is connected for electric charging purposes;

(b) Nonelectric vehicles are prohibited from parking in charging station spaces; and

(c) Electric vehicles are authorized to park in spaces designated as charging station spaces only during the time the vehicles are connected for electric charging purposes. When the vehicle is no longer charging, the owner or operator of said vehicle shall be required to remove the vehicle from the charging station space.

C. Charging station fees. The fee to use parking spaces within the Borough identified as charging station spaces shall be determined by the Borough and adopted by resolution.

§ 104-17. Oversized vehicles.

A. No person shall park or leave standing any oversized vehicle or unattached trailer upon any public street, highway, right-of-way, alley, Borough-owned land or parking lot within the Borough of West Chester, unless that person has requested and received prior approval from the Borough Parking Department.

B. The prohibition described in Subsection A of this section shall not apply to oversized vehicles which are:

(1) Engaged in the loading or unloading of persons and/or property; or

(2) Parked in connection with, or in the aid of the performance of a service to or on a property in the block in which such vehicle is parked; or

(3) Parked or left standing as a result of a mechanical breakdown so as to allow the performance of emergency repairs on the vehicle for a period not to exceed 24 consecutive hours, and in such cases the owner or operator of the vehicle shall inform the Borough Parking Department or the Borough Police Department of the make, model, and location of the vehicle for safety purposes. Due to safety hazards related to interference with sight distances and the free movement of traffic on the public streets, any oversized vehicle found in violation of § 104-17A that remains on a Borough street for more than 48 hours may be removed from the Borough street pursuant to Article VII of this chapter.

§ 104-18. School bus parking.

A. The following location is designated as a school bus parking zone:

Highway	Side	Days/Hours	Location
Gay Street	North	Mon. - Fri./2:00 a.m. - 9:00 a.m. and 1:00 p.m. - 4:00 p.m.	From Darlington Street to New Street

§ 104-19. Parking prohibited on private property.

A. No person shall park or leave unattended a vehicle on private property without the consent of the owner or other person in control or possession of the property except in the case of an emergency or disablement of the vehicle, in which case the operator shall arrange for the removal of the vehicle as soon as possible.

B. The provisions of this section shall not apply to private parking lots unless such lots are conspicuously posted to notify the public of any parking restrictions and the operator of the vehicle violates such parking restrictions.

§ 104-20. Designation of bus stops; parking otherwise prohibited.

The following locations are hereby designated as bus stops, and the parking of motor vehicles, except for buses loading and unloading passengers, is prohibited at such locations:

Highway	Side	Days/Hours	Location
Church Street	West	All	From a point beginning 49 feet south of the intersection of University Avenue extending until the driveway for the Schmucker Science Center/Boucher Hall
Gay Street	North	All	At intersection east of Penn Street
High Street	East	All	North of Gay Street at sign as erected
High Street	East	Mon. - Fri./7:30 a.m. - 8:30	Between Biddle Street and the Friends School

		a.m. and 2:30 p.m. - 3:30 p.m.	driveway entrance
Market Street	South	All	East of Wayne Street between signs as erected
Market Street	South	All	West of Adams Street at sign as erected
Market Street	South	All	West of High Street at sign as erected
Market Street	South	All	West of Matlack Street at sign as erected
Market Street	South	All	West of Worthington Street at sign as erected
Union Street	North	All	West of High Street between signs as erected

§ 104-21. Designation of loading zones; parking otherwise prohibited.

A. Truck Loading Zones. The following locations are hereby designated as truck loading zones between the hours of 6:00 a.m. - 6:00 p.m. and the parking of motor vehicles is prohibited at such locations:

Highway	Side	Location
Chestnut Street	North	117 East Chestnut Street (Chestnut Street Lofts deliveries)
Franklin Street	West	250 South Franklin Street, between signs as erected
High Street	East	South of entrance to Bicentennial Garage at designated sign
High Street	West	Beginning at a point 120 feet south of Pearl Alley between signs as erected- retail spaces at Bicentennial Garage
High Street	West	From Prescott Alley to a sign as erected south thereof
Lacey Street	South	Sharon Alley at signs as erected
Linden Street	South	From Sharon Alley to High Street
Market Street	Both	East of Church Street between signs as erected
Market Street	South	Center of block between Darlington Street and Church Street at sign as erected
Market Street	South	Directly west of the garage opening at 124 E Market St
Matlack Street	East	549 S. Matlack Street
Miner Street	North	127 E Miner Street
Prescott Alley	North	From Walnut Street to Law Alley between signs as erected

B. 15-Minute Parking Zones. The parking of vehicles is prohibited in the following locations, except for loading or unloading with a maximum time of 15-minutes:

Highway	Side	Location
Church Street	East	111 N Church Street
Church Street	West	116 N Church Street
Church Street	West	20 North Church Street
Church Street	East	15 North Church Street
Darlington Street	West	Immediately south of Market Street as designated by signage
Gay Street	South	126 E Gay Street
Gay Street	North	15 W Gay Street
Gay Street	South	9 W Gay Street
Gay Street	South	112 W Gay Street
Gay Street	North	14 W Gay Street
High Street	West	116 South High Street
High Street	East	120 N High Street
High Street	West	30 South High Street at designated sign
High Street	East	227 North High Street at designated sign
High Street	East	221 South High Street - Sundays / 9:00 a.m. – 1:00 p.m.
Lacey Street	South	West of Sharon Alley at designated sign
Market Street	South	16 West Market Street
Market Street	South	24 West Market Street
Market Street	South	104 West Market Street
Market Street	South	128 W Market Street
Market Street	North	136 W Market Street
Market Street	North	335 West Market street as designated by signage
Miner Street	South	130 W Miner Street as designated by signage
Miner Street	South	628 East Miner Street
Walnut Street	East	North of Gay Street per Hotel Indigo land development plan
Walnut Street	West	11 N Walnut
Walnut Street	West	326 North Walnut Street
Walnut Street	West	From Chestnut Street to Evans Alley Mon. – Fri. / 6:45 a.m. – 9:15 a.m.;

3:45 p.m. – 6:30 p.m.

C. Passenger Loading/Unloading Zones. The following locations are hereby designated as passenger loading/unloading zones, and the parking of motor vehicles, except for passenger loading and unloading between 10:00 a.m. and 2:00 p.m. on Sundays only, is prohibited at such locations:

Highway	Side	Location
Church Street	West	At 112 South Church Street between signs as erected
Miner Street	South	At 300 East Miner Street between signs as erected
Miner Street	South	At 418 East Miner Street between signs as erected

§ 104-22. Special purpose parking zones established; parking otherwise prohibited.

The following are hereby established as special purpose parking zones, and it shall be unlawful for any person to park any vehicle or tractor, or to allow the same to be parked in any such zone, except as specifically provided for such zone:

Highway	Side	Location	Authorized Purpose or Vehicle
Chestnut Street	North	45 feet east of High Street	Motor coach parking only
Church Street	East	Anderson Hall	2 parking spaces on each side of the Anderson Hall entrance for official West Chester University vehicles only
Church Street	West	690 S Church Street	1 parking space for WCU Public Safety Visitors
Church Street	East	60 feet south of University Avenue	1 service vehicle
Darlington Street	West	Between Market Street and Courthouse Alley	West Chester Police parking only, Monday through Friday, 8:00 a.m. to 4:30 p.m.
Darlington Street	West	1 Space directly north of Market Street	24/7 Police Parking only
Market Street	North	From Courthouse Alley to a point approximately 80 feet east thereof	Parking for West Chester Police only, Monday through Friday 8:00 a.m. to 4:00 p.m.
Nields Street	North	Between designated signs next to McBratnie Park immediately to the	1 parking space for McBratnie Park patron use only, 1 hour limit, Monday to Friday/8:00

		east of Permit Area B	a.m. to 8:00 p.m.
University Avenue	South	West of High Street at Phillips Hall	1 parking space for official West Chester University vehicles only

§ 104-23. Parking prohibited at handicapped areas.

A. No person shall park or leave unattended a vehicle at any place specifically reserved for handicapped parking, unless the parked vehicle has a state-issued plate or placard (displayed conspicuous manner) for a handicapped person or severely disabled veteran and is being used in the immediate service of a handicapped person or severely disabled veteran. Borough Council shall adopt and amend from time to time by resolution the designated parking spaces that are reserved for handicapped parking.

B. For the purpose of this section, a reserved handicapped parking place must be indicated by a Pennsylvania Department of Transportation approved sign with universally accepted handicapped symbols. Each sign must indicate that the state-issued placard or plate must be displayed at all times while parking in the space.

C. The Parking Department shall process applications for handicapped parking spaces twice a year on application forms provided by the Department. The Parking Director shall have the authority to approve a handicapped parking space on a Borough-owned road based on criteria established by Borough Council in a resolution. The Parking Department shall maintain a list of the addresses where a handicapped parking space has been established. Once approved, a property owner must annually provide evidence to the Parking Department that the person for whom the handicapped space was assigned continues to reside at that address and continues to possess a state-issued plate or placard for a handicapped person or severely disabled veteran.

§ 104-24. Violations and penalties.

A. An owner or operator of any motor vehicle parked in violation of any provisions of this Article III, except §§ 104-12, 104-17A, and 104-23, shall be issued a notice of violation and shall be ordered to pay a fine of $30, unless the fine is paid to the Borough of West Chester within 14 days of the issuance of such notice, in which case the fine amount shall be reduced to $20.

B. An owner or operator of any motor vehicle parked in violation of any provision of § 104-12 shall be issued a notice of violation and shall be ordered to pay a fine of $35, unless the fine is paid to the Borough of West Chester within 14 days of the issuance of such notice, in which case the fine amount shall be reduced to $25.

C. An owner or operator of any motor vehicle parked in violation of any provision of § 104-17A shall be issued a notice of violation and shall be ordered to pay a fine of $75 for each such violation and each day in which such violation continues shall constitute a separate violation or offense, unless the fine is paid to the Borough of West Chester within 14 days of the issuance of such notice, in which case each fine amount shall be reduced to $65.

D. If the owner or operator of the motor vehicle fails to respond to the notice of violation as set forth in Subsections A, B and C above by payment of the fine within 14 days of issuance of such notice, the Borough shall send a warning letter requesting payment of the full amount

of the fine within 10 days of the date of the letter. Should the owner or operator of the motor vehicle fail to respond to the letter within the ten-day time frame, the Borough shall proceed with the issuance of a citation for the greater fine amount in accordance with the Pennsylvania Rules of Criminal Procedure. Upon conviction of the offense, the defendant shall be ordered to pay the applicable fine and the costs of prosecution, and/or to be incarcerated in the county prison for not more than five days.

E. An owner or operator of any motor vehicle parked in violation of any provision of § 104-23 shall be issued a notice of violation and shall be ordered to pay a fine of $200 and the applicable costs of prosecution, unless the fine is paid to the Borough of West Chester within 14 days of the issuance of such notice, in which case the fine amount shall be reduced by $10.

ARTICLE IV
On-Street Metered Parking

§ 104-25. Parking meter zones established.

A. Three-hour zone; with rates to be established by resolution of Borough Council.

(1) Except for such spaces as are or shall be designated as bus spaces, entrances to hotels and theaters, fireplugs or other places where parking is now or may hereafter be prohibited, it shall be unlawful and a violation of this article for the owner or operator of any motor vehicle, between the hours of 8:00 a.m. and 10:00 p.m. on Monday, Tuesday and Wednesday, between the hours of 8:00 a.m. and 12:00 midnight on Thursdays and Fridays, and between the hours of 5:00 p.m. and 12:00 midnight on Saturdays (except holidays), to park such vehicle for more than three hours at any time upon the streets in the Borough of West Chester hereinafter described, which are hereby established as three-hour parking meter zones with rates to be established by resolution of Borough Council:

Highway	Side	Location
Chestnut Street	North	From Church Street to Matlack Street
Chestnut Street	South	From New Street to Matlack Street
Church Street	East	From Patton Alley to Barnard Street
Church Street	West	From Patton Alley to Barnard Street
Darlington Street	West	From Chestnut Street to Miner Street
Gay Street	Both	From Matlack Street to New Street
High Street	Both	From Washington Street to Dean Street
Market Street	North	From Entrance to 330 W Market Street to High Street
Market Street	South	From Darlington Street to Franklin Street
Matlack Street	East	From Market Street to Cedar Alley
Miner Street	North	From Church Street to Walnut Street

Miner Street	South	From Church Street to High Street
New Street	West	From Gay Street to Market Street
Walnut Street	East	From Chestnut Street to Cedar Alley
Walnut Street	West	From Prescott Alley to Gay Street
Wollerton Street	North	From Darlington Street to New Street
Wollerton Street	South	From New Street to Borough Parking Lot No. 9/Miner St Lot

B. Four-hour zone; with rates to be established by resolution of Borough Council.

(1) Except for such spaces as are or shall be designated as bus spaces, entrances to hotels and theaters, fireplugs or other places where parking is now or may hereafter be prohibited, it shall be unlawful and a violation of this article for the owner or operator of any motor vehicle, between the hours of 8:00 a.m. and 10:00 p.m. on Monday, Tuesday and Wednesday, between the hours of 8:00 a.m. and 12:00 midnight on Thursdays and Fridays, and between the hours of 5:00 p.m. and 12:00 midnight on Saturdays (except holidays), to park such vehicle for more than four hours at any time upon the streets in the Borough of West Chester hereinafter described, which are hereby established as four-hour parking meter zones with rates to be established by resolution of Borough Council:

Highway	**Side**	**Location**
Church Street	Both	From Sharpless Street to Rosedale Avenue
High Street	West	From University Avenue to Rosedale Avenue
Linden Street	Both	From High Street to Sharon Alley
New Street	East	From Sharpless Street to Rosedale Avenue
Nields Street	Both	From New Street west to the entrance of the West Chester University Parking Garage (on the south side) and along McBratnie Park (on the north side)
Sharpless Street	South	From High Street to New Street
University Avenue	Both	From High Street to Church Street

§ 104-26. Overtime parking unlawful.

A. It shall be unlawful and a violation of the provisions of this article for any person to permit a vehicle to remain in any parking space after expiration of the parking time limit established in § 104-25.

§ 104-27. Suspension of metered parking on first Fridays from 5:00 p.m. until 10:00 p.m.

The metered parking regulations set forth in this Chapter shall be suspended on the first Friday of

the month between the hours of 5:00 p.m. until 12:00 midnight.

§ 104-28. Unlawful to tamper with meter.

A. It shall be unlawful and a violation of this Article IV for any person to deface, injure, tamper with, open or willfully break, destroy or impair the usefulness of any parking meter installed under the provisions of this Article.

B. Any person who shall violate this section shall be issued a citation. Thereafter, the prosecution shall proceed in accordance with the Pennsylvania Rules of Criminal Procedure; and, upon conviction for the offense, the defendant shall be ordered to pay a fine of $300, together with the cost of prosecution, and/or to be incarcerated in the county prison for not more than 30 days.

§ 104-29. Unlawful operation of business.

A. It shall be unlawful and a violation of this article for any person, owner or operator of a passenger and/or commercial motor vehicle or trailer to operate a food truck from any parking space adjacent to any parking meter established under this article or on any public right-of-way, except in the following designated locations:

Name of Street	Side	Location
Church Street	West	From Sharpless Street to Rosedale Avenue
University Avenue	South	From High Street to Church Street

B. Any person, owner or operator of a food truck or trailer that operates from the parking spaces permitted in § 104-29A above shall first obtain a permit pursuant to the Borough's Food Truck Ordinance and shall comply with the regulations in this § 104-29.

C. Propane tanks, gas containers and emergency generators shall not be placed in the street or public right-of-way.

D. No trash or debris shall accumulate under or around the food truck or trailer at any time.

§ 104-30. Violations and penalties. If any vehicle shall remain in any such parking space for such length of time that the meter shall indicate by a proper signal that the lawful parking time shall have expired, such vehicle shall be considered as having been parked overtime, and the parking of a vehicle overtime shall be a violation of this article, provided that every hour that a vehicle shall remain parked at a meter showing a violation shall constitute a separate violation of this article.

A. An owner or operator of a motor vehicle who shall violate any provisions of this Article IV, with the exception of § 104-28, shall be issued a notice of violation and be ordered to pay a fine of $35, unless the fine is paid to the Borough of West Chester within 14 days of the issuance of such notice, in which case the fine amount shall be reduced to $25.

B. If the owner or operator of the motor vehicle fails to respond to the notice of violation as set forth in Subsection A above by payment of the fine within 14 days of issuance of such notice, the Borough shall send a warning letter requesting payment of the full fine of $35 within 10

days of the date of the letter. Should the owner or operator of the motor vehicle fail to respond to the letter by payment within the ten-day time frame, the Borough shall proceed with the issuance of a citation for the greater fine amount in accordance with the Pennsylvania Rules of Criminal Procedure. Upon conviction of the offense, the defendant shall be ordered to pay the applicable fine and the costs of prosecution, and/or to be incarcerated in the county prison for not more than five days.

ARTICLE V
Metered Off-Street Parking

§ 104-31. Metered or leased parking lots established.

The following are hereby established as the metered and/or leased parking lots operated by the Borough of West Chester:

A. Chestnut Street Garage situated on Chestnut Street between Walnut Street and High Street.

B. Bicentennial Garage situated on the west side of High Street, between Market Street and Miner Street.

C. West Gay Street Lot situated at the southwest corner of Gay Street and New Street (water tank).

D. South High Street Lot situated on the east side of High Street, between Miner Street and Barnard Street (100 block of South High Street).

E. Hannum Avenue Lot situated at the northwest corner of Gay Street and New Street.

F. North Darlington Street Lot situated at the northeast corner of Chestnut Street and Darlington Street.

G. West Miner Street Lot situated on the north side of West Miner Street, between Darlington Street and New Street (200 block of West Miner Street).

H. West Chestnut Street Lot situated at the northeast corner of Church Street and Chestnut Street.

I. East Market Street Lot situated on the north side of Market Street, between Walnut Street and Matlack Street (100 block of East Market Street).

J. Greenfield Lot situated on South Franklin Street at East Nields Street.

K. Borough Hall lot located at 401 E Gay Street

§ 104-32. Parking time limits, charges and hours of operation for various parking lots

The time limits, charges and hours of operation for the following Borough parking lots shall be as indicated in the chart set forth below.

Lot/Garage	Hours of Operation	Parking Conditions	Fees	Method of Payment
Chestnut Street Garage	Monthly - per permit Public parking upper levels - 24/7 Lower level: 3 Hour parking maximum Monday, Tuesday and Wednesday 8:00 a.m. to 10:00 p.m. Thursday and Friday 8:00 a.m. to 12:00 a.m., midnight Saturday 5:00 p.m. to 12:00 a.m., midnight	Per garage regulations Parking meter/multicompartment parking control device for lower level parking only	Fees as established by Resolution of Council	Permit and hourly parking paid to Borough or its designee Parking meter/multicompartment parking control device on lot
Bicentennial garage	Monthly - per permit Public parking - 24/7	Per garage regulations	Fees as established by Resolution of Council	Permit and hourly parking paid to Borough or its designee
Lot #3 New Street Lot	Monday to Friday 8:00 a.m. to 5:00 p.m.	Permit basis Permits will be distributed on a lottery basis	Fees as established by Resolution of Council	Permit paid to Borough or its designee
Lot #5 South High Street Lot	Monday, Tuesday and Wednesday 8:00 a.m. to 10:00 p.m. Thursday and Friday 8:00 a.m. to 12:00 a.m. midnight Saturday 5:00 p.m. to 12:00 a.m. midnight	Metered	Fees as established by Resolution of Council	Permit paid to Borough or its designee Parking meter/multicompartment parking control device on lot
Lot #6 Gay Street Lot	Monday, Tuesday and Wednesday 8:00 a.m. to 10:00 p.m. Thursday and Friday 8:00 a.m. to 12:00 a.m. midnight Saturday 5:00 p.m. to 12:00 a.m., midnight	Metered and reserved parking spaces for permit parking	Fees as established by Resolution of Council	Permit paid to Borough or its designee Parking meter/multicompartment on lot
Lot #7 Darlington Street Lot	Monday, Tuesday and Wednesday 8:00 a.m. to 10:00 p.m. Thursday and Friday 8:00 a.m. to 12:00 a.m. midnight Saturday 5:00 p.m. to 12:00 a.m. midnight	Meter and reserved parking spaces for permit parking	Fees as established by Resolution of Council	Permit paid to Borough or its designee Parking meter/multicompartment on lot
Lot #9 West Miner Street Lot	Monday, Tuesday and Wednesday 8:00 a.m. to 10:00 p.m. Thursday and Friday 8:00 a.m. to 12:00 a.m. midnight Saturday 5:00 p.m. to 12:00 a.m. midnight	Metered	Fees as established by Resolution of Council	Parking meter/multicompartment on lot

Lot #10 West Chestnut Street	Monday, Tuesday and Wednesday 8:00 a.m. to 10:00 p.m. Thursday and Friday 8:00 a.m. to 12:00 a.m. midnight Saturday 5:00 p.m. to 12:00 a.m. midnight	Metered and reserved parking spaces for monthly permit parking	Fees as established by Resolution of Council	Permit paid to Borough or its designee Parking meter/multicompartment on lot
Lot #11 East Market Street	Monday, Tuesday and Wednesday 8:00 a.m. to 10:00 p.m. Thursday and Friday 8:00 a.m. to 12:00 a.m. midnight Saturday 5:00 p.m. to 12:00 a.m. midnight	Metered	Fees as established by Resolution of Council	Parking meter/multicompartment on lot
Greenfield Lot	24 hours/7 days per week Reserved parking per signage reserved for park usage during park hours	Permit parking	Fees as established by Resolution of Council	Permit paid to Borough or its designee Reserved parking for park usage
Borough Hall Lot	Monday, Tuesday and Wednesday 8:00 a.m. to 10:00 p.m. Thursday and Friday 8:00 a.m. to 12:00 a.m. midnight Saturday 5:00 p.m. to 12:00 a.m. midnight	Metered and reserved parking spaces for monthly permit parking	Fees as established by Resolution of Council	Permit paid to Borough or its designee Parking meter/multicompartment on lot

§ 104-33. Placement and characteristics of meters.

A. Parking meters installed in the said lots shall be placed immediately adjacent to the individual parking spaces that shall be marked off in the said lots. Each parking meter shall be placed or set in such manner as to show that the parking space adjacent to such meter is or is not legally occupied. Each parking meter installed shall indicate by a proper legend the legal time established by this article and, when occupied, shall indicate on and by its dial and pointer the duration of the period of legal parking and, on the expiration of such period, shall indicate illegal parking or overparking.

B. Multicompartment parking control devices shall be installed next to the main entrance of lots being metered with such devices and shall be clearly and conspicuously identified. Each such multicompartment parking control device shall indicate, by a proper legend, the identity of the spaces controlled by such device as well as the fee for parking in such space and the duration of the period of legal parking therein.

§ 104-34. Parked vehicles to be within individual parking spaces.

Lines and/or markings shall be painted or placed upon the various metered parking lots hereby established, adjacent to each parking meter, for the purpose of designating the parking space for which such meter shall be used. As applicable, vehicles shall be parked forward-facing with the foremost part of the vehicle nearest to the parking meter. Each vehicle parked adjacent to any parking meter shall be parked within the lines or markings so placed and applicable to such meter. It shall be unlawful and a violation of this article for any person:

A. To park any vehicle across any such line or marking.

B. To park any vehicle in such a position that such vehicle shall not be within the area so designated by such lines or markings.

C. To park a vehicle elsewhere in any such lot than in an individual parking space adjacent to a parking meter.

D. To park a vehicle so that it is not forward-facing with the foremost part of the vehicle nearest to the parking meter.

§ 104-35. Manner of parking at meters.

When a parking space is diagonal or at right angle to the curb, any vehicle parked in such parking space shall be parked so that the foremost part of such vehicle shall be nearest to the parking meter. When a parking space is parallel with the adjacent curb, any vehicle parked in such parking space shall be parked with the foremost part of such vehicle nearest to such meter.

§ 104-36. Unlawful operation of business.

It shall be unlawful and a violation of this article for any person, owner or operator of a passenger and/ or commercial motor vehicle to operate a business from any parking space in a Borough parking lot.

§ 104-37. Payment for use of lots; overtime parking unlawful.

Vehicles parked in any of the Borough parking lots shall pay the appropriate fee as specified in Section 104-32. Upon the payment of the appropriate fee such parking space may be lawfully occupied by such vehicle for the length of time designated by § 104-32 of this article for that particular lot and no other. If any vehicle shall remain in any such parking space for a time longer than permitted or for a time longer than the customer paid for, such vehicle shall be considered as having been parked overtime. The parking of a vehicle overtime shall be a violation of this article, provided that every hour that a vehicle shall remain parked overtime shall constitute a separate violation of this article.

§ 104-38. Unlawful to tamper with meters.

A. It shall be unlawful and a violation of this Article V for any person to deface, injure, tamper with, open or willfully break, destroy or impair the usefulness of any parking meter installed under the provisions of this article.

B. Any person who shall violate this section shall be issued a citation. Thereafter, the prosecution shall proceed in accordance with the Pennsylvania Rules of Criminal Procedure; and, upon conviction for the offense, the defendant shall be ordered to pay a fine of $300, together with the cost of prosecution, and/or to be incarcerated in the county prison for not more than 30 days.

§ 104-39. Revision of rates and charges authorized.

The rates and charges collected through parking meters for off-street parking shall be subject to revision from time to time as may be considered necessary by the Borough Council by adoption of a resolution.

§ 104-40. Use of revenues received.

The revenue received from the operation of the municipal parking lots shall be used for general Borough purposes in relief of taxes on real estate.

§ 104-41. Violations and penalties.

A. An owner or operator of any motor vehicle parked in violation of any provisions of this Article V, with the exception of § 104-38, shall be issued a notice of violation and ordered to pay a fine of $35, unless the fine is paid to the Borough of West Chester within 14 days of the issuance of such notice, in which case the fine amount shall be reduced to $25.

B. If the owner or operator of the motor vehicle fails to respond to the notice of violation as set forth in Subsection A above by payment of the fine within 14 days of issuance of such notice, the Borough shall send a warning letter requesting payment of the full fine of $35 within 10 days of the date of the letter. Should the owner or operator of the motor vehicle fail to respond to the letter by payment within the ten-day time frame, the Borough shall proceed with the issuance of a citation for the greater fine amount in accordance with the Pennsylvania Rules of Criminal Procedure. Upon conviction of the offense, the defendant shall be ordered to pay the applicable fine and the costs of prosecution, and/or to be incarcerated in the county prison for not more than five days.

ARTICLE VI
Snow and Ice Emergency

§ 104-42. Declaration of emergency; automatic emergency.

A. In order to facilitate the movement of traffic and to combat the hazards of excessive snow and ice on the highways or portions of the highways named in § 104-45A of this article, the Mayor, in his or her discretion, may declare an emergency due to such hazards.

B. In order to facilitate the movement of traffic and to combat the hazards of excessive snow on the highways or portions of the highways named in § 104-45B of this article, when snow accumulations reach and/or exceed four inches on the highways or portions of the highways named in § 104-45B during any snowfall, parking is automatically prohibited and a snow emergency shall be deemed to exist.

§ 104-43. Parking prohibited on specific highways during emergency; restrictions on operation of motor vehicles and tractors on such streets.

A. After any such emergency shall have been declared in accordance § 104-42A, it shall be unlawful during the period of such emergency for any person to park a motor vehicle or tractor or to allow the same to remain parked on any highway or portion thereof named in § 104-45A of this article or to operate any motor vehicle or tractor on any such highway or portion thereof unless such motor vehicle or tractor shall be equipped with adequate equipment to provide sufficient traction to keep such motor vehicle or tractor in motion so that other traffic on such highways will not be blocked or impeded.

B. When a snow emergency is deemed to exist in accordance with § 104-42B, it shall be unlawful during the period of such emergency for any person to park a motor vehicle or tractor or to allow the same to remain parked on any highway or portion thereof named in § 104-45B of this article.

§ 104-44. Placement of signs along highways affected: information on existence of emergency.

A. In order to assist the operators of motor vehicles and tractors in determining the highways affected by § 104-42A, the Director of Public Works and/or his or her designee shall place around the utility poles on the highways or portions thereof designated in § 104-45A signs stating restricted parking during snow emergencies. The Borough shall also, through radio, newspaper or other available media, disseminate information as to the existence of such an emergency.

B. Specific highways.

(1) In order to assist the operators of motor vehicles and tractors in determining the highways affected by § 104-42B, the Director of Public Works and/or his or her designee shall place a sign or signs along the highway, street or portions thereof designated in § 104-45B stating restricted parking during emergency and violator will be towed.

(2) The snow emergency existing on the highways, streets or portions thereof designated in § 104-45B shall be automatically discontinued at such time as the highways, streets or portions thereof have been cleared to the curb.

§ 104-45. Highways affected.

A. The highways or portions thereof to which the provisions of this article shall be applicable during all periods of emergency declared as provided in § 104-42A are as follows:

(1) High Street, from the northern Borough boundary to the southern Borough boundary.

(2) Hannum Avenue, from New Street to the western Borough boundary.

(3) Market Street, from Wayne Street to the eastern Borough boundary.

(4) Marshall Street, from Brandywine Street to the eastern Borough boundary.

(5) Wayne Street, from Hannum Avenue to Price Street.

(6) Price Street, from High Street to the western Borough boundary.

(7) Route No. 162, from the western Borough boundary to Hannum Avenue.

(8) Matlack Street from Market Street to Chestnut Street.

(9) Chestnut Street from Matlack Street to Hannum Avenue.

(10) Brandywine Street from Miner Street to Market Street.

(11) Market Street from Brandywine Street to Wayne Street.

(12) Gay Street from eastern boundary to Wayne Street.

(13) Lacey Street from Matlack Street to Franklin Street.

(14) Franklin Street from Rosedale Avenue to Nields Street.

(15) Nields Street from Franklin Street to Bolmar Street.

(16) Rosedale Avenue from Franklin Street to Church Street.

(17) New Street from Chestnut Street to Market Street.

(18) Walnut Street from Rosedale Avenue to Virginia Avenue, right side only.

(19) Church Street from Virginia Avenue to Rosedale Avenue, right side only.

(20) Virginia Avenue from Walnut Street to Church Street.

(21) Franklin Street from Nields Street to Lacey Street, east side only.

(22) Miner Street from High Street to Wayne Street, north side only.

(23) Matlack Street from Magnolia Street to Nields Street, east side only.

(24) Everhart Street from Hannum Avenue to Lafayette Street.

(25) Lafayette Street from Everhart Street to Brandywine Street.

(26) Brandywine Street from Lafayette Street to Marshall Street.

B. The highways, streets or portions thereof to which the provisions of § 104-42B shall be applicable are as follows:

(1) West side of Church Street between Virginia Avenue and Rosedale Avenue.

(2) East side of Walnut Street between Virginia Avenue and Rosedale Avenue.

(3) North side of Miner Street between High Street and Brandywine Street.

§ 104-46. Violations and penalties.

A. An owner or operator of any motor vehicle parked in violation of any provisions of this Article VI shall be issued a notice of violation and shall be ordered to pay a fine of $35, unless the fine is paid to the Borough of West Chester within 14 days of the issuance of such notice, in which case the fine amount shall be reduced to $25.

B. If the owner or operator of the motor vehicle fails to respond to the notice of violation as set forth in Subsection A above by payment of the fine within 14 days of issuance of such notice, the Borough shall send a warning letter requesting payment of the full fine of $35 within 10 days of the date of the letter. Should the owner or operator of the motor vehicle fail to respond to the letter by payment within the ten-day time frame, the Borough shall proceed with the issuance of a citation for the greater fine amount in accordance with the Pennsylvania Rules of Criminal Procedure. Upon conviction of the offense, the defendant shall be ordered to pay the applicable fine, the late fee of $10 and the costs of prosecution, and/or to be incarcerated in the county prison for not more than five days.

§ 104-47. Use of off-street parking lots during emergencies.

The Borough off-street parking lots may be used without charge for parking for a period designated by the Borough following declaration of a snow emergency.

§ 104-48. Removal of vehicles during emergencies.

Upon the existence of a snow or ice emergency in accordance with the provisions of § 104-42A and/or § 104-42B, any vehicles remaining parked, stuck or stalled upon any of the highways, streets or portions thereof designated in § 104-45A and/or § 104-45B, as applicable, may be removed in accordance with the provisions of Article VII of this chapter entitled "Removal and Impounding of Illegally Parked Vehicles."

ARTICLE VII
Removal and Impounding of Illegally Parked Vehicles

§ 104-49. Authority to remove and impound illegally parked vehicles.

A. The Borough Police are hereby authorized to remove and impound, or to order the removal and impounding, of any vehicle parked on any of the streets, highways or public property of the Borough in violation of any of the provisions of the law or of any ordinance of the Borough, provided that no vehicle shall be removed or impounded except in strict adherence to the provisions of this article.

B. The Director of Parking is hereby authorized to remove and impound, or to order the removal and impounding, of any vehicle which was booted for more than 48 hours pursuant to the

provisions in Article X of this chapter provided that no vehicle shall be removed or impounded except in strict adherence to the provisions of this article and Article X.

§ 104-50. Approved storage garages designated.

Borough Council shall, by resolution, establish a list of approved storage garages and approved pounds for the storage of impounded vehicles, which list may be amended from time to time by resolution of Borough Council. The list shall be kept on file in the office of the Borough Manager.

§ 104-51. Garages to provide certificates of insurance.

Every such approved storage garage shall provide current certificates of insurance, demonstrating general liability coverage in the minimum amount of $1,000,000, and garage keeper's coverage in the minimum amount of $1,000,000, to be filed with the Borough Secretary.

§ 104-52. Towing and storage charges fixed.

Borough Council shall, by resolution, establish a schedule of towing and storage charges and fees that shall be charged for the towing and storage of vehicles removed and impounded under the authority of this chapter. The schedule of towing and storage charges and fees may be amended from time to time by resolution of Borough Council, and such schedule shall be kept on file in the office of the Borough Manager.

§ 104-53. Notification of removal and impounding.

Within 12 hours from the time of removal of any vehicle under authority granted by this chapter, notice of the fact that such vehicle has been impounded shall be sent by the Borough for vehicles that were booted pursuant to the authority in Article X to the owner of record of such vehicle. Such notice shall designate the place from which said vehicle was removed, the reason for its removal and impounding and the pound in which it shall have been impounded.

§ 104-54. Effect of payment of towing and impounding charges without protest.

The payment of any towing and impounding charges authorized by this chapter shall, unless such payment shall have been made "under protest," be final and conclusive, and shall constitute a waiver of any right to recover the money so paid.

§ 104-55. Effect of payment of charges under protest.

In the event that any towing and impounding charges so imposed shall be paid "under protest," the offender shall be entitled to a hearing before a magistrate or court of record having jurisdiction, in which case such defendant shall be proceeded against and shall receive such notice as is provided by the Vehicle Code in other cases of summary offenses and shall have the same rights as to appeal and waiver of hearing.

§ 104-56. Records of vehicles removed and impounded.

In cases of vehicles impounded after booting, the Parking Department shall keep a record of all vehicles impounded and shall be able at all reasonable times to furnish the owners or

agents of the owners thereof with information as to the place of storage of such vehicles.

§ 104-57. Liability of owner or operator of vehicle for fine or penalty.

The payment of towing and storage charges shall not operate to relieve the owner or operator of any vehicle from liability for any fine or penalty for the violation of any law or ordinance on account of which the said vehicle was removed and impounded.

§ 104-58. Restrictions upon removal of vehicles.

No vehicle shall be removed under the authority of this article if, at the time of the intended removal thereof, the owner or person for the time being in charge of such vehicle is present and expresses a willingness and intention to remove such vehicle immediately.

§ 104-59. "No parking" posting required for private commercial properties.

A. An owner of private commercial property which provides two or more off-street parking spaces for use by its employees, customers and patrons shall erect a sign no greater than two square feet in area which notifies the public as follows:

(1) The property is privately owned;

(2) Parking is reserved for use by employees and patrons of the commercial business and all other parking is prohibited;

(3) Violators will be towed;

(4) The name, address, and phone number of the towing company which will perform the towing.

B. The property owner shall not tow unauthorized vehicles from the private property unless such sign is posted in a conspicuous location on the private property so that it is easily recognized and clearly legible for the public.

ARTICLE VIII
Additional Parking Violations and Penalties

§ 104-60. Parking restrictions at sidewalks, crosswalks, bridges and beyond curb in nondesignated parking spaces.

A. Except when necessary to avoid conflict with other traffic or to protect the safety of any person or vehicle or in compliance with the law or at the direction of a police officer or official traffic control device, no person shall stop, stand or park a vehicle:

(1) On a sidewalk.

(2) On a crosswalk.

(3) Upon any bridge or other elevated structure upon a highway or within a highway tunnel.

(4) To the right of a curb in an area of right-of-way which is not designated for parking.

B. Except where angle parking is permitted by this chapter, every vehicle standing or parked

upon a two-way highway shall be positioned parallel to and with the right-hand wheels within 12 inches of the right-hand curb or, in absence of a curb, as close as practicable to the right edge of the right-hand shoulder.

C. Except where angle parking is permitted by this chapter, every vehicle standing or parked upon a one-way highway shall be positioned parallel to the curb or edge of the highway in the direction of authorized traffic movement with its right-hand wheels within 12 inches of the right-hand curb or, in absence of a curb, as close as practicable to the right edge of the right-hand shoulder; or with its left- hand wheels within 12 inches of the left-hand curb or, in absence of a curb, as close as practicable to the left edge of the left-hand shoulder.

D. Penalties for offenses.

(1) An owner or operator of a motor vehicle parked in violation of any provision of this Article VIII shall be issued a notice of violation and be ordered to pay a fine of $35, unless the fine is paid to the Borough of West Chester within 14 days of the issuance of such notice, in which case the fine amount shall be reduced by $10.

(2) If the owner or operator of the motor vehicle fails to respond to the notice of violation as set forth in Subsection D(1) above by payment of the fine within 14 days of issuance of such notice, the Borough shall send a warning letter requesting payment of the full fine within 10 days of the date of the letter. Should the owner or operator of the motor vehicle fail to respond to the letter by payment within the ten-day time frame, the Borough shall proceed with the issuance of a citation for the greater fine amount in accordance with the Pennsylvania Rules of Criminal Procedure. Upon conviction of the offense, the defendant shall be ordered to pay the applicable fine, the late fee of $10 and the costs of prosecution, and/or to be incarcerated in the county prison for not more than five days.

§ 104-61. Parking restrictions at curblines, railroad crossings and traffic control devices and near intersections.

A. Except when necessary to avoid conflict with other traffic or to protect the safety of any person or vehicle or in compliance with law or the directions of a police officer or official traffic control device, no person shall:

(1) Stop, stand or park a vehicle:

(a) On the roadway side of any vehicle stopped or parked at the edge or curb of a street.

(b) Between a safety zone and the adjacent curb within 30 feet of points on the curb immediately opposite the ends of a safety zone, unless a different length is indicated by official traffic control devices.

(2) Park a vehicle:

(a) Within 50 feet of the nearest rail of a railroad crossing.

(b) At any place where official signs prohibit parking.

(3) Stand or park a vehicle:

(a) Within 30 feet upon the approach to any flashing signal, stop sign, yield sign or traffic control signal located at the site of a roadway.

(b) Within 25 feet of an intersection.

B. Any owner or operator of a motor vehicle parked in violation of this section shall be issued a notice of violation and be ordered to pay a fine of $30, unless the fine is paid to the Borough of West Chester within 14 days of the issuance of such notice, in which case the fine amount shall be reduced by $10. If the owner or operator of the motor vehicle fails to respond to the notice of violation by payment of the fine within 14 days of issuance of such notice, the Borough shall send a warning letter requesting payment of the full fine within 10 days of the date of the letter. Should the owner or operator of the motor vehicle fail to respond to the letter by payment within the ten-day time frame, the Borough shall proceed with the issuance of a citation for the greater fine amount in accordance with the Pennsylvania Rules of Criminal Procedure. Upon conviction of the offense, the defendant shall be ordered to pay the applicable fine and the costs of prosecution, and/or to be incarcerated in the county prison for not more than five days.

§ 104-62. Parking restrictions within intersections and at excavations, driveways or fire hydrants.

A. Except when necessary to avoid conflict with other traffic or to protect the safety of any person or vehicle or in compliance with law or the directions of a police officer or official traffic control device, no person shall:

(1) Stop, stand or park a vehicle:

(a) Within an intersection.

(b) Alongside or opposite any street excavation or obstruction when stopping, standing or parking would obstruct traffic.

(2) Stand or park a vehicle:

(a) In front of a public or private driveway.

(b) Within 15 feet of a fire hydrant.

(c) Within 20 feet of a driveway entrance to any fire station or, when properly signposted, on the side of a street opposite the entrance to any fire station within 75 feet of the entrance.

(d) On private property without permission of owner or occupant of premises.

(e) In a fire lane which has been so designated in accordance with the provisions of Chapter 57, Fire Prevention, § 57-4F.

B. Any person who violates the provisions of § 104-62A(1)(a), (1)(b), (2)(a), (2)(c) or (2)(d) shall be issued a notice of violation and be ordered to pay a fine of $25, unless the fine is paid to the Borough of West Chester within 14 days of the issuance of such notice, in which case the fine amount shall be reduced by $10. If the owner or operator of the motor vehicle fails to respond to the notice of violation by payment of the fine within 14 days of issuance of such notice, the Borough shall send a warning letter requesting payment of

the full fine within 10 days of the date of the letter. Should the person fail to respond to the letter by payment within the ten-day time frame, the Borough shall proceed with the issuance of a citation for the greater fine amount in accordance with the Pennsylvania Rules of Criminal Procedure. Upon conviction of the offense, the defendant shall be ordered to pay the applicable fine and the costs of prosecution, and/or to be incarcerated in the county prison for not more than five days.

C. Any person who violates the provisions of § 104-62A(2)(b) and (e) shall be issued a notice of violation and be ordered to pay a fine of $75, unless the fine is paid to the Borough of West Chester within 14 days of the issuance of such notice, in which case the fine amount shall be reduced by $10. If the owner or operator of the motor vehicle fails to respond to the notice of violation by payment of the fine within 14 days of issuance of such notice, the Borough shall send a warning letter requesting payment of the full fine within 10 days of the date of the letter. Should the person fail to respond to the letter by payment within the ten-day time frame, the Borough shall proceed with the issuance of a citation for the greater fine amount in accordance with the Pennsylvania Rules of Criminal Procedure. Upon conviction of the offense, the defendant shall be ordered to pay the applicable fine and the costs of prosecution, and/or to be incarcerated in the county prison for not more than five days.

§ 104-63. Stopping and/or standing of vehicles/double parking prohibited on any public street or public alley.

A. Blocking the flow of traffic on any public street or public alley within the Borough of West Chester by the stopping and/or standing/double parking of any motor vehicle is prohibited, provided that a motor vehicle with a registered commercial motor vehicle license registration may stop and/or stand/ double park for a short period of time for the purpose of delivering goods and services.

B. An owner or operator of any motor vehicle stopped, standing and/or double-parked in violation of the provisions of § 104-63A shall be issued a notice of violation and be ordered to pay a fine of $35, unless the fine is paid to the Borough of West Chester within 14 days of the issuance of such notice, in which case the fine amount shall be reduced by $10.

C. If the owner or operator of the motor vehicle fails to respond to the notice of violation by payment of the fine within 14 days of issuance of such notice, the Borough shall send a warning letter requesting payment of the full fine within 10 days of the date of the letter. Should the owner or operator of the motor vehicle fail to respond to the letter by payment within the ten-day time frame, the Borough shall proceed with the issuance of a citation for the greater fine amount in accordance with the Pennsylvania Rules of Criminal Procedure. Upon conviction of the offense, the defendant shall be ordered to pay the applicable fine and the costs of prosecution, and/or to be incarcerated in the county prison for not more than five days.

ARTICLE IX
Interpretation

§ 104-64. Continuation of existing regulations.

The provisions of this chapter, so far as they are the same as those of ordinances and

regulations in force immediately prior to the enactment of this chapter, are intended as a continuation of such ordinances and regulations and not as new enactments. The provisions of this chapter shall not affect any act done or liability incurred, nor shall they affect any suit or prosecution pending or to be instituted to enforce any of these repealed ordinances or regulations.

ARTICLE X
Immobilizing Vehicles

§ 104-65. Boot installation.

A motor vehicle found parked within the Borough upon any public street or public property, at any time, may, by or under the direction of the Borough's Parking Department or any officer of the Borough Police Department, be booted if there are five or more outstanding parking citations or one or more arrest warrants as a result of outstanding parking citations pending against the owner of the motor vehicle.

§ 104-66. Notice of booting.

After a motor vehicle has been booted, the Borough shall place or cause to be placed on the vehicle, in a conspicuous manner, notice sufficient to warn any individual that the vehicle has been immobilized, and that any attempt to move the vehicle might result in damage to the vehicle. The notice shall also outline the procedure for obtaining removal of the boot. As soon as practicable, the Borough shall provide the owner of the booted vehicle, at his request, with a list of the prior outstanding parking citations or warrants for which, or on account of which, the vehicle was booted.

§ 104-67. Removal of boot.

The owner of a vehicle which has been booted, or other authorized person, shall be permitted to secure the release of the vehicle upon:

A. Depositing the collateral required for his or her appearance before a District Justice to answer for each outstanding parking citation; or

B. Paying the amount of the fine, penalty and court costs, if any, for each outstanding parking citation or unsettled warrant, and submitting proof that said payment has been made; and

C. Payment of all fees and fines, as prescribed in this article.

§ 104-68. Immobilization hearing.

The owner of a booted vehicle, or other authorized person, shall have the right to a post immobilization hearing, limited to the determination of the validity of the booting. Such hearing must be requested within five days after the vehicle is booted and shall be conducted by a hearing officer appointed by the Borough Director of Parking. The hearing shall be held during normal business hours within five business days of the demand therefor. The post immobilization hearing will not be determinative of or adjudicate the merits of any citation or violation issued relative to any immobilized vehicle but will be limited solely to whether the vehicle was properly subject to booting under the provisions of this article.

§ 104-69. Towing and storage of immobilized vehicles.

The boot shall remain in place for 48 hours, except as provided below, unless the owner of the vehicle has complied with § 104-67 of this article regarding the payment of fines, costs and fees. If such compliance has not occurred within 48 hours, the vehicle shall be towed and stored pursuant to the provisions in Article VII of this chapter. If the booting occurs when a vehicle is parked in violation of any provision of the Pennsylvania Motor Vehicle Code or any ordinance of the Borough, or if the booted vehicle or the immobilization device appears to have been tampered with, then such vehicle is subject to immediate removal and impounding. All towing and storage fees imposed pursuant to the authority and procedures in Article VII of this chapter shall be paid, along with the fees specified in § 104-67 of this article, before the owner or authorized person shall be permitted to repossess or secure the release of the vehicle. Vehicles unclaimed within 15 days of towing and storage shall be deemed abandoned and subject to disposal, as such, in the manner authorized by law.

§ 104-70. Booting fee.

The owner of the booted vehicle shall be subject to an additional fine of $100 when the vehicle is booted. The Borough shall issue a citation for such fine when the boot is applied to the vehicle. Such fine must be paid before the boot can be removed under § 104-67 of this article.

§ 104-71. Tampering with boot prohibited.

Any person who shall tamper with, remove or attempt to remove any device used to immobilize a motor vehicle that has been booted pursuant to this article, or who shall move or attempt to move the vehicle booted before release of the vehicle has been officially secured, shall be guilty of a summary offense and, upon conviction thereof, shall be ordered to pay a fine of $1,000.

ARTICLE XI
Valet Parking

§ 104-72. Scope.

This article shall govern the operation of all valet parking services provided by businesses located within the Town Center Zoning District of the Borough.

§ 104-73. Definitions.

As used in this article, the following terms shall have the meanings indicated:

VALET PARKING — A parking service offered and/or provided by a business, whereby an attendant parks and retrieves patrons' vehicles.

§ 104-74. Valet parking application.

No business located in the Town Center Zoning District may offer and/or provide valet parking services without adhering to requirements set forth in this article.

A. All new applicants who intend to offer and/or provide valet parking service should consult with the Parking Services Department of the Borough prior to the submission of an

application for a valet parking service operation.

B. All applications for valet parking service shall consist of the following materials, copies of which are available at the Borough of West Chester and its website (www.west-chester.com):

(1) Application form;

(2) A license agreement entered into between the business offering and/or performing a valet parking service and the Borough;

(3) A one-page diagram or site plan depicting the street and/or garage location(s) where vehicles will be picked up and dropped off as part of the valet parking service. This diagram or site plan must clearly indicate the number and location of parking meters that may be involved in the valet parking service (i.e., the reserved area);

(4) Required insurance information; and

(5) Application fee.

C. All businesses offering and/or providing valet parking service in the Town Center Zoning District must complete the requisite application form and enter into a license agreement with the Borough prior to offering and/or providing any valet parking service.

D. A valet parking service approved by the Borough shall be valid from the date of issuance until the end of the calendar year in which the approval was issued. There shall be no proration of fees.

E. The Parking Services Department of the Borough shall send valet parking service renewal notices and application packets to businesses offering and/or performing a valet parking service on or before October 15 of each year. Completed valet parking service application packets must be submitted to the Borough no later than December 1 of that same year. Completed valet parking service packets for renewal will be accessed a late fee as determined by Resolution of Borough Council, if received by the Borough between December 2 and December 31. Renewal packets submitted to the Borough after December 31 will not be accepted and a valet parking service approval will not be extended by the Borough to the renewal business applicant for the subsequent year.

F. All valet parking service license agreements and related materials will be kept on file in the Parking Services Department of the Borough. Copies of the license agreements, diagrams/site plans, as well as any supplementary materials, will be forwarded to the Borough Police Department.

§ 104-75. Fees.

The Borough shall collect a fee in an amount established by Borough Council by resolution for processing the initial application fees, renewal application fees, one-day and special event fees and late application fees.

§ 104-76. Use of public parking garage or surface lot.

Use of a public parking garage or surface lot owned by the Borough for a valet parking service requires an additional daily fee, as determined by resolution of the Borough Council, for each

space that is to be utilized. Accommodations must be made with the Borough at least one week in advance of the planned usage to arrange for the use of a public parking facility.

§ 104-77. Prohibited activities.

The following spaces shall not be used for valet parking services offered and/or performed in the Town Center Zoning District:

A. Use of street metered parking;

B. Double parking on public streets;

C. Blocking of public and private points of ingress and egress onto public streets;

D. Unauthorized use of private, non-Borough public parking areas; and

E. The use of more than four metered parking spaces in parking lots and parking garages.

§ 104-78. Insurance.

A. A certificate of insurance and endorsement naming the Borough of West Chester as an additional insured must accompany all applications, including annual renewals. The certificate shall also include the name of the business applying for valet parking service approval, as well as the business' location. The certificate must also be part of the valet parking application packet submitted to the Borough. Without such certificate containing the required endorsement, the submission will be deemed incomplete and valet parking service will not be permitted.

B. The certificate of insurance must include as an additional insured, "The Borough of West Chester, including any and all elected and appointed officials, employees, agents and representatives."

C. The Borough reserves the right to require a certified copy of any business's insurance policy.

D. The certificate of insurance must include a cancellation notice that provides the following: "Should any of the above-described policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions."

E. All insurance policies required hereunder shall be endorsed to provide that the policy is not subject to cancellation or nonrenewal until 30 days prior written notice has been provided to the business and the Borough.

F. Insurance shall be maintained by the business in the following minimum amounts of coverage, which shall cover the valet parking service:

(1) Comprehensive general liability: not less than $1,000,000 per occurrence and/or aggregate, combined single limit for personal injury, bodily injury and property damage.

(2) Comprehensive auto liability: not less than $1,000,000 per occurrence and/or aggregate, combined single limit for personal injury, bodily injury and property damage.

(3) Worker's compensation and employers' liability insurance: Statutory minimum.

§ 104-79. Violations and penalties.

A. Suspension of valet parking approval. The Borough Manager may suspend a business's ability to offer and/or provide valet parking service for no more than 30 days if:

(1) A business is found to have knowingly provided false information in the application process (as set forth in § 104-74 above); or

(2) A business has received two notices of violation, verbal or written, of any provision of this article within the same calendar year.

B. Revocation of valet parking approval. The Borough Manager may revoke a business's ability to offer and/or provide valet parking service for the remainder of the calendar year if a business has received three notices of violation, verbal or written, of any provision of this article within the same calendar year.

C. A business may not receive a valet parking service approval unless all fines accrued for any violation of this article from previous year(s) have been paid.

D. Any business violating any of the provisions of this article shall be sentenced to pay a fine of no less than $50 and no greater than $600, together with costs of prosecution. The imposition of a penalty as provided herein shall not serve to prevent the abatement of any nuisance or to prevent the suspension or revocation of the approval held by any business who shall violate the provisions of this article, or any other law or ordinance while engaged in activities permitted under the provision of this article. Each day of a violation shall constitute a separate offense which shall be punishable by a separate fine.

SECTION 2. SEVERABILITY. If any sentence, clause, section or part of this Ordinance is for any reason found to be unconstitutional, illegal or invalid, such unconstitutionality, illegality or invalidity shall not affect or impair any of the remaining provisions, sentences, clauses, sections or parts hereof. It is hereby declared as the intent of Council of the Borough of West Chester that this Ordinance would have been adopted had such unconstitutional, illegal or invalid sentence, clause, section or part thereof not been included therein.

SECTION 3. REPEALER. All Ordinances or parts of Ordinances conflicting with any provision of this Ordinance are hereby repealed insofar as the same affects this Ordinance.

SECTION 4. EFFECTIVE DATE. This Ordinance shall become effective upon enactment as provided by law.

ENACTED AND ORDAINED THIS _____ DAY OF _____, 2026.

ATTEST:

COUNCIL FOR THE BOROUGH
OF WEST CHESTER

_____
Sean Metrick, Secretary

By: _____
Nicole Scimone, President

APPROVED THIS _____ DAY OF _____, 2026.

_____
Lillian L. DeBaptiste, Mayor

The Friendly 2026

Food Fight

July 1st to August 31st

West Chester Borough vs East & West Bradford



Non-Perishable Food Collection Drive for the Chester County Food Bank

The West Chester Food Collection site will be in the Municipal Building from July 1st thru August 31st:
401 E. Gay Street
West Chester, PA 19380

Help the Borough beat the Bradfords by collecting the most non-perishable food!

www.west-chester.com

Borough of West Chester

401 East Gay St West Chester PA 19380
www.west-chester.com
(610)-692-7574

Borough Council
Nicole Scimone, President
Bernie Flynn, Vice President
Jerome Szczepaniak
Bryan Travis
Brian McGinnis
Stephen Marvin
Lisa Kearns

Mayor
Lillian L. DeBaptiste

Borough Manager
Sean Metrick

Borough Manager's Report
August 18, 2026

2027 Operating and Capital Budgets

Work on the 2027 budget has begun and the major challenge is dealing with the Supreme Court's decision regarding the Borough Stream Protection Fee program. Dubbed by critics as the "rain tax", the stream fee was an equitable solution to address the legacy issue of stormwater pollution, flooding, and repairs to aging infrastructure. The fee program charged all property owners based upon the amount of impervious coverage on their lots. The stream fee used the same engineering practices used to comply with stormwater codes when developers seek approval under modern stormwater codes. Unfortunately for the Borough, the Court sided with the Commonwealth attorneys' argument that the fee was a tax and that a tax immune entity, West Chester University, did not have to pay it. Unfortunately, rain falls on all properties, not just taxable ones.

To comply with the Court's decision, the Borough will repeal the ordinance that created the Stream Fee and will no longer charge any property owner regardless of their taxable status. In an irony not lost on a few of the Supreme Court Justices in their decision, the Commonwealth continues to require towns like West Chester to comply with their stormwater permit standards while denying a rational means to raise money to pay for it. How will the Borough replace the ~$1.2m of revenue upon repeal of the stream fee to repair and update its stormwater system? The answer to this question lies at the heart of the 2027 budget.

Budget Schedule

There will be many opportunities for public input on the 2027 budget. Starting with Committee Meetings of Borough Council on September 8th and 9th, department directors will discuss operational plans and investment in 2027. At September's work session, the Borough Manager will present a draft budget to Borough Council for its review and adoption at its October voting session. It's important to note that September and October is the time most changes occur with the budget. Many costs such as insurance renewals, grant revenue, and capital expenses are not

known by local ordinance deadlines. The Borough's budget process leaves both November and December meeting cycles available to meet the year-end deadline for final budget approval.

Budget Highlights

Although Council has not authorized an emergency medical services tax by vote, the proposed preliminary budget will include a tax establishing a special purpose fund to pay for these costs, currently provided by Good Fellowship Ambulance Company in the amount of $298k for 2026.

The proposed budget will include an increase in property tax to raise some of the revenue lost by the repeal of the stream fee. The exact percentage will follow from a significant reduction in stormwater management program expenses in 2027 of at least 20%. Property owners with less than 3,000 square feet of impervious coverage on their lots used to pay between $40 and $221 per year in stream fees. Properties with more than 3,000 square feet of coverage had custom calculations to determine the fee. Some taxable property owners will see a net increase in their cost to fund stormwater management while others will see a decrease, depending on the stream fee they paid and their assessed property value.

The proposed budget will explore increasing the hourly rate for parking on street at meters, off street on surface lots, and garages and transfer the increased revenue to offset general fund increases. Raising parking rates is one of the few options the borough can use to raise money from people who do not live in the Borough since nonresident earned income tax is capped by statute.

The final area of focus in 2027 is the capital budget. We are taking a close look at long-term costs to update and maintain streets, sewers, buildings, vehicles and equipment, and parks in accordance with comprehensive and parks plan objectives. Our goal is to understand and budget for an annual contribution to the capital fund with careful debt management and grant procurement to pay these costs not just next year but for decades to come. A point of emphasis in 2027 is right sizing of our vehicle fleet to allow for greater interoperability, higher mpg, and less spending on repairs through scheduled maintenance and vehicle replacement. This is just one example of how staff are engaged in finding solutions that save taxpayers and residents money while meeting the high level of service demanded.

Sean Metrick, Borough Manager

COUNCIL TOPIC CONSIDERATION MEMO

THIS MEMO IS TO SERVE AS A PROPOSAL FOR COUNCIL APPROVAL ON A TOPIC THAT MAY HAVE SUBSTANTIAL TIME & PLANNING REQUIRED. BEFORE WORK COMMENCES, THIS MEMO WILL BE PLACED ON A WORK SESSION AGENDA FOR COUNCIL APPROVAL SUPPORTING THIS ENDEAVOR.

GENERAL INFORMATION

Council Sponsor: Jerome Szczepaniak
Date: Aug 18, 2026 Topic Title/Ordinance Number: Gas-Powered Leaf Blower restrictions

Committee Responsible: Smart Growth Goal Alignment: Quality of Life in The Borough
Identified Departments Involved: Code Enforcement, WCPD

ISSUE

Provide a short description of the concern or topic:
Gas-powered leaf blowers are banned in over 200 municipalities across the US, including several towns in the greater Philadelphia area.

These blowers contribute 50% of all **Air pollution** attributed to small gas-powered yard equipment, despite making up less than 25% of the unit sales. One study found that running a two-stroke engine for 30 minutes generates air pollution equivalent to driving a pickup truck over two thousand miles.

As importantly, **Noise Pollution** is the second most important reason for bans or incentives. These blowers can produce 90-100 dbs at the level of the operators' ears; this exceeds what is considered safe hearing levels as 85 db is the threshold at which continued exposure to the sound leads to hearing damage – not to mention irritated neighbors.

Electric-powered leaf blowers are non-polluting and generate significantly lower levels of noise. Current models widely available in the marketplace today match or exceed the performance of two-stroke gas-powered versions. With each new generation, electric blowers offer incremental performance improvements over the previous. Distributors of the gas-powered versions increasingly limit their offerings to shift the sales focus to the electrically-powered variants.

Other regulations include noise-levels capped at 65 db, roughly the level of sound of the interior of a car at 60 mph.

PROPOSED PLAN OF ACTION

Provide a plan of action for the issue:

To allow owners of gas-powered blowers time to recoup their investments in their assets, the approach is to phase-in limitations on the use of the gas-powered leaf blowers, initially limiting their use to seasons of high need (i.e., Autumn, as leaves fall and Spring for the post-winter cleanup), with the eventual goal of a complete ban of their use.

Desired Implementation Timing: Initial limits to be imposed in 2027, with the transition to a full ban by 2030.

ASSOCIATED COSTS

Please provide a general list of any costs that may be associated with this project. Consider costs for consultant time, hearing costs, any ancillary studies that may be required:

Outside legal advice to compose the ordinance and public hearings to review the proposed ordinance.

NEXT STEPS (TO BE COMPLETED AFTER COUNCIL WORK-SESSION DISCUSSION)

1) Draft a preliminary ordinance.
2) Present draft to appropriate committee (S-G) for review.
3) Edit and adjust as necessary.
4) Present to full council for approval.
5) Present ordinance in public hearing
6) Complete and sign

Kathy Brooks

From: Stephen Vogelman Jr. <Vogelman@codeelevator.com>
Sent: Tuesday, July 28, 2026 4:27 PM
To: Kathy Brooks
Subject: Code Elevator Rates Library - Borough of West Chester

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Good afternoon,

This email is to confirm that the hourly billing rates currently provided to the Borough of West Chester will also be extended to the West Chester Library, located at 415 N. Church Street, West Chester, PA 19380.

The hourly billing rates for work performed outside the scope of the contract are as follows:

Rate Type	Mechanic	Helper	Team
Regular	$315.00	$252.00	$567.00
Premium (1.7x)	$535.50	N/A	N/A
Premium (0.7x)	$220.50	N/A	N/A
Overtime (2.0x)	$630.00	$504.00	$1,155.00

These rates will apply to all work performed outside the scope of the contract for the West Chester Library.

If you have any questions or concerns, please feel free to give me a call.

Thank you, and we appreciate the opportunity to continue serving your facilities.

Best regards,

CODE ELEVATOR

Stephen Vogelman Jr. |Vice President

a: Code Elevator | 420 Feheley Drive, Suite B | King of Prussia, PA 19406
e: vogelman@codeelevator.com
m: 267.535.0863
w: https://codeelevator.com/

From: Kathy Brooks <KBrooks@west-chester.com>
Sent: Tuesday, July 28, 2026 9:17 AM

To: Stephen Vogelman Jr. <Vogelman@codeelevator.com>
Subject: Library - Borough of West Chester

Steve

Nice speaking with you. Thank you for sending over an email confirming the rates would apply to the library as well.

Have a great day!

Kathy Brooks
Borough of West Chester
Public Works Department
610-696-5282

AMENDMENT #1: POST PHASE 1

POLICY FOR ALLOCATION OF SEWER CAPACITY AND CONNECTION TO THE GOOSE CREEK RESTRICTED COLLECTION AREA

A. **Establishment of Policy.** The Borough of West Chester (the "Borough") shall allocate available capacity in the Goose Creek Restricted Collection System in accordance with the policy set forth herein. This policy shall be administered by the Borough Wastewater Director with assistance from the Borough Engineer.

B. **Adherence to the Borough of West Chester Connection Management Plan.** The Borough shall adhere to the Borough of West Chester Connection Management Plan (the "CMP") and Corrective Action Plan (the "CAP") as approved by the Pennsylvania Department of Environmental Protection ("PADEP"). In addition to the specific projects listed by specific property address in the CMP, The Borough shall not permit more than ~~20~~ 36 additional equivalent dwelling units ("EDUs") of "Miscellaneous" connections (the "Miscellaneous Permitted EDUs") to the Restricted Collection System until the Phase 2~~1~~ improvements and upgrades which are described in detail in the CAP have been completed and DEP issues written notice to the Borough that it may permit additional connections to the Restricted Collection System. "Miscellaneous" connections are connections that are not listed by specific property address in the CMP. For purposes of this policy, one

(1) EDU equals Two Hundred Thirty-Nine (239) gallons per day of wastewater.

C. **Allocation and Connection of Miscellaneous Permitted EDUs.** The Borough shall allocate and reserve the Miscellaneous Permitted EDUs as follows:

1) Capacity reservation is authorized only for parcels which have filed with the Borough as of the effective date of the Council Resolution adopting this Policy, a building permit application, sketch plan submission, or a preliminary subdivision and land development application (the "Pending Application"). The parcels which have a Pending Application are herein referred to as "Eligible Parcels."

2) The total capacity reservation available cumulatively for all Eligible Parcels is ~~twenty~~ thirty-six (~~20~~36) EDUs.

3) An owner of an Eligible Parcel may request reservation of up to ~~3~~ 5 EDUs by written request to the Borough sent by certified mail, return receipt requested, to Sean Mitchell, Wastewater Director, Borough of West Chester, 401 E. Gay Street, West Chester, PA 19380. Additional EDU requests beyond 5 EDUs may be evaluated on a case-by-case basis at the discretion of the Borough.

4) The number of EDUs requested shall be limited by the development proposed in the Pending Application~~, but in no~~

~~event more than 3 EDUs~~. By way of example, if the Pending Application is for one (1) single-family dwelling, the number of EDUs which may be reserved shall be limited to one (1).

5) The reservation request shall be made only by the owner of the Eligible Parcel and shall include the name of the owner of the Eligible Parcel, the postal address and UPI Number of the Eligible Parcel, the number of EDUs requested, and a certified check for payment of the applicable tapping fees for all of the requested EDUs. Tapping fees shall be calculated and paid in accordance with Section 89-1.1.G of the Borough Code as may be amended from time to time. Incomplete applications will not be accepted and will be returned to the owner.

6) Complete requests for reservation of capacity in accordance with the Policy shall be processed in the order received by the Borough Wastewater Director based on the time and date of receipt of the certified mail request. Capacity will be reserved for complete applications on the date of receipt (the "Reservation Date").

7) In order to extend the reservation beyond one (1) year from the Reservation Date, the owner of the Eligible Parcel must begin paying sewer rental rates for each EDU reserved in accordance with and in the amount required by Section 89-11.B of the Borough Code as may be amended from time to

time. Failure to timely pay the required sewer rental rates will result in an automatic cancellation of the reservation. In the event of cancellation of the reservation for nonpayment, the Owner shall not be entitled to a refund of the tapping fee or any sewer rental payments paid for the reserved capacity.

8) An owner of reserved capacity may relinquish some or all of the reserved capacity by written request to the Borough sent by certified mail, return receipt requested, to Sean Mitchell, Wastewater Director, Borough of West Chester, 401 E. Gay Street, West Chester, PA 19380. In the event of voluntary relinquishment, the amount of the tapping fee paid for the reservation of each EDU relinquished shall be refunded by the Borough to the Owner. Any sewer rental payments paid for the reserved capacity shall not be refunded by the Borough to the Owner.

9) The reserved capacity shall be reserved for the Eligible Parcel only and shall not be sold, conveyed, or transferred by the Owner to any individual or entity.

Goose Creek
Sanitary Sewer Basin
Affected Area

Limited
Capacity
Pipes

Goose Creek
Sanitary Sewer Basin

Manhole
Clean Out
Dead End
Pump Station
Force Main
Gravity Sewer
SanitaryBasin
Edge of Road
Building
Parcel
Water
Municipal Boundary

250 0 250 Feet

Mapping derived from data provided by Chester County and West Chester Borough.

2/10/2012	PM:HSH	GIS: BLS	R000670.0431

HRG
Harbert, Rowland & Grebb, Inc.
Engineering & Related Services
1846 Charter Lane
P.O. Box 10337
Lancaster, PA 17605
717.291.1783
Fax 717.291.2093
www.hrginc.com
Offices Statewide

W:\665\670\0431\Projects\SanitarySystem.mxd

EXHIBIT 5

PHASE 1 PIPE UPGRADES
GOOSE CREEK BASIN AFFECTED AREA

[BUILDING RELATIONSHIPS. DESIGNING SOLUTIONS.]

Sanitary Sewer System
West Chester Borough
Chester County, Pennsylvania

Goose Creek Sanitary Sewer Basin Affected Area

Limited Capacity Pipes

Goose Creek Sanitary Sewer Basin

EXHIBIT 7

PHASE 2 PIPE UPGRADES

GOOSE CREEK BASIN AFFECTED AREA

250 0 250 Feet

Mapping derived from data provided by Chester County and West Chester Borough.

2/10/2012	PM:HSH	GIS: BLS	R000670.0431

HRG
Harbert, Rowland & Grebic, Inc.
Engineering & Related Services

1846 Charter Lane
P.O. Box 10337
Lancaster, PA 17605
717.291.1783
Fax 717.291.2093
www.hrginc.com
Offices Statewide

W:\665\670\0431\Projects\SanitarySystem.mxd

- Manhole
- Clean Out
- Dead End
- Pump Station
- Force Main
- Gravity Sewer
- SanitaryBasin
- Edge of Road
- Building
- Parcel
- Water
- Municipal Boundary

[BUILDING RELATIONSHIPS. DESIGNING SOLUTIONS.]

Sanitary Sewer System
West Chester Borough
Chester County, Pennsylvania

Connections Management Plan (CMP) - PAGE 1 - INFORMATION
This CMP has been prepared in conjunction with a Corrective Action Plan, in accordance with the requirements of PA Regulations at Title 25, Chapter 94, regarding Wasteload Management.
The purpose of the CMP is to establish a certain limit on the volume of flow that may be accepted for connection to the overloaded sewer system. A dated version of the CMP will only be valid if it is approved by DEP in writing.
Connections management is required for overloaded sewer systems. It is separate from the Planning Module review process. Projects that are identified in the various pages of this CMP may or may not have Planning Module approval. Planning Modules that have not been approved at the time an overload is determined may be considered for approval only if the current valid version of the CMP includes a sufficient volume of approved flow to accommodate the project.
All projects identified in the CMP shall be understood to be in one of three categories according to their status in the Planning process. The categories are: 1) projects with Planning approved or waived; 2) projects with Planning Module under review; and 3) future projects. "Future projects" are all those for which a Planning Module has not been submitted as of the date the CMP was prepared.
Flow volumes are customarily quantified as Equivalent Dwelling Units (EDUs). Volumes listed in the CMP may be assigned to development projects, or they may be indicated as "miscellaneous" connections. "Miscellaneous" flows approved in the CMP can be assigned to a project at a later time.
It is expected that the CMP may be revised from time to time by the permittee and submitted to DEP for review. A revised, dated version of the CMP will only be valid if it is approved by DEP in writing.
Worksheet 2 ("Planning Assigned") and Worksheet 3 ("Future Projects") of this CMP may identify projects that cannot be accommodated by the number of EDUs shown as Approved by DEP. The permittee shall decide which projects will be allocated the flow from the quantity of EDUs that are approved. The CMP should be revised when EDUs are being assigned to a project and a planning module is submitted to DEP. The CMP should be revised again when the Planning Module has been approved by DEP.
The SUMMARY page of this CMP will show the amount of flow currently approved by DEP for connection to the system.

Permittee / Facility Owner	West Chester Borough
Facility	Goose Creek Sanitary Sewer Collection System
Name of contact for the Permittee/Facility Owner	Sean Mitchell, Wastewater Director
Date of the PREVIOUS APPROVED version of the CMP	N/A
Date of THIS VERSION of the CMP	12/17/2024

CMP Summary *and three* Worksheet *pages should be attached*

Connections Management Plan (CMP) - CMP SUMMARY

Permittee / Facility Owner	*West Chester Borough*
Facility	*Goose Creek Sanitary Sewer Collection System*
Date the CMP was prepared	*12/17/2024*

Permittees may use the table on this page to show the amount of flow they are proposing for connection to the overloaded sewer system. DEP reserves to itself the right to approve an amount of flow that is less than the total amount proposed by the permittee, or to decline to approve new flow, pending the submission of an acceptable demonstration by the permittee that they are making progress on corrective action.

from the three Worksheets	Total # EDUs	# connections completed to date	EDUs included in the CMP
Connections from planning modules approved by DEP	0	0	0
Connections from projects with Planning assigned but module not approved	219		219
Connections from future projects	498		498
Un-allocated "miscellaneous" connection credit in the CMP			0

Date of the PREVIOUS APPROVED CMP	N/A
# EDUs approved by DEP in the PREVIOUS APPROVED CMP	N/A
# EDUs proposed by the permittee to be added to the CMP	717
# EDUs APPROVED BY DEP to be added to the CMP (The number in this space will be determined by DEP)	717
# EDUs APPROVED BY DEP for inclusion in this CMP (*Previously-approved flow plus new approved flow)*	717

Average Daily Flow is related to EDU according to the following rate:	One EDU equals	239	gallons per day per EDU

Equivalent flow approved to be added to the sewer system [Equivalent flow = (EDUs approved in this CMP) * (rate in gpd/EDU)]	171,363	gallons per day

Connections Management Plan (CMP) - Worksheet 1 - Projects with Planning Approved

Permittee / Facility Owner	*West Chester Borough*
Facility	*Goose Creek Sanitary Sewer Collection System*
Date the CMP was prepared	*12/17/2024*

Projects with Planning Modules Approved by DEP, or Planning is waived

DEP Code #	Date Planning determination approved by DEP	Project Name	Municipality	Total # EDUs Proposed	# EDUs Included in CMP	# connections completed to date
			TOTAL	0	0	0

Connections Management Plan (CMP - Worksheet 2 - Projects with Planning Assigned, but Planning Module not yet approved

Permittee / Facility Owner	*West Chester Borough*
Facility	*Goose Creek Sanitary Sewer Collection System*
Date the CMP was prepared	*12/17/2024*

Projects with Planning Assigned by DEP

DEP Code #	Project Name	Municipality	Total # EDUs Proposed	# EDUs Included in CMP	Required Improvements
1-15003-470-3J	250 East Market Street	West Chester Borough	219	219	Phase 1
TOTAL			219	219	

Connections Management Plan (CMP) - Worksheet 3 - FUTURE PROJECTS

Permittee / Facility Owner	*West Chester Borough*
Facility	*Goose Creek Sanitary Sewer Collection System*
Date the CMP was prepared	*12/17/2024*

Future Projects

Estimated Date the Planning Module will be submitted to DEP	Project Name	Municipality	Total # EDUs Proposed	# EDUs Included in CMP	Required Improvements
2025	27 South High Street - Steve's Steaks (4 EDUs - 1 Existing EDUs = 3 New EDUs)	West Chester Borough	3	3	None
2025	34 South High Street - Restaurant (2 EDUs - 1 Existing EDU = 1 New EDU)	West Chester Borough	1	1	None
2025	Miscellaneous	West Chester Borough	20	20	None
2025	410 South High Street	West Chester Borough	125	125	Phase 1
2026	Miscellaneous	West Chester Borough	20	20	Phase 1
2026	The Michaels Organization - North Adams Street Project	West Chester Borough	329	329	Phase 2 & 3
TOTAL			498	498	

Connections Management Plan (CMP) - PAGE 1 - INFORMATION
This CMP has been prepared in conjunction with a Corrective Action Plan, in accordance with the requirements of PA Regulations at Title 25, Chapter 94, regarding Wasteload Management.
The purpose of the CMP is to establish a certain limit on the volume of flow that may be accepted for connection to the overloaded sewer system. A dated version of the CMP will only be valid if it is approved by DEP in writing.
Connections management is required for overloaded sewer systems. It is separate from the Planning Module review process. Projects that are identified in the various pages of this CMP may or may not have Planning Module approval. Planning Modules that have not been approved at the time an overload is determined may be considered for approval only if the current valid version of the CMP includes a sufficient volume of approved flow to accommodate the project.
All projects identified in the CMP shall be understood to be in one of three categories according to their status in the Planning process. The categories are: 1) projects with Planning approved or waived; 2) projects with Planning Module under review; and 3) future projects. "Future projects" are all those for which a Planning Module has not been submitted as of the date the CMP was prepared.
Flow volumes are customarily quantified as Equivalent Dwelling Units (EDUs). Volumes listed in the CMP may be assigned to development projects, or they may be indicated as "miscellaneous" connections. "Miscellaneous" flows approved in the CMP can be assigned to a project at a later time.
It is expected that the CMP may be revised from time to time by the permittee and submitted to DEP for review. A revised, dated version of the CMP will only be valid if it is approved by DEP in writing.
Worksheet 2 ("Planning Assigned") and Worksheet 3 ("Future Projects") of this CMP may identify projects that cannot be accommodated by the number of EDUs shown as Approved by DEP. The permittee shall decide which projects will be allocated the flow from the quantity of EDUs that are approved. The CMP should be revised when EDUs are being assigned to a project and a planning module is submitted to DEP. The CMP should be revised again when the Planning Module has been approved by DEP.
The SUMMARY page of this CMP will show the amount of flow currently approved by DEP for connection to the system.

Permittee / Facility Owner	West Chester Borough
Facility	Goose Creek Sanitary Sewer Collection System
Name of contact for the Permittee/Facility Owner	Sean Mitchell, Wastewater Director
Date of the PREVIOUS APPROVED version of the CMP	12/17/2024
Date of THIS VERSION of the CMP	7/31/2026

CMP Summary *and three* Worksheet *pages should be attached*

Connections Management Plan (CMP) - CMP SUMMARY

Permittee / Facility Owner	*West Chester Borough*
Facility	*Goose Creek Sanitary Sewer Collection System*
Date the CMP was prepared	*7/31/2026*

Permittees may use the table on this page to show the amount of flow they are proposing for connection to the overloaded sewer system. DEP reserves to itself the right to approve an amount of flow that is less than the total amount proposed by the permittee, or to decline to approve new flow, pending the submission of an acceptable demonstration by the permittee that they are making progress on corrective action.

from the three Worksheets	Total # EDUs	# connections completed to date	EDUs included in the CMP
Connections from planning modules approved by DEP	220	0	220
Connections from projects with Planning assigned but module not approved	7		7
Connections from future projects	490		490
Un-allocated "miscellaneous" connection credit in the CMP			0

Date of the PREVIOUS APPROVED CMP	10/14/2025
# EDUs approved by DEP in the PREVIOUS APPROVED CMP	717
# EDUs proposed by the permittee to be added to the CMP	28
# EDUs APPROVED BY DEP to be added to the CMP (The number in this space will be determined by DEP)	28
# EDUs APPROVED BY DEP for inclusion in this CMP (*Previously-approved flow plus new approved flow)*	745

Average Daily Flow is related to EDU according to the following rate:	One EDU equals	239	gallons per day per EDU

Equivalent flow approved to be added to the sewer system [Equivalent flow = (EDUs approved in this CMP) * (rate in gpd/EDU)]	178,055	gallons per day

Connections Management Plan (CMP) - Worksheet 1 - Projects with Planning Approved

Permittee / Facility Owner	*West Chester Borough*
Facility	*Goose Creek Sanitary Sewer Collection System*
Date the CMP was prepared	*7/31/2026*

Projects with Planning Modules Approved by DEP, or Planning is waived

DEP Code #	Date Planning determination approved by DEP	Project Name	Municipality	Total # EDUs Proposed	# EDUs Included in CMP	# connections completed to date
1-15003-470-3J	10/14/2025	250 East Market Street - Apartment Building	West Chester Borough	219	219	0
1-15003-491-X	12/19/2025	340 East Barnard Street - One New Dwelling	West Chester Borough	1	1	0

Connections Management Plan (CMP - Worksheet 2 - Projects with Planning Assigned, but Planning Module not yet approved

Permittee / Facility Owner	*West Chester Borough*
Facility	*Goose Creek Sanitary Sewer Collection System*
Date the CMP was prepared	*7/31/2026*

Projects with Planning Assigned by DEP

DEP Code #	Project Name	Municipality	Total # EDUs Proposed	# EDUs Included in CMP	Required Improvements
1-15003-498-3J	2 West Market Street - The Foundation Restaurant	West Chester Borough	6	6	Phase 1 (Complete)
1-15003-493-3J	27 East Miner Street - One New Dwelling	West Chester Borough	1	1	Phase 1 (Complete)
TOTAL			7	7	

Connections Management Plan (CMP) - Worksheet 3 - FUTURE PROJECTS

Permittee / Facility Owner	*West Chester Borough*
Facility	*Goose Creek Sanitary Sewer Collection System*
Date the CMP was prepared	*7/31/2026*

Future Projects

Estimated Date the Planning Module will be submitted to DEP	Project Name	Municipality	Total # EDUs Proposed	# EDUs Included in CMP	Required Improvements
2026	410 South High Street - Residential Development	West Chester Borough	125	125	Phase 1 (Complete)
2026-2027	Miscellaneous	West Chester Borough	36	36	Phase 1 (Complete)
2027	The Michaels Organization - North Adams Street Project	West Chester Borough	329	329	Phases 2 & 3
TOTAL			490	490	

Main Notes Contacts Fees Details Submittals Workflow Other Requirements

Permit #: SE-26-0028 Status: COMPLETENESS REVIEW Contact: Crawford, Howard Site Address: 305 E GAY ST
Type: SPECIAL EVENT PERMIT Project Name: Veterans Day Parade 2026 Contractor: WEST CHESTER, PA 19380

Name	Value
DAY-OF CONTACT NAME:*	Howard Crawford
DAY-OF CONTACT PHONE NUMBER:*	[redacted]
DATE OF EVENT:*	11/08/2026
SET-UP TIME:*	1330
BREAK-DOWN TIME:*	1600
EVENT START TIME:*	1400
EVENT END TIME:*	1530
TYPE OF EVENT:*	Parade
NUMBER OF PARTICIPANTS:*	250
NUMBER OF WORKERS:*	15
LIST ALL STREET CLOSURES:*	N. Penn st. to Gay St, to Church, to Market to
IMPACT ON PUBLIC TRANSPORTATION:*	No
FOOD VENDORS:*	☐
CRAFTERS:*	☐
CRAFTERS COUNT:*	0

West Chester Police Department
AGREEMENT FOR POLICE SERVICES

401 EAST GAY STREET WEST CHESTER, PA 19380 TELEPHONE: 610-696-2700

Chief of Police

MARTIN DIEGHAN
Lieutenant

Lieutenant

CHRISTOPER DALY
Lieutenant

In order to process your request for police coverage at your event, please complete the information that is listed below. Once this form is complete, please submit it to:

West Chester Police Department
Attention: Staci King
401 East Gay Street
West Chester, PA 19380

Please note that all fees must be received no later than 5 days prior to the event. All police fees for runs and races must be submitted at the time of application. Should you have questions, please call 610-436-1323.

Event Name: Veterans Day Parade

Event Date: 08 Nov 2026 **Start Time:** 1400hrs **End Time:** 1600hrs

Name of Organization Hosting Event: WC Veterans Council/American Legion

Person Responsible for Payment of Fee: Howard Crawford

Address of Person Responsible for Fee: [redacted]

Phone Number of Person Responsible:

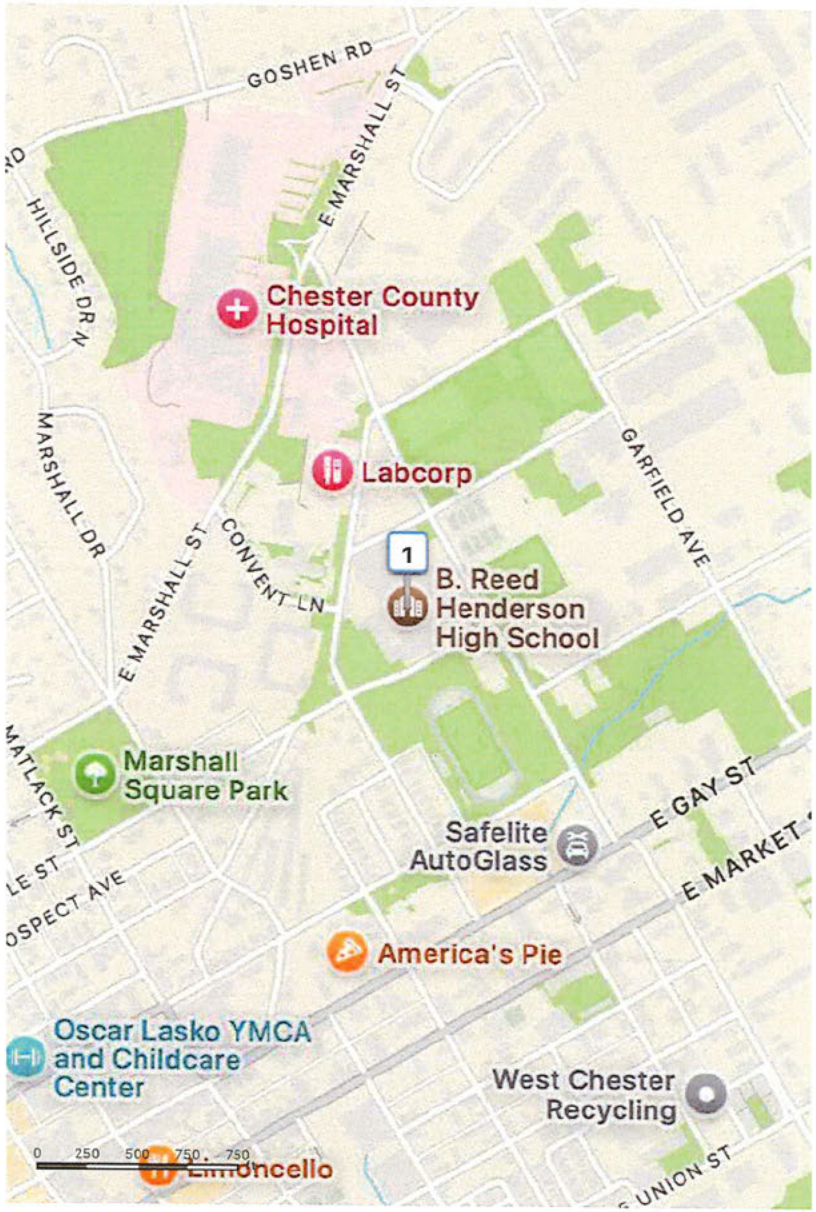
Number of Police Officers Requested: 4-6 (discretion of WCPD)

I, Howard A Crawford certify that I am requesting police coverage for the event listed above and that I am authorized to do so on behalf of the organization. I am aware that police coverage for this event is invoiced at $180.00 per officer, per hour, with a 3 hour minimum for all events. Events that take place on holidays are billed at double time rate.

Howard Crawford
Signature

27 June 2026
Date

Henderson High School
near West Chester





Henderson High School
400 Montgomery Ave
[redacted]

Main Notes Contacts Fees Details Submittals Workflow Other Requirements

Permit #: SE-26-0020 Status: COMPLETENESS REVIEW Contact: Cameron Cotrufello Site Address: Gay Street and Market Street West Chester, PA 19380

Type: SPECIAL EVENT PERMIT Project Name: Unite for HER Run/Walk Contractor:

Name	Value
DAY-OF CONTACT NAME:*	Cameron Cotrufello
DAY-OF CONTACT PHONE NUMBER:*	[redacted]
DATE OF EVENT:*	10/17/2026
SET-UP TIME:*	7:30am
BREAK-DOWN TIME:*	11:30am
EVENT START TIME:*	9:00am
EVENT END TIME:*	11:00am
TYPE OF EVENT:*	Walk/Run
NUMBER OF PARTICIPANTS:*	3000
NUMBER OF WORKERS:*	20
LIST ALL STREET CLOSURES:*	Market and Gay Street Halloween Loop
IMPACT ON PUBLIC TRANSPORTATION:*	Yes
FOOD VENDORS:*	☐
CRAFTERS:*	☐
CRAFTERS COUNT:*	0

West Chester Police Department
AGREEMENT FOR POLICE SERVICES

401 EAST GAY STREET *WEST CHESTER, PA 19380* *TELEPHONE: 610-696-2700*

Josh Lee
Chief of Police

Chris Daly
Lieutenant

Jeffrey Ditz
Lieutenant

James Gorman
Lieutenant

In order to process your request for police coverage at your event, please complete the information that is listed below. Once this form is complete, please submit it to:

West Chester Police Department
Attention: Staci King
401 East Gay Street
West Chester, PA 19380

Please note that all fees must be received no later than 5 days prior to the event. All police fees for runs and races must be submitted at the time of application. Should you have questions, please call 610-436-1323.

Event Name: Unite for HER Run/walk

Event Date: October 17, 2026 **Start Time:** 8:45am **End Time:** 11:00am

Name of Organization Hosting Event: Unite for HER

Person Responsible for Payment of Fee: Cameron Cotrufello

Address of Person Responsible for Fee: [redacted]

Phone Number of Person Responsible: [redacted]

Number of Police Officers Requested: however many needed to faciltate this new setup

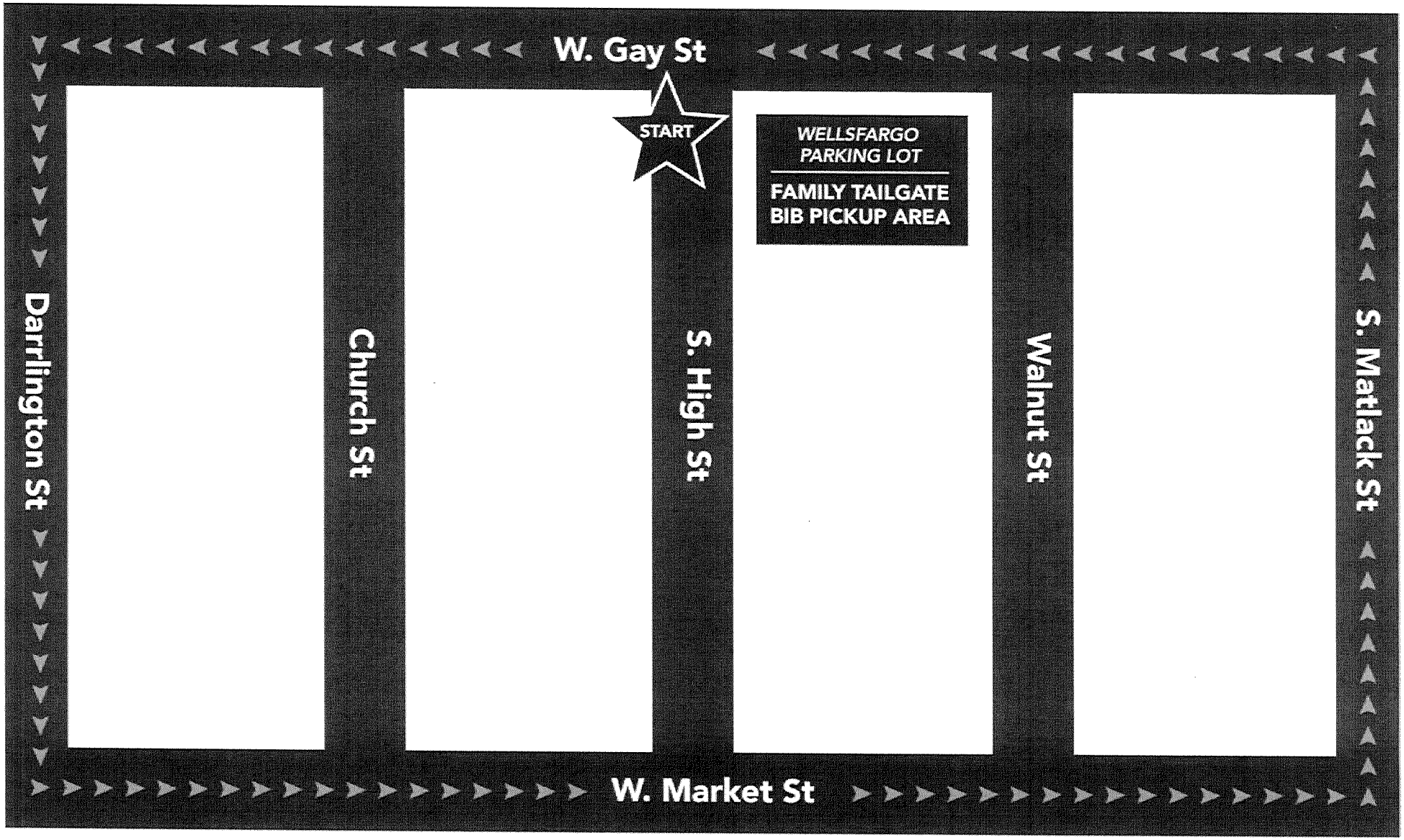
I, Cameron Cotrufello **certify that I am requesting police coverage for the event listed above and that I am authorized to do so on behalf of the organization. I am aware that police coverage for this event is invoiced at $129.00 per officer, per hour, with a 3 hour minimum for all events. Events that take place on holidays are billed at double time rate.**

Signature

June 30, 2026
Date

Unite for HER Presented by health markets

Bud Nestler-Licensed Insurance Agent
(484) 883-3445



Main Notes Contacts Fees Details Submittals Workflow Other Requirements

Permit #: SE-26-0029 Status: COMPLETENESS REVIEW Contact: Ryan, Laurie Site Address: 137 N HIGH ST
Type: SPECIAL EVENT PERMIT Project Name: West Chester Christmas Parade Contractor: WEST CHESTER, PA 19380

Name	Value
DAY-OF CONTACT NAME:*	Laurie Ryan Carly McFadden
DAY-OF CONTACT PHONE NUMBER:*	[redacted]
DATE OF EVENT:*	12/04/2026
SET-UP TIME:*	4:00 pm
BREAK-DOWN TIME:*	9:00 pm
EVENT START TIME:*	7:00 pm
EVENT END TIME:*	8:30 pm
TYPE OF EVENT:*	Parade
NUMBER OF PARTICIPANTS:*	6000
NUMBER OF WORKERS:*	150
LIST ALL STREET CLOSURES:*	All Streets within the parade footprint are clo
IMPACT ON PUBLIC TRANSPORTATION:*	Yes
FOOD VENDORS:*	☐
CRAFTERS:*	☐
CRAFTERS COUNT:*	0

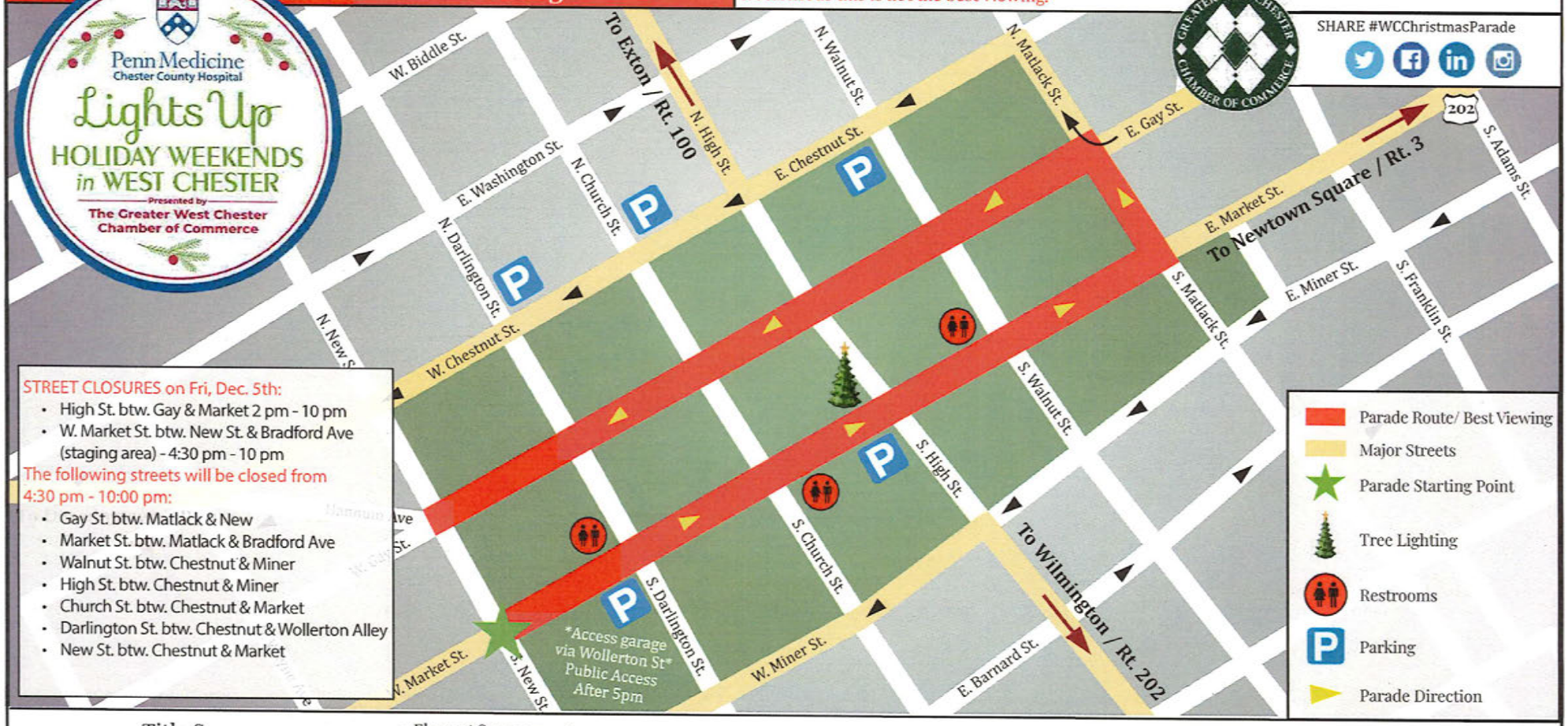
Friday, December 5th, 2025
6:30 pm - Tree Lighting | 7:00 pm - Parade
www.GWCC.org

Penn Medicine Chester County Hospital
Lights Up HOLIDAY WEEKENDS in WEST CHESTER
Presented by The Greater West Chester Chamber of Commerce

The West Chester Christmas Parade will make one loop around the route. Starting and stopping at the same point. Santa can be seen all along the route and will be riding at the end of the parade. We recommend avoiding New St. btw. Gay & Market as this is not the best viewing.

FAMILY TIP:
The best early view of Santa is on Market Street!

SHARE #WCChristmasParade



STREET CLOSURES on Fri, Dec. 5th:

- High St. btw. Gay & Market 2 pm - 10 pm
- W. Market St. btw. New St. & Bradford Ave (staging area) - 4:30 pm - 10 pm

The following streets will be closed from 4:30 pm - 10:00 pm:

- Gay St. btw. Matlack & New
- Market St. btw. Matlack & Bradford Ave
- Walnut St. btw. Chestnut & Miner
- High St. btw. Chestnut & Miner
- Church St. btw. Chestnut & Market
- Darlington St. btw. Chestnut & Wollerton Alley
- New St. btw. Chestnut & Market

- Parade Route/ Best Viewing
- Major Streets
- Parade Starting Point
- Tree Lighting
- Restrooms
- Parking
- Parade Direction

Title Sponsor
Penn Medicine Chester County Hospital

Tree Sponsor
Lasko

Media Sponsors
Main Line Today
VistaToday

Santa Float Sponsors
Lamb McErlane PC Attorneys at Law
Treehouse Group

Element Sponsors
B.E. Duffey & Sons
Sheller Energy

VIP Area Sponsors
Cocoon
Alexander Catering Company
Cafe Gourmino
The Master's Baker

Premium Block Sponsors
Essential Properties
West
FirstBank
Del Vacchio

Half Block Sponsors
West Chester Dental Arts
Rudloff Custom Builders
Scott Auto Group
City Wide
CTDI
Fred Beans Ford West Chester

Quarter Block Sponsors
Rothwell
Bush Infiniti of Westchester
MacElree Harvey
LinkBank
Pegasus
Guided Wealth Management
Arthur Hall Insurance
Saloon
Station 142
Hazley
1st Resource Bank
Pennsylvania American Water
The Golf Zone
RPA Wealth Management
Penn Oaks
DARE

Special Thanks to our other Holiday Sponsors & Partners!
JDog Junk Removal & Hauling
Tobacco Oil Lube Express
Blue Dog Printing & Design
A.J. Blosenski, Inc.
M&T Bank Wilmington Trust
peco An Exelon Company
WSFS bank
West Chester Downtown Foundation

AGREEMENT BETWEEN BOROUGH OF WEST CHESTER AND GREATER WEST CHESTER CHAMBER OF COMMERCE

THIS AGREEMENT (the "Agreement") is made this 20th day of August, 2025 by and between the **BOROUGH OF WEST CHESTER**, a Home Rule Municipality organized under the laws of the Commonwealth of Pennsylvania, with an address of 401 East Gay Street, West Chester, Pennsylvania 19380 (the "Borough") and the **GREATER WEST CHESTER CHAMBER OF COMMERCE** (the "Chamber"), a non-profit corporation with an address of 137 North High Street, West Chester, Pennsylvania 19380 (collectively referred to as the "Parties").

BACKGROUND:

WHEREAS, the Chamber intends to host the annual West Chester Christmas Parade ("Parade") in the Borough; and

WHEREAS, the Chamber must obtain a Special Event Permit ("Permit") to host the Parade in the Borough; and

WHEREAS, as part of the permitting process, the Chamber is required to pay a fee to the Borough with the Special Event Permit Application to reimburse the Borough for the estimated cost of police services that will be provided by the Borough's Police Department at the Parade ("Police Services Fee"); and

WHEREAS, at the request of the Chamber, the Borough has agreed to provide the Chamber with a credit up to Ten Thousand ($10,000.00) Dollars to be applied to the Police Services Fee on an annual basis during the term of this Agreement as long at the Chamber obtains a Permit to host the Parade;

NOW THEREFORE, the Parties hereto intending to be legally bound agree as follows:

1. **Incorporation of Recitals**. The Recitals, as set forth in the Background Section of this Agreement, are incorporated hereinafter by reference.

2. **Permit Terms.** At the time of application for the Special Event Permit for the Parade, the Chamber shall comply with all requirements of obtaining the Permit.

3. **Police Services Fee.** During the duration of this Agreement, as long as the Chamber obtains a Permit to host the Parade, the Borough shall provide the Chamber with a credit

toward the Police Services Fee up to Ten Thousand ($10,000.00) Dollars annually at the time of submitting the application for the Permit.

4. **Term**. The obligations and responsibilities set forth in this Agreement shall commence when this Agreement is approved by Borough Council and shall terminate on December 31, 2028.

5. **Not Assignable**. This Agreement and the provisions hereof are not assignable to any third party.

6. **Effective Date**. This Agreement shall become effective as of the date hereof.

7. **Entire Agreement**. This writing constitutes the entire agreement between the parties with respect to the Police Services Fee for the Permit.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be duly executed this 20th day of August, 2025.

ATTEST:

Sean Metrick, Secretary

BOROUGH OF WEST CHESTER

By: _____
Patrick McCoy, Council President

ATTEST:

_____

GREATER WEST CHESTER CHAMBER OF COMMERCE

By: _____

Chester County Hazard Mitigation Plan

Municipal Adoption Resolution

Resolution No. 2025-
Borough of West Chester

WHEREAS, the Borough of West Chester, Chester County, Pennsylvania, is most vulnerable to natural and human-made hazards which may result in loss of life and property, economic hardship, and threats to public health and safety, and

WHEREAS, Section 322 of the Disaster Mitigation Act of 2000 (DMA 2000) requires state and local governments to develop and submit for approval to the President a mitigation plan that outlines processes for identifying their respective natural hazards, risks, and vulnerabilities, and

WHEREAS, the Borough of West Chester acknowledges the requirement of Section 322 of DMA 2000 to have an approved Hazard Mitigation Plan as a prerequisite to receiving post-disaster Hazard Mitigation Grant Program funds, and

WHEREAS, the Chester County Hazard Mitigation Plan has been developed by the Chester County Department of Emergency Services, in cooperation with other County departments, and officials and citizens of the Borough of West Chester, and

WHEREAS, a public involvement process consistent with the requirements of DMA 2000 was conducted to develop the Chester County Hazard Mitigation Plan, and

WHEREAS, the Chester County Hazard Mitigation Plan recommends mitigation activities that will reduce losses to life and property affected by both natural and human-made hazards that face the county and its municipal governments,

NOW THEREFORE BE IT RESOLVED by the governing body for the Borough of West Chester

- The Chester County Hazard Mitigation Plan is hereby adopted as the official Hazard Mitigation Plan of the Borough of West Chester, and
- The respective officials and agencies identified in the implementation strategy of the Chester County Hazard Mitigation Plan are hereby directed to implement the recommended activities assigned to them.

ADOPTED, this 19th day of August, 2026

ATTEST:

CHESTER COUNTY 2026

HAZARD MITIGATION PLAN UPDATE



PREPARED FOR:

Chester County
Department of Emergency Services
601 Westtown Road, Suite 012
West Chester, PA 19380

PREPARED BY:

Michael Baker International, Inc.
1818 Market Street, Suite 3110
Philadelphia, Pennsylvania 19103

Michael Baker INTERNATIONAL

CERTIFICATION OF ANNUAL REVIEW MEETINGS

The Chester County Hazard Mitigation Planning Team (HMPT) has reviewed this Hazard Mitigation Plan. See Section 8 for further details regarding this form. The director of the team hereby certifies the review.

YEAR	DATE OF MEETING	AUDIENCE	SIGNATURE
2021	N/A	N/A	To the best knowledge of the Chester County Hazard Mitigation Steering Committee (HMSC) no HMP meetings were held before the beginning of the HMP Update process. See Section 3 of the Chester County 2026 HMP Update for details regarding the meetings held during this process.
2022	N/A	N/A	
2023	N/A	N/A	
2024	See Section 3	See Section 3	
2025	See Section 3	See Section 3	
2026	See Section 3	See Section 3	

RECORD OF CHANGES

DATE	DESCRIPTION OF CHANGE MADE, MITIGATION ACTION COMPLETED, OR PUBLIC OUTREACH PERFORMED	CHANGE MADE BY (PRINT NAME)	CHANGE MADE BY (SIGNATURE)
2021-2026	To the best knowledge of the Chester County HMSC no HMP progress reports were submitted from municipalities for the period from 2021 through 2026, although mitigation actions were accomplished in this period. Progress on actions is discussed in detail in Section 6.1 of this plan.	N/A	N/A

REMINDER: Please attach all associated meeting agendas, sign-in sheets, handouts, and minutes.

TABLE OF CONTENTS

CERTIFICATION OF ANNUAL REVIEW MEETINGS ii
RECORD OF CHANGES iii
TABLE OF CONTENTS iv
TABLE OF TABLES vii
TABLE OF FIGURES xiii
ACRONYMS xvi
1. INTRODUCTION 1
1.1. BACKGROUND 1
1.2. PURPOSE 1
1.3. SCOPE 2
1.4. AUTHORITY AND REFERENCES 3
2. COMMUNITY PROFILE 5
2.1. GEOGRAPHY AND ENVIRONMENT 5
2.2. COMMUNITY FACTS 8
2.3. POPULATION AND DEMOGRAPHICS 9
2.4. EQUITY IN HAZARD MITIGATION PLANNING 19
2.5. LAND USE AND DEVELOPMENT 21
2.6. DATA SOURCES 28
3. PLANNING PROCESS 40
3.1. UPDATE PROCESS SUMMARY 40
3.2. THE PLANNING TEAM 41
3.3. MEETINGS AND DOCUMENTATION 48
3.4. PUBLIC AND STAKEHOLDER PARTICIPATION 52
3.5. MULTI-JURISDICTIONAL PLANNING 54
4. RISK ASSESSMENT 63
4.1. UPDATE PROCESS SUMMARY 63
4.2. HAZARD IDENTIFICATION 65
4.2.1. Presidential Disaster Declarations 65
4.2.2. Summary of Hazards 67
4.3. HAZARD PROFILES AND VULNERABILITY ANALYSIS 73
4.3.1. Drought 73

4.3.2. Earthquake 91
4.3.3. Extreme Temperature 106
4.3.4. Flood, Flash Flood, Ice Jam 129
4.3.5. Hurricane, Tropical Storm, Nor'easter 190
4.3.6. Invasive Species 199
4.3.7. Pandemic and Infectious Disease 210
4.3.8. Radon Exposure 224
4.3.9. Tornado, Windstorm 241
4.3.10. Wildfire 263
4.3.11. Winter Storm 285
4.3.12. Cyber Terrorism 293
4.3.13. Dam Failure 299
4.3.14. Environmental Hazards – Gas and Liquid Pipelines 300
4.3.15. Environmental Hazards – Hazardous Materials Release 321
4.3.16. Nuclear Incidents 344
4.3.17. Substance Use Disorder 354
4.3.18. Terrorism 359
4.3.19. Transportation Incidents 366
4.3.20. Urban Fire and Explosion 393
4.3.21. Utility Interruption 397
4.4. HAZARD VULNERABILITY SUMMARY 403
4.4.1. Methodology 403
4.4.2. Ranking Results 405
4.4.3. Potential Loss Estimates 417
4.4.4. Future Development and Vulnerability 427
4.4.5. Community Survey 437
5. Capability Assessment 438
5.1. Update Process Summary 438
5.2. Capability Assessment Findings 440
5.2.1. Planning and Regulatory Capabilities 440
5.2.2. Administrative and Technical Capability 457
5.2.3. Financial Capability 464

5.2.4. Education and Outreach 471
5.2.5. Socially Vulnerable or Underserved Communities 476
5.2.6. Plan Integration 477
6. MITIGATION STRATEGY 485
6.1. UPDATE PROCESS SUMMARY 485
6.1.1. Mitigation Goal and Objective Review 485
6.1.2. Mitigation Action Review 487
6.1.3. Mitigation Successes 534
6.2. Mitigation Goals and Objectives 536
6.3. Identification and Analysis of Mitigation Techniques 539
6.4. Mitigation Action Plan 546
6.5. MITIGATION STRATEGY EQUITY REVIEW 706
7. PLAN MAINTENANCE 707
7.1. Update Process Summary 707
7.2. Monitoring, Evaluating, and Updating the Plan 707
7.3. Continued Public Involvement 709
8. PLAN ADOPTION 710

TABLE OF TABLES

Table 2.3-1 Chester County Population Growth (1-Year ACS, 2023) 10
Table 2.3-2 Chester County Population Growth by Municipality (5-Year ACS, 2023) 10
Table 2.3-3 Chester County Demographics (1-Year ACS, 2023) 14
Table 2.3-4 Demographic Breakdown of Residents Experiencing Poverty Over Time (1-Year ACS, 2023) 17
Table 2.4-1 Chester County Census Tracts in Medium-High to High Challenge Percentiles 19
Figure 2.5-1 Landscapes Map (Chester County Planning Commission, 2018 22
Table 2.5-1 Housing Characteristics in Chester County (5-Year ACS, 2018; 5-Year ACS 2023) 25
Table 2.6-1 Number of Critical Facilities in Chester County by Type and Data Source 31
Table 2.6-2 Critical Facility Definitions for Chester County 31
Table 2.6-3 Critical Facilities by Type for Each Municipality 34
Table 3.2-1 Chester County Hazard Mitigation Plan Steering Committee (HMSC) 41
Table 3.2-2 HMPT Members 42
MUNICIPALITIES- & SPECIAL DISTRICTS 42
NON-MUNICIPAL STAKEHOLDERS 45
Table 3.5-1 2026 Chester County HMP Municipal and Special District Participation 56
Table 3.5-2 Chester County HMP Stakeholder Participation 60
Table 4.2.1-1 Presidential Disaster and Emergency Declarations for Chester County 65
Table 4.2.1-2 Gubernatorial Disaster Declarations or Proclamations Affecting Chester County. 66
Table 4.2.1-3 Small Business Administration Disaster Declarations affecting Chester County. 67
Table 4.2.2-1 List and Description of Natural and Manmade Hazards Profiled in the 2026 Hazard Mitigation Plan Update. (PA 2025 Standard Operating Guide) 68
Table 4.3.1-1 Palmer Drought Severity Index (PSDI) Classifications (NOAA NWS, 2005) ... 75
Table 4.3.1-2 Most Likely Lifelines Impacted by Drought 77
Table 4.3.1-3 Drought Status for Chester County from 1980 to 2025 (PA DEP, 2025a). 78
Table 4.3.1-4 Crop Loss Insurance Compensation Due to Drought (USDA, 2025) 79
Table 4.3.1-5 Domestic Wells by Municipality (PaGWIS, 2025) 83
Table 4.3.1-6 Expected Annual Losses to Drought by Census Tract (FEMA NRI, 2025) 85

Table 4.3.2-1 Richter Scale Magnitudes and Associated Earthquake Size Effects 93
Table 4.3.2-2 Modified Mercalli Intensity Scale with associated impacts 94
Table 4.3.2-3 Most Likely Lifelines Impacted by Earthquakes..... 96
Table 4.3.2-4 Housing Units At Least 55 Years Old by Municipality (U.S. Census Bureau, 5-Year ACS, 2023) 98
Table 4.3.2-5 Expected Annual Losses to Earthquake by Census Tract (FEMA NRI, 2025) 100
Table 4.3.3-1 Most Likely Lifelines Affected by Extreme Temperature 116
Table 4.3.3-2 Previous Temperature Extremes Impacting Chester County, 2013 to 2024 (NOAA NCEI, 2024a)..... 117
Table 4.3.3-3 Population Aged 5 or Younger by Municipality (U.S. Census, 2023)..... 121
Table 4.3.3-4 Population Aged 65 or Older by Municipality (U.S. Census, 2023) 123
Table 4.3.3-5 Disabled Population by Municipality (U.S. Census, 2023) 125
Table 4.3.4-1 Land Areas Within Flood Hazard Areas By Municipality..... 130
Table 4.3.4-2 Reported Flooding Hotspots in Chester County (CCWRA, 2024)..... 140
Table 4.3.4-3 Most Likely Lifelines Impacted by Floods, Flash Foods, and Ice Jams 145
Table 4.3.4-4 Flood Categories at the Brandywine Creek at Chadds Ford (CDFP1), Schuylkill River at Pottstown (PTNP1), and East Brandywine Creek Below Downingtown (DWNP1) Gauges (CCWRA, 2025) (NOAA NWS, 2025) 146
Table 4.3.4-5 Historic Crests at the Brandywine Creek at Chadds Ford (CDFP1), Schuylkill River at Pottstown (PTNP1), and East Brandywine Creek Below Downingtown (DWNP1) Gauges 147
Table 4.3.4-6 Past Flood and Flash Flood Events In Chester County 2015 to 2025 (NOAA NCEI, 2025) 148
Table 4.3.4-7 Total RL and SRL Properties in Chester County 164
Table 4.3.4-8 Repetitive Loss Properties by Municipality 166
Table 4.3.4-9 Severe Repetitive Loss Properties by Municipality (FEMA, 2023)..... 167
Table 4.3.4-10 Chester County Municipal Participation in the National Flood Insurance Program 168
Table 4.3.4-11 Recurrence Intervals and Associated Probabilities of Occurrence (USGS, 2024) 171
Table 4.3.4-12 Community Flood Vulnerability in Chester County, 2025 176
Table 4.3.4-13 Vulnerability by Structure Type 182
Table 4.3.4-14 Mobile Home Flood Vulnerability in Chester County 186

Table 4.3.5-1 Saffir-Simpson Scale Categories with associated wind speeds and damages (NOAA, 2025) 192
Table 4.3.5-2 Most Likely Lifelines Impacted by Hurricanes, Tropical Storms, or Nor'easter 194
Table 4.3.5-3 Previous Tropical Storms in or near Chester County (NOAA, 2025) 194
Table 4.3.6-1 Invasive Plant Species Found in Chester County (West Bradford Township, 2025) (DCNR, 2025a) 202
Table 4.3.6-2 Most Likely Lifelines Impacted by Invasive Species 204
Table 4.3.6-3 Previous Occurrences of Invasive Species Events Requiring State Action or Quarantine. 204
Table 4.3.6-4 Invasive Species in Chester County (iMapInvasives, 2025) 205
Table 4.3.6-5 Agricultural Land by Municipality (NLCD, 2023) 207
Table 4.3.7-1 Most Likely Lifelines Impacted by Pandemic and Infectious Diseases 214
Table 4.3.7-2 Significant Influenza Outbreaks over the Past Century (Global Security, 2009; WHO, 2009; WHO, 2025) 214
Table 4.3.7-3 Number of Flu Cases in Chester County by Flu Season (CCHD, 2023; PA Open Data, 2025) 215
Table 4.3.7-4 Cumulative COVID-19 Cases Chester County 2020-2023 (PA Open Data, 2025). 215
Table 4.3.7-5 Population Aged 5 or Younger by Municipality (U.S. Census, 2023) 217
Table 4.3.7-6 Population Aged 65 or Older by Municipality (U.S. Census, 2023) 219
Table 4.3.8-1 Radon risk for Smokers and Non-Smokers (EPA, 2016). 233
Table 4.3.8-2 Most Likely Lifelines Impacted by Radon Exposure 234
Table 4.3.8-3 Housing Units At Least 55 Years Old by Municipality (U.S. Census Bureau, 5-Year ACS, 2023) 235
Table 4.3.8-4 Domestic Wells by Municipality (PaGWIS, 2025) 237
Table 4.3.9-1 Enhanced Fujita Scale (EF-Scale) categories with associated wind speeds. 242
Table 4.3.9-2 Expected Tornado Damages 242
Table 4.3.9-3 Most Likely Lifelines Impacted by Tornadoes or Windstorms 245
Table 4.3.9-4 Previous Tornado and Windstorm Events in Chester County (NCEI 2024) . 247
Table 4.3.9-5 Adverse/Severe Weather Events in Chester County (Chester County DES, 2023-24) 249
Table 4.3.9-6 Mobile homes in Chester County (U.S. Census Bureau, 2023) 251
Table 4.3.9-7 Expected Annual Losses to Tornadoes by Census Tract (FEMA NRI, 2025) 253

Table 4.3.9-8 Expected Annual Losses to Strong Winds by Census Tract (FEMA NRI, 2025) 257
Table 4.3.10-1 Most Likely Lifelines Impacted by Wildfires 264
Table 4.3.10-2 Wildfires in PA Forest District 17 (DCNR, 2025a) 265
Table 4.3.10-3 Brush Fires in Chester County from 2023 to 2025 (Chester County EMS, 2025) 266
Table 4.3.10-4 Structures and Critical Facilities Vulnerable to Wildfire 274
Table 4.3.10-5 Population Vulnerable to Wildfire by Municipality 277
Table 4.3.10-6 Expected Annual Losses to Wildfire by Census Tract (FEMA NRI, 2025) 280
Table 4.3.11-1 Most Likely Lifelines Impacted by Winter Storm 288
Table 4.3.11-2 Previous Winter Storm Events Impacting Chester County from 2013 to 2024 (NOAA NCEI, 2024) 288
Table 4.3.11-3 Housing Units Built Prior to 1940 by Municipality (U.S. Census, 2023) 290
Table 4.3.12-1 Methods of Cyberattacks (PA OHS, 2022) 293
Table 4.3.12-2 Most Likely Lifelines Impacted by Cyberterrorism 296
Table 4.3.14-1 Most Likely Lifelines Impacted by Pipeline Incidents 306
Table 4.3.14-2 Structures Vulnerable to Pipelines 308
Table 4.3.14-3 Structures Vulnerable to Pipeline Incidents by Land Use 311
Table 4.3.14-4 Critical Facilities Vulnerable to Pipeline Incidents 315
Table 4.3.14-5 Population Vulnerable to Pipeline Incidents 318
Table 4.3.15-1 TRI Facilities in Chester County (EPA, 2025) 323
Table 4.3.15-2 Most Likely Lifelines Impacted by Hazardous Materials Release 326
Table 4.3.15-3 Hazardous Materials Incidents Reported to PEMA (2018 to April 2023) 327
Table 4.3.15-4 Hazardous Materials Releases in Chester County (Chester County EMA, 2025) 327
Table 4.3.15-5 Structures Vulnerable to Hazardous Materials Release 330
Table 4.3.15-6 Structures Vulnerable to Hazardous Materials Release 333
Table 4.3.15-7 Critical Facilities Vulnerable to Hazardous Materials Release 338
Table 4.3.15-8 Population Vulnerable to Hazardous Materials Release 341
Table 4.3.16-1 Most Likely Lifelines Impacted by Nuclear Incidents 348
Table 4.3.16-2 Municipalities within the Limerick Generating Station Plume Exposure EPZ 351
Table 4.3.17-1 Most Likely Lifelines Impacted by Substance Abuse 355

Table 4.3.17-2 Number of Reported Accidental Overdose Deaths in Pennsylvania from 2015 to 2023 (OverdoseFreePA, 2023) 356
Table 4.3.18-1 Most Likely Lifelines Impacted by Terrorism 361
Table 4.3.18-2 Terrorist Activity Recorded in Chester County (2015 to 2018) 362
Table 4.3.18-3 Terrorist Activity Recorded in Chester County in 2023 (Chester County DES, 2025) 362
Table 4.3.19-1 Most Likely Lifelines Impacted by Transportation Incidents 370
Table 4.3.19-2 Reportable Traffic Crash Data, 2010 to 2024 (PennDOT, 2025). 371
Table 4.3.19-3 Transportation Incidents Recorded in Chester County (Chester County EMA, 2025). 373
Table 4.3.19-4 Structures Vulnerable to Transportation Incidents, 2025 376
Table 4.3.19-5 Critical Facilities Vulnerable to Transportation Accidents, 2025. 382
Table 4.3.19-6 Population Vulnerable to Transportation Accidents, 2025. 388
Table 4.3.20-1 Most Likely Lifelines Impacted by Urban Explosion and Fire 394
Table 4.3.20-2 Structure Fires Recorded in Chester County Incident Log (Chester County, 2023-24) 395
Table 4.3.21-1 Most Likely Lifelines Impacted by Utility Interruption 398
Table 4.3.21-2 Utility Interruption Events Reported to Chester County EMA 2023 to 2024 (Chester County EMA, 2025) 399
Table 4.3.21-3 Power Outages in Chester County 2020 to 2023 (She, Adetola, and Yun, 2024) 399
Table 4.4-1 Summary of Risk Factor Approach Used to Rank Hazard Risk 403
Table 4.4-2 Ranking of Hazard Types Based on Risk Factor Methodology 407
Table 4.4-3 Jurisdictional Risk Evaluation 409
Table 4.4-4 Historic NFIP Claims by Municipality 418
Table 4.4-5 Chester County Tax Assessed Building Values 420
Table 4.4-6 Population Forecasts 2023 to 2050 by Municipality (DVRPC, 2025) 428
Table 4.4-7 New Housing Units Built in Chester County 2010 to 2024 (CCPC, 2025b) . 431
Table 5.1-1 Relevant Departments and Documents 439
Table 5.2-1 Reported Planning and Regulatory Capabilities 447
TABLE 5.2-2 NFIP Participation in Chester County (FEMA, 2026; PEMA, 2025). 452
TABLE 5.2-3 Floodplain Administrators by Municipality (PA DCED, 2025). 455
Table 5.2-4 Reported Administrative and Technical Capabilities 462

Table 5.2-5 Reported Financial Capabilities 469
Table 5.2-6 2025 Trainings and Exercises 472
Table 5.2-7 Relevant Departments and Documents 478
Table 5.2-8 Municipal Responses to Capability Questionnaire 481
Table 5.2-9 Summary of Self-Assessment Capability Responses Expressed as a Percentage of Responses Received. 483
Table 6.1-1 List and Review Summary of 2021 Mitigation Strategy Goals and Objectives 485
Table 6.1-2 2021 Mitigation Action Progress 488
Table 6.2-1 Chester County 2026 Mitigation Goals and Actions 536
Table 6.3-1 Mitigation Techniques for All Hazards in Chester County 539
Table 6.3-2 Hazards Addressed by Mitigation Actions by Municipality 541
Table 6.4-1 Chester County 2026 Mitigation Action Plan 548
Table 6.4-2 2026 Mitigation Action Plan Prioritization 662

TABLE OF FIGURES

Figure 2.1-1 Chester County Base Map (CDC/ASTDR, 2022) 6
Figure 2.1-2 Chester County Watersheds (USGS, 2024) 7
Figure 2.3-2 Population Density in Chester County 13
Figure 2.3-3 Population Density Under 5 Years Old in Chester County 15
Figure 2.3-4 Population Density 65 Years and Older in Chester County 16
Figure 2.3-5 Population Density Below the Poverty Line in Chester County 18
Figure 2.4-1 FEMA Community Resilience Challenges Index (CRCI) Census Tracts in Chester County (FEMA CRCI, 2024) 20
Figure 2.5-1 Landscapes Map (Chester County Planning Commission, 2018) 22
Figure 2.5-2 Historic Resources and Districts (Chester County Planning Commission, 2018) 24
Figure 2.5-3 Chester County Land Cover (NLCD, 2023) 27
Figure 2.6-1 FEMA's Community Lifelines 30
Figure 3.1-1 Chester County HMP Stakeholder Types 40
Figure 3.3-1 Social Media Post Advertising the Public Open House 50
Figure 3.3-2 Draft Plan Review Meeting Website Advertisement 51
Figure 3.4-1 Public Survey Flyer 53
Figure 3.4-2 Draft Plan Review Meeting Flyer 54
Figure 4.3.1-1 Drought Frequency in Chester County (US Drought Monitor, 2024) 80
Figure 4.3.1-2 Drought Frequency in Chester County (US Drought Monitor, 2024) 82
Figure 4.3.2-1 Approximate USGS Seismic Hazard for Pennsylvania, 2023 92
Figure 4.3.2-2 Map of earthquake epicenters in Pennsylvania 97
Figure 4.3.3-1 Average Temperatures at West Chester 2 NW PA, US (U.S. Climate Data 2024) 106
Figure 4.3.3-2 Urban Heat Island Profile (USGS, 2019b) 108
Figure 4.3.3-3 Surface Temperature Difference by Census Block (DVRPC, 2021) 109
109
Figure 4.3.3-4 Average Maximum Temperature in Chester County, 2021 110
Figure 4.3.3-5 Average Minimum Temperature in Chester County, 2021 111
Figure 4.3.3-6 NWS Heat Index Chart (NOAA NWS, 2024a) 113
Figure 4.3.3-7 NWS Wind Chill Index (NOAA NWS, 2020) 115

Figure 4.3.3-8 Chester County Extreme Heat Hazard Assessment Report (CMRA, 2025) .. 120
Figure 4.3.4-1 Watersheds in Chester County, Pennsylvania 136
Figure 4.3.4-2 Known Hazards and Potential Water Resource Concerns in Chester County (CCWRA, 2024) 138
Figure 4.3.4-3 Reported Flooding Hotspots in Chester County (CCWRA, 2024)..... 139
Figure 4.3.4-4 Diagram identifying Special Flood Hazard Area, 1 percent-annual-chance floodplain (SFHA), floodway and flood fringe (PA DEP, 2023). 141
Figure 4.3.4-5 FEMA Flood Hazard Areas in Chester County 142
Figure 4.3.4-6 Flash Flood Reports in Chester County..... 161
Figure 4.3.4-7 Ice Jams in Chester County 162
Figure 4.3.4-8 Chester County Flooding Hazard Assessment Report (CMRA, 2025) 173
Figure 4.3.5-1 Wind Speed Zones in Chester County 191
Figure 4.3.5-2 Historic Coastal Storms in Pennsylvania, 2024..... 196
Figure 4.3.6-1 Invasive Species Reports in Chester County (iMapInvasives, 2025)..... 201
Figure 4.3.8-1 Sketch of Radon Entry Points into a House (Arizona Geological Survey, 2006) 225
Figure 4.3.8-2 Radon Hazard Zones in Pennsylvania (EPA, 2021) 226
Figure 4.3.8-3 Chester County Average Basement Radon Test Results, 2024..... 228
Figure 4.3.8-4 Chester County Maximum Basement Radon Test Results, 2024 229
Figure 4.3.8-5 Chester County Average First Floor Radon Test Results, 2024..... 230
Figure 4.3.8-6 Chester County Maximum First Floor Radon Test Results, 2024 231
Figure 4.3.8-7 Radon System Manometer in Basement (Scott Home Inspection, 2017) (IRadon, 2024 239
Figure 4.3.8-8 Radon Mitigation Systems (Scott Home Inspection, 2017) (IRadon, 2024).. 239
Figure 4.3.9-1 Design Wind Speeds 244
Figure 4.3.9-2 Historic Tornado Tracks in Chester County, 1950-2024..... 246
Figure 4.3.10-1 Fire Districts in Pennsylvania. 265
Figure 4.3.10-2 Number of Fires and Acres Burned in PA Forest District 17 (DCNR, 2025a)266
Figure 4.3.10-3 Wildfire Origin in Chester County, 2024..... 268
Figure 4.3.10-4 Chester County Wildfire Hazard Assessment Report (CMRA, 2025) 270
Figure 4.3.10-5 Wildfire Hazard Potential in Chester County, 2023..... 272
Figure 4.3.10-6 Forested Areas in Chester County, 2023 273
Figure 4.3.11-1 Mean Annual Snowfall for Chester County, 2021..... 286

Figure 4.3.14-1 Pipelines in Chester County 302
Figure 4.3.14-2 Pipelines in Chester County 303
Figure 4.3.15-1 Location of Toxic Release Inventory (TRI) Facilities in Chester County, 2025 322
Figure 4.3.16-1 Areas of Chester County within Plume Exposure EPZs (Chester County, 2025) 345
Figure 4.3.19-1 Chester County Transportation Systems, 2025 368
Figure 4.3.19-2 Chester County Traffic Volume on Key Roadways, 2024 369
Figure 4.3.19-3 Chester County Transportation Crash Density, 2021-2023 372
Figure 4.3.20-1 2023 Fire in downtown Oxford (6abc, 2023) 393
Figure 4.3.20-2 Damage from 2023 urban fire in downtown Oxford (6abc, 2023) 393
Figure 4.4-1 Chester County Potential Loss Calculated with Hazus 426
Figure 4.4-2 Growth and Rural Resource Areas in Chester County 433
Figure 4.4-3 Farmland Preservation Areas in Chester County 434
Figure 4.4-4 Natural Resource Priority Protection Areas in Chester County 435
Figure 4.4-5 Conservation Clusters and Corridors in Chester County 436

ACRONYMS

ACRONYM	FULL NAME	ACRONYM	FULL NAME
ACS	US Census American Community Survey	NFIP	National Flood Insurance Program
CDC	Centers for Disease Control and Prevention	NFPA	National Fire Protection Association
CFR	Code of Federal Regulations	NIDIS	National Integrated Drought Information System
CRS	Community Rating System	NOAA	National Oceanic and Atmospheric Administration
DCED	Department of Community and Economic Development	NWS	National Weather Service
DCNR	Department of Conservation and Natural Resources	PA DEP	Pennsylvania Department of Environmental Protection
DMA	Disaster Mitigation Act	PaGWIS	Pennsylvania Groundwater Information System
DOH	Department of Health	PASDA	Pennsylvania Spatial Data Access
EF-Scale	Enhanced Fujita Scale	PDSI	Palmer Drought Severity Index
EOP	Emergency Operations Plan	PEMA	Pennsylvania Emergency Management Agency
EOC	Emergency Operations Center	PennDOT	Pennsylvania Department of Transportation
EMC	Emergency Management Coordinator	pCi/L	pico Curies per Liter
EPA	Environmental Protection Agency	RF	Risk Factor
EPZ	Emergency Planning Zone	RL	Repetitive Loss
FEMA	Federal Emergency Management Agency	SFHA	Special Flood Hazard Area
FIRM	Flood Insurance Rate Map	SOG	Standard Operating Guide
FMA	Flood Mitigation Assistance Program	SRL	Severe Repetitive Loss
GIS	Geographic Information Systems	TRI	Toxic Release Inventory
HMGP	Hazard Mitigation Grant Program	UCC	Uniform Construction Code
HMP	Hazard Mitigation Plan	USACE	United States Army Corps of Engineers
HMPT	Hazard Mitigation Planning Team	USDA	United States Department of Agriculture
HMSC	Hazard Mitigation Steering Committee	USGS	United States Geological Survey
ICC	International Code Council	WATS-MPO	Williamsport Area Transportation Study Metropolitan Planning Organization
IBC	International Building Code	WOG	Watershed Outreach Groups
MSA	Metropolitan Statistical Area	WYO	Write Your Own
NDMC	National Drought Mitigation Center		

1. INTRODUCTION

1.1. BACKGROUND

Across the United States, natural and human-caused disasters have led to increasing deaths, injuries, property damage, and interruptions of business and government services. The time, money, and effort spent to recover from these disasters exhaust resources, diverting attention from important public programs and private agendas.

Chester County, Pennsylvania, has experienced a significant number of statewide and county-specific disaster declarations since 1954. The emergency management community, citizens, elected officials, and other stakeholders in Chester County recognize the impact of disasters on the community and have concluded that proactive efforts need to be taken to reduce the impact of natural and human-caused hazards. To that purpose, Chester County is committed to updating and maintaining the Chester County Hazard Mitigation Plan (HMP).

"Hazard mitigation" describes actions taken to prevent or reduce the long-term risks to life and property caused by a hazard event. Pre-disaster mitigation actions are taken in advance of a hazard event and are essential to ending the typical disaster cycle of damage, reconstruction, and repeated damage. With careful selection, mitigation actions can be long-term, cost-effective measures taken to reduce the risk of loss.

Chester County Department of Emergency Services (CCDES) and the Planning Team (composed of Chester County officials, county departments, municipal representatives, emergency responders, school and higher education representatives, community groups, and any other stakeholder with a role in hazard mitigation) have updated this HMP with an all-hazards approach.

The Chester County Hazard Mitigation Plan, also referred to as the Plan or HMP, is the result of work by local officials and citizens of the county to develop a pre-disaster multi-hazard mitigation plan that will not only guide the county towards greater disaster resistance but will also respect the character and needs of the community.

1.2. PURPOSE

This HMP update was developed for the purpose of:

- Providing a blueprint for reducing property damage and saving lives from the effects of future natural and human-caused disasters in Chester County;
- Complying with state and federal legislative requirements for county mitigation in order for the county to be eligible for federal and technical assistance from state and federal hazard mitigation programs;
- Identifying, introducing, and implementing cost-effective hazard mitigation measures in order to accomplish county goals and objectives and to raise awareness and acceptance of hazard mitigation;

- Demonstrating a firm local commitment to hazard mitigation principles; and
- Improving community resiliency following a disaster event.

Adoption of this plan supports Chester County and participating jurisdictions' eligibility to apply for and receive certain federal grant funds that are administered by the Commonwealth of Pennsylvania for Federal Emergency Management Agency (FEMA). This plan complies with the requirements of the Disaster Mitigation Act of 2000, which requires local governments to develop hazard mitigation plans for federal funding for mitigation activities, and its implementing regulations published in Title 44 of the Code of Federal Regulations (CFR) Section 201.6.

1.3. SCOPE

The Chester County 2026 HMP update has been prepared to meet requirements set forth by FEMA and the Pennsylvania Emergency Management Agency (PEMA) in order for the county to be eligible for funding and technical assistance from state and federal hazard mitigation programs. It will be updated and maintained to address both natural and human-made hazards determined to be probable and/or present a risk for multiple deaths/injuries and property damages to the local municipalities within the county. Updates will take place following significant disasters or, at a minimum, this plan will be subject to review and update on an annual basis.

In accordance with the Disaster Mitigation Act (DMA) of 2000, the HMP update documents the following topics:

- Planning Process;
- Hazard Identification;
- Risk Assessment;
- Mitigation Strategy: Goals, Objectives, and Actions;
- Formal Adoption by the Participating Jurisdictions; and
- PEMA and FEMA approval.

The report format is structured in accordance with the most current planning guidance from FEMA, Local Mitigation Planning Policy Guide (2025), and PEMA, Commonwealth of Pennsylvania's All-Hazard Mitigation Planning Standard Operating Guide (SOG) (2025).

It should be noted that future funding for mitigation projects will be contingent upon each jurisdiction in Chester County adopting the Plan. Any jurisdiction that does not adopt the 2026 HMP update within one year of plan approval will be ineligible for pre- and post-disaster mitigation funds and must take additional steps before adopting the plan.

1.4. AUTHORITY AND REFERENCES

Authority for this plan originates from the following federal sources:

- Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C., Section 322, as amended.
- CFR, Title 44, Parts 201 and 206.
- Disaster Mitigation Act of 2000, Public Law 106-390, as amended.
- National Flood Insurance Act of 1968, as amended, 42 U.S.C. 4001 et seq.
- Executive Order 12989 on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. February 1994.

Authority for this plan originates from the following Commonwealth of Pennsylvania sources:

- Pennsylvania Emergency Management Services Code. Title 35, Pa C.S. Section 101.
- Pennsylvania Municipalities Planning Code of 1968, Act 247 as reenacted and amended by Act 170 of 1988.
- Pennsylvania Stormwater Management Act of October 4, 1978. P.L. 864, No. 167.
- Pennsylvania Floodplain Management Act of 1978. P.L. 851, No. 166.
- Pennsylvania Hazardous Material Emergency Planning and Response Act of 1990 (Act 165).

The following FEMA guides and reference documents were used to prepare this document:

- FEMA 386-1: Getting Started. September 2002.
- FEMA 386-2: Understanding Your Risks: Identifying Hazards and Estimating Losses. August 2001.
- FEMA 386-3: Developing the Mitigation Plan. April 2003.
- FEMA 386-4: Bringing the Plan to Life. August 2003.
- FEMA 386-5: Using Benefit-Cost Review in Mitigation Planning. May 2007.
- FEMA 386-6: Integrating Historic Property and Cultural Resource Considerations into Hazard Mitigation Planning. May 2005.
- FEMA 386-7: Integrating Manmade Hazards into Mitigation Planning. September 2003.
- FEMA 386-8: Multijurisdictional Mitigation Planning. August 2006.
- FEMA 386-9: Using the Hazard Mitigation Plan to Prepare Successful Mitigation Projects. August 2008.
- FEMA: Integrating Hazard Mitigation into Local Planning: Case Studies and Tools for Community Officials. March 2013
- FEMA: Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards. January 2013.
- FEMA: National Fire Incident Reporting System 5.0: Complete Reference Guide. January 2015.
- FEMA: Hazard Mitigation Assistance Unified Guidance. February 2015.
- FEMA. Rehabilitation of High Hazard Potential Dams (HHPD) Grant Program FAQ. June 2020.

- FEMA. Region 3 High Hazard Potential Dams: Local and Tribal Mitigation Planning Tips. July 2024.
- FEMA: Local Mitigation Planning Policy Guide. April 2025.
- FEMA: Local Mitigation Planning Handbook. June 2025.

The following PEMA guides and reference documents were used to prepare this document:

- PEMA: Hazard Mitigation Planning Made Easy!
- PEMA Mitigation Ideas: Potential Mitigation Measures by Hazard Type; A Mitigation Planning Tool for Communities. March 2009.
- PEMA. Administrative Processes. December 20, 2019.
- PEMA: Pennsylvania's Hazard Mitigation Planning Standard Operating Guide. 2025.

The following additional guidance document produced by the National Fire Protection Association (NFPA) was used to update this plan:

- NFPA 1600: Standard on Disaster/Emergency Management and Business Continuity Programs. 2007.

Additional materials are present in **Appendix A.**

2. COMMUNITY PROFILE

This section profiles Chester County and its municipalities. Information on the county's geographic profile, climate, demographic profile, and employment and industry profile are provided.

2.1. GEOGRAPHY AND ENVIRONMENT

Chester County encompasses 760 square miles of urban, suburban, and rural areas with woodland and agricultural resource areas. Topography in Chester County includes rolling hills and valleys characteristic of the Piedmont plateau region in the Eastern United States. This region runs along the eastern foothills of the Appalachian Mountains. The highest elevation is 1,071 feet above mean sea level (MSL) at Welsh Mountain in Honey Brook Township and the lowest elevation of approximately 70 feet above MSL is located at the Schuylkill River, Chester-Montgomery county line. Figure 2.1-1 illustrates the county's transportation network, water bodies, and municipal boundaries.

Located in Southeastern Pennsylvania, Chester County is bordered to the southeast by the State of Delaware, to the south by the State of Maryland, to the west by Lancaster County, to the northwest by Berks County, to the northeast by Montgomery County, and to the east by Delaware County.

A considerable number of rivers and streams are present in and around the county and Chester County itself contains 20 rivers, streams, and creeks. French Creek and the Schuylkill River run along the northern part of the county, Octoraro Creek runs along the western border, and the Brandywine Creek forms part of its eastern border. Figure 2.1-2 shows the watersheds in Chester County.

Key features across the county include historic downtowns, regional economic, population, and transportation centers, residential communities, rural villages, open space and woodlands, and farmlands ranging from small, scattered farms to large concentrations of active and diverse farm operations. Water bodies make up 8.7 square miles of the county. Valley Forge National Historical Park lies on the boundary between Chester and Montgomery Counties. Hopewell Big Woods National Historical Site lies on the boundary of Chester and Berks Counties. The Schuylkill River Heritage Area encompasses the northern 1/3 of the county. The Serpentine Barrens are located near the Pennsylvania border with Maryland. Areas in the southeast portion of the county are significant campaign areas from the Battle of Brandywine.

Figure 2.1-1 Chester County Base Map (CDC/ASTDR, 2022)

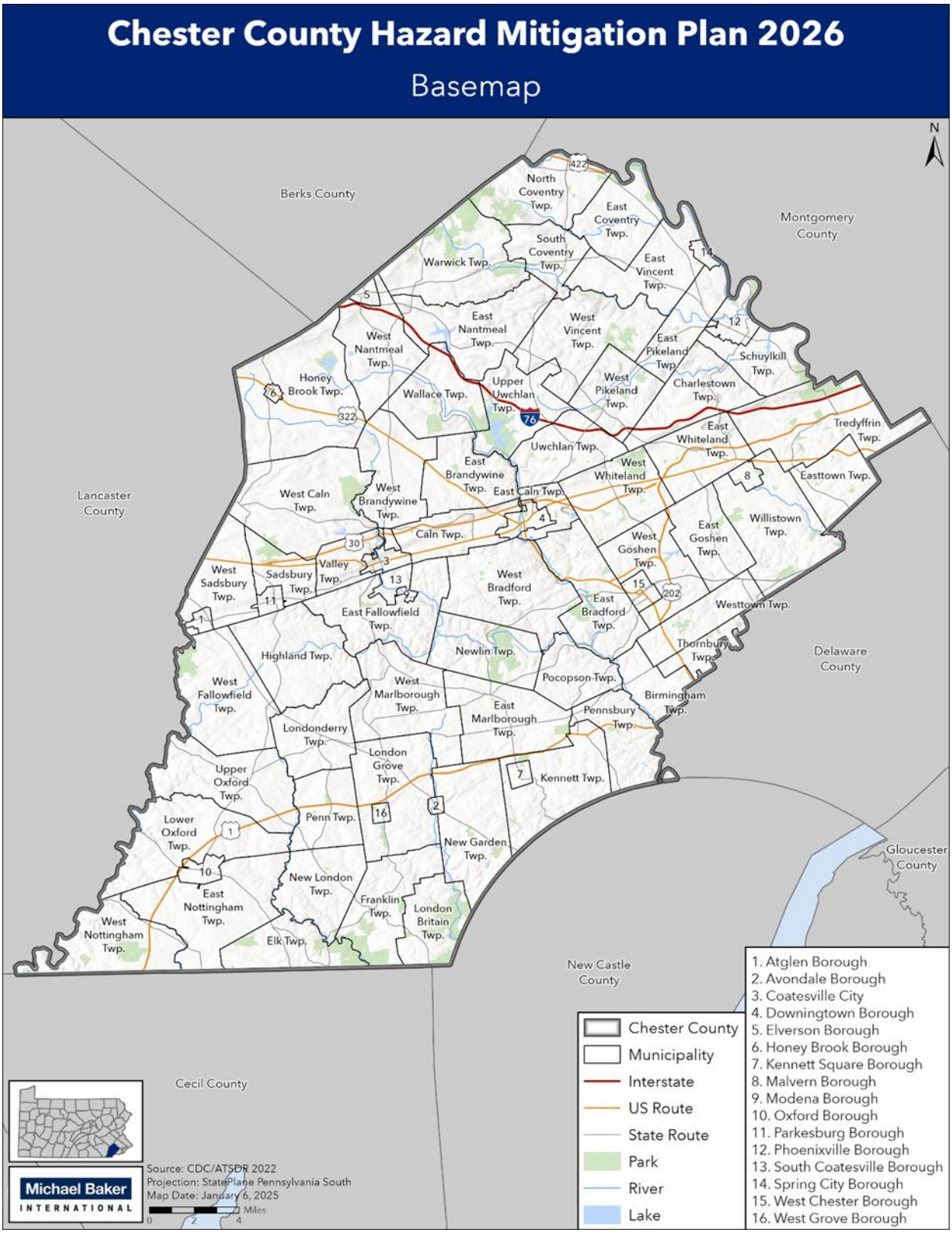
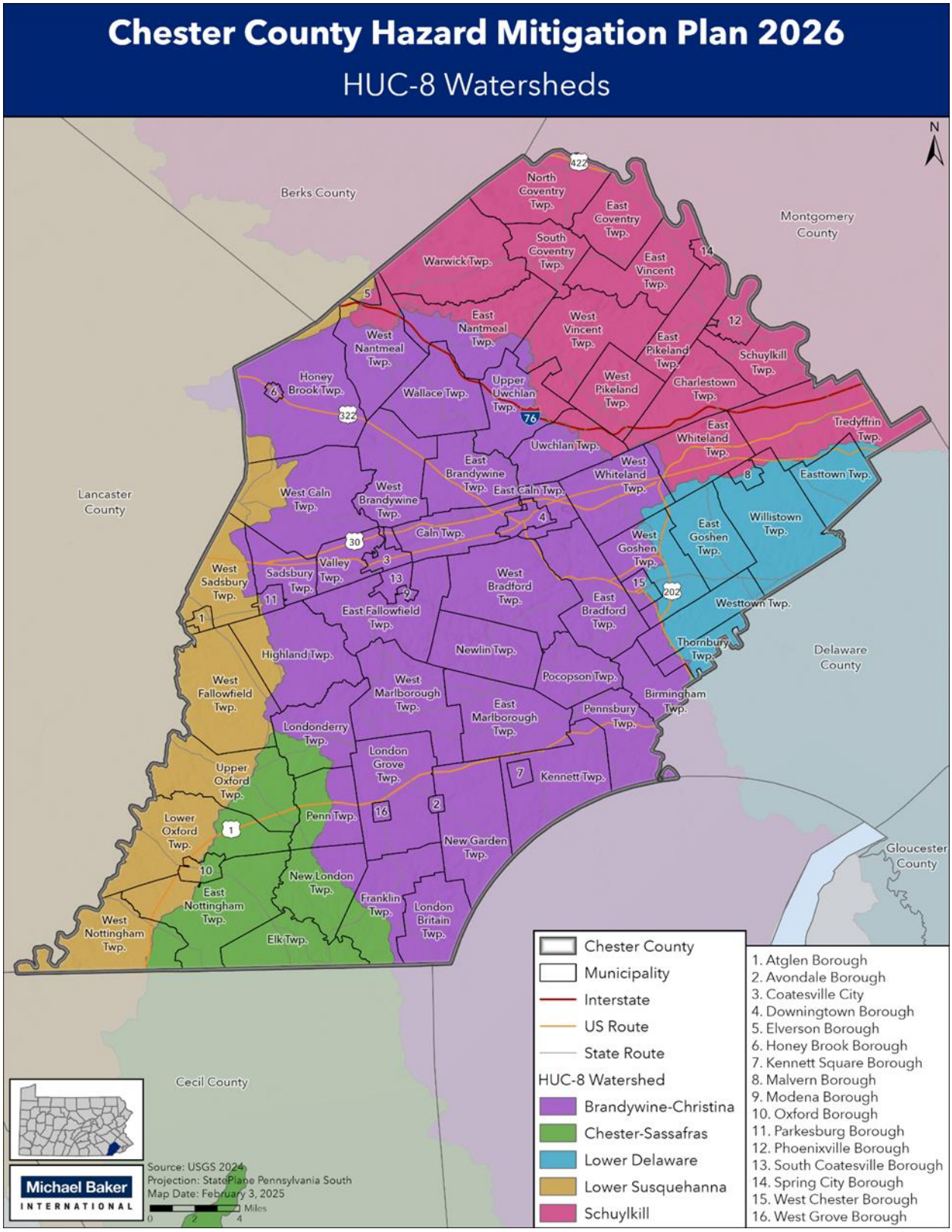


Figure 2.1-2 Chester County Watersheds (USGS, 2024)



2.2. COMMUNITY FACTS

On March 4, 1681, Chester County replaced the Pennsylvania portion of New Netherland/New York's Upland. Chester County was one of the three Pennsylvania counties initially created by William Penn on August 24, 1682. Originally, the county's borders were Philadelphia County to the north, the Susquehanna River to the west, the Delaware River to the East, and Delaware and Maryland to the south.

The first county seat was in the city of Chester, but in 1788, it moved to Turk's Head (later named West Chester), a more central location to accommodate the increased population of the western part of the county. In 1789, the eastern part of the county separated from Chester County becoming Delaware County. A three-person Board of Commissioners administers Chester County government. Since Pennsylvania is a commonwealth state, many rights and duties reside with the municipal elected officials within the county.

The Chester County Planning Commission serves an advisory role to the county supervisors and helps implement the county's comprehensive plan. Chester County is also served by the Delaware Valley Regional Planning Commission (DVRPC), the federally designated Metropolitan Planning Organization (MPO) for the greater Philadelphia region. DVRPC is an advisory agency that convenes partners across their nine-county jurisdiction to address key issues, including those related to transportation, land use, environmental protection, economic development, and equity. DVRPC is responsible for coordinating transportation planning efforts throughout its entire region, including the long-range plan titled Connection 2050 (adopted September 2021) and the DVRPC FY2025 Transportation Improvement Plan for PA that took effect on October 1, 2024.

The first road "to the West", Lancaster County, passed through the central part of Chester County, following the Great Valley westward, which later became known as U.S. Route 30. The first railroad, Pennsylvania Railroad, followed the same route as the Reading Railroad and proceeded up the Schuylkill River to Reading. Improved transportation allowed workers to commute to urban jobs, which led to the rise of the suburbs. There are several key transportation routes throughout the county. The population is clustered along these routes, making transit into Philadelphia and other major metropolitan areas easier. Interstate 76 and Routes 1, 30, and 322 provide for eastbound and westbound travel throughout the county. U.S. Routes 100 and 202 provide for northbound and southbound travel. In addition to these major transportation routes, there are smaller State Routes that support regional transport.

Throughout the mid-19th and 20th century, Chester County was largely rural with farms, mills, and forges easily transporting goods such as corn, wheat, barley, oats, rye, buckwheat, and flax through the Pennsylvania Railroad that linked the county's central valley to Philadelphia. Just before the Civil War, investors built the Philadelphia & Baltimore Central Railroad through the middle of the county to link Philadelphia to the cities of Lancaster to the west and Baltimore to the south. The addition of the railroad to the region grew local economies that were located along the route. The West Chester Railroad opened in 1832, and the West Chester &

Philadelphia Railroad opened in the 1850s, connecting towns within the county to Philadelphia and Delaware. Agriculture served as the county's economic base as it operated within a mostly self-sufficient economy as the demand for meat and dairy rose and transportation was available. The 1860 agricultural census reported that Chester County's 50,000 cattle were used for beef and dairy purposes. Plant cultivation also contributed significantly to the county economy with mushrooms being the best-known food crop. An iron industry also flourished due to the county's rich iron ore deposits and waterpower. During the Civil War, Phoenix Iron produced the Griffin Gun and became a major supplier of the Union Army.

In 1950, the completion of the Pennsylvania Turnpike drastically altered development in the northeast region of the county. The turnpike initially provided only two exits within Chester County (Downingtown and Malvern/Phoenixville). These two exits became the focal points for growth along with the Valley Forge/King of Prussia exit located in Montgomery County at the border with Chester County. Beginning in the 1970s, the stretch of Route 202 between West Chester and King of Prussia attracted hundreds of computer-related companies, biomedical research, and other service and information-based firms and drew thousands of new residents. Large-scale developments multiplied during the 1970s to the 1990s and Chester County lost over 50,000 acres of land to development.

Chester County's economy has traditionally been diverse and stable and employment has consistently been the best in the region. No longer a bedroom suburb of the city, Chester County houses major employment centers for the Philadelphia metropolitan region and is not dominated by a single industry. In the eastern and central sectors of the county, there has been an increase of corporate headquarters, industrial parks, and businesses. Commercial land uses are concentrated in the urban centers and the boroughs along major highways such as Route 202 and Route 30. Industrial land use is extensive in Coatesville, Downingtown, West Chester, and Phoenixville, the county's urban centers.

Chester County includes 73 municipalities with 57 townships, 15 boroughs, and 1 city, which are listed in Table 2.3-2.

2.3. POPULATION AND DEMOGRAPHICS

Population and demographic data provide baseline information about residents. Changes in demographics or population may be used to identify higher-risk populations. Maintaining up-to-date data on demographics will allow Chester County to accurately assess magnitudes of hazards and develop more specific mitigation plans. The American Community Survey (ACS) provides the most statistically accurate population estimates. This plan utilizes 5-Year estimates for all population and demographic data gathered from the U.S. Census Bureau. 2023 5-Year estimates were the most current data during this plan update.

Since the 2021 plan update, Chester County's population has grown considerably. The population increased by almost 3.25% in 2022 despite a 0.57% decrease two years prior, in 2020. From its first federal census counts of 1790, Chester County's population grew by 10.2%

from 498,886 in 2010 to 549,784 in 2023 (ACS, 2023). The county is the seventh most populated in the Commonwealth.

Table 2.3-1 lists county population counts with annual percent population change from 2014 to 2023. As of 2023, Chester County's population density is 721 persons per square mile, compared to the statewide average of 292.

Table 2.3-1 Chester County Population Growth (1-Year ACS, 2023)

YEAR	TOTAL POPULATION	PERCENT CHANGE (%)
2014	512,784	0.65%
2015	515,939	0.62%
2016	516,312	0.07%
2017	519,293	0.58%
2018	522,046	0.53%
2019	524,989	0.56%
2020	521,980	-0.57%
2021	528,649	1.28%
2022	545,823	3.25%
2023	549,784	0.73%

Table 2.3-2 lists municipal population counts in 2010 and 2023 with percent population change in that timeframe. It should be noted that changes in population or demographics may be used to identify higher-risk populations. Maintaining up-to-date data on demographics will allow Chester County to better assess magnitudes of hazards and develop more specific mitigation plans and strategies.

Table 2.3-2 Chester County Population Growth by Municipality (5-Year ACS, 2023)

MUNICIPALITY	2010 POP.	2023 POP.	% CHANGE
Atglen Borough	1,296	1,319	1.8%
Avondale Borough	1,426	1,286	-9.8%
Birmingham Township	4,238	4,086	-3.6%
Caln Township	13,589	14,555	7.1%
Charlestown Township	5,420	6,169	13.8%
Coatesville City	12,774	13,323	4.3%
Downingtown Borough	7,907	8,163	3.2%
East Bradford Township	9,924	10,599	6.8%
East Brandywine Township	6,644	9,935	49.5%
East Caln Township	4,473	5,493	22.8%
East Coventry Township	6,301	7,136	13.3%
East Fallowfield Township	7,065	7,737	9.5%
East Goshen Township	17,978	18,392	2.3%
East Marlborough Township	6,921	7,567	9.3%
East Nantmeal Township	1,784	1,650	-7.5%
East Nottingham Township	8,176	9,022	10.3%
East Pikeland Township	7,036	8,413	19.6 %
Easttown Township	10,538	11,015	4.5%

Table 2.3-2 Chester County Population Growth by Municipality (5-Year ACS, 2023)

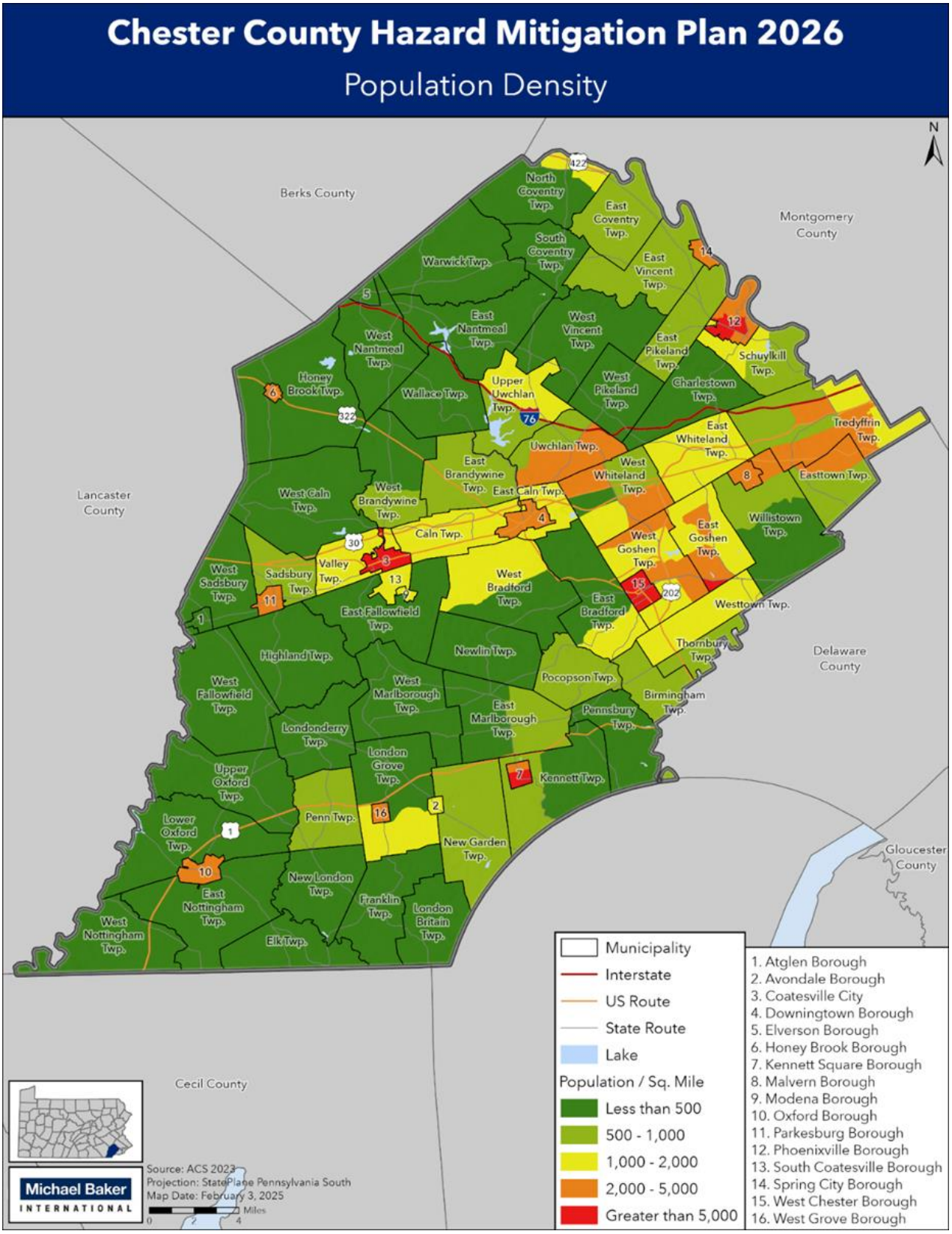
MUNICIPALITY	2010 POP.	2023 POP.	% CHANGE
East Vincent Township	6,633	7,521	13.4%
East Whiteland Township	10,481	14,459	38.0%
Elk Township	1,683	1,731	2.9%
Elverson Borough	1,266	1,392	10.0%
Franklin Township	4,286	4,430	3.4%
Highland Township	1,235	1,225	-0.8%
Honey Brook Borough	1,518	2,089	37.6%
Honey Brook Township	7,431	8,319	11.9%
Kennett Township	7,418	8,763	18.1%
Kennett Square Borough	5,959	6,096	2.3%
London Britain Township	3,098	3,200	3.3%
Londonderry Township	2,136	2,525	18.2%
London Grove Township	7,134	8,884	24.5%
Lower Oxford Township	5,066	5,570	9.9%
Malvern Borough	3,023	3,427	13.4%
Modena Borough	466	348	-25.3%
New Garden Township	11,573	11,423	-1.3%
Newlin Township	1,319	1,223	-7.3%
New London Township	5,481	5,823	6.2%
North Coventry Township	7,841	8,419	7.4%
Oxford Borough	4,971	5,763	15.9%
Parkesburg Borough	3,582	3,894	8.7%
Penn Township	4,938	5,654	14.5%
Pennsbury Township	3,607	3,875	7.4%
Phoenixville Borough	16,249	19,062	17.3%
Pocopson Township	4,411	4,452	0.9%
Sadsbury Township	3,406	4,248	24.7%
Schuylkill Township	8,306	8,811	6.1%
South Coatesville Borough	1,359	1,843	35.6%
South Coventry Township	2,493	2,796	12.2%
Spring City Borough	3,346	3,551	6.1%
Thornbury Township	2,969	3,181	7.1%
Tredyffrin Township	29,480	31,822	7.9%
Upper Oxford Township	2,589	2,547	-1.6%
Upper Uwchlan Township	10,498	12,731	21.3 %
Uwchlan Township	17,937	19,231	7.2%
Valley Township	6,537	7,965	21.8%
Wallace Township	3,449	3,736	8.3%
Warwick Township	2,537	2,596	2.3%
West Bradford Township	12,012	14,520	20.9%
West Brandywine Township	7,382	7,534	2.1%
West Caln Township	8,744	8,938	2.2%
West Chester Borough	18,530	19,235	3.8%
West Fallowfield Township	2,567	2,430	-5.3%

Table 2.3-2 Chester County Population Growth by Municipality (5-Year ACS, 2023)

MUNICIPALITY	2010 POP.	2023 POP.	% CHANGE
West Goshen Township	21,773	23,281	6.9%
West Grove Borough	2,838	2,791	-1.7%
West Marlborough Township	899	891	-0.9%
West Nantmeal Township	2,024	2,203	8.8%
West Nottingham Township	2,727	2,803	2.8%
West Pikeland Township	3,968	4,026	1.5%
West Sadsbury Township	2,204	2,570	16.6%
Westtown Township	10,811	11,201	3.6%
West Vincent Township	4,345	6,751	55.4%
West Whiteland Township	18,074	19,951	10.4%
Willistown Township	10,472	11,286	7.8%

Population density in Chester County is shown in Figure 2.3-2. The Borough of West Chester has the highest population density of all the municipalities in the county (10,771 persons per square mile) (ACS, 2020). Most of the municipalities in Chester County have population densities above the statewide average. However, many municipalities in the county have low population density. Dispersing information, instructions, and resources during a disaster response is more difficult in low-density areas, since residents are less centralized.

Figure 2.3-2 Population Density in Chester County



As of 2023, 15,289 people in Chester County live in group quarters. The term "group quarters" refers to communal living settings such as prisons, college dormitories, or long-term care facilities. West Chester University's main campus, comprised of north campus and south campus, occupies parts of West Chester Borough, West Goshen Township and East Bradford Township. The total enrollment at the main campus during fall 2022 was 17,076 students. The campus has 1,879 total employees, 1,526 full-time and 353 part-time (West Chester University, 2023). Residents living in group quarters may have unique needs during hazard events. It is important to ensure that each group quarter facility has its own emergency plan to account for the unique needs of its residents during a hazard event.

While low-density areas may provide challenges to disseminating hazard mitigation information, a low population density also means that hazards will not affect as many people. For example, diseases may not spread as quickly because citizens are in contact with fewer people. Similarly, fires are less likely to spread to other structures because of the large distances between them. The magnitude of an event is typically smaller in a less-populated area because each event affects fewer people and properties.

Table 2.3-3 highlights some demographic information for Chester County. The median age of 40.6 years. Population densities for individuals under the age of five are shown in Figure 2.3-2 below, while population densities for individuals aged 65 and older are shown in Figure 2.3-3. These populations are concentrated in boroughs and northeastern townships, where overall population density is higher.

Table 2.3-3 Chester County Demographics (1-Year ACS, 2023)

DATA POINT	2023 FIGURE
Total Population	549,784
Female	277,737
Male	272,047
Median Age (years)	40.6
Under 5 years	29,208
5 – 19 years	106,892
20 – 64 years	312,466
65 years and older	101,218

Figure 2.3-3 Population Density Under 5 Years Old in Chester County

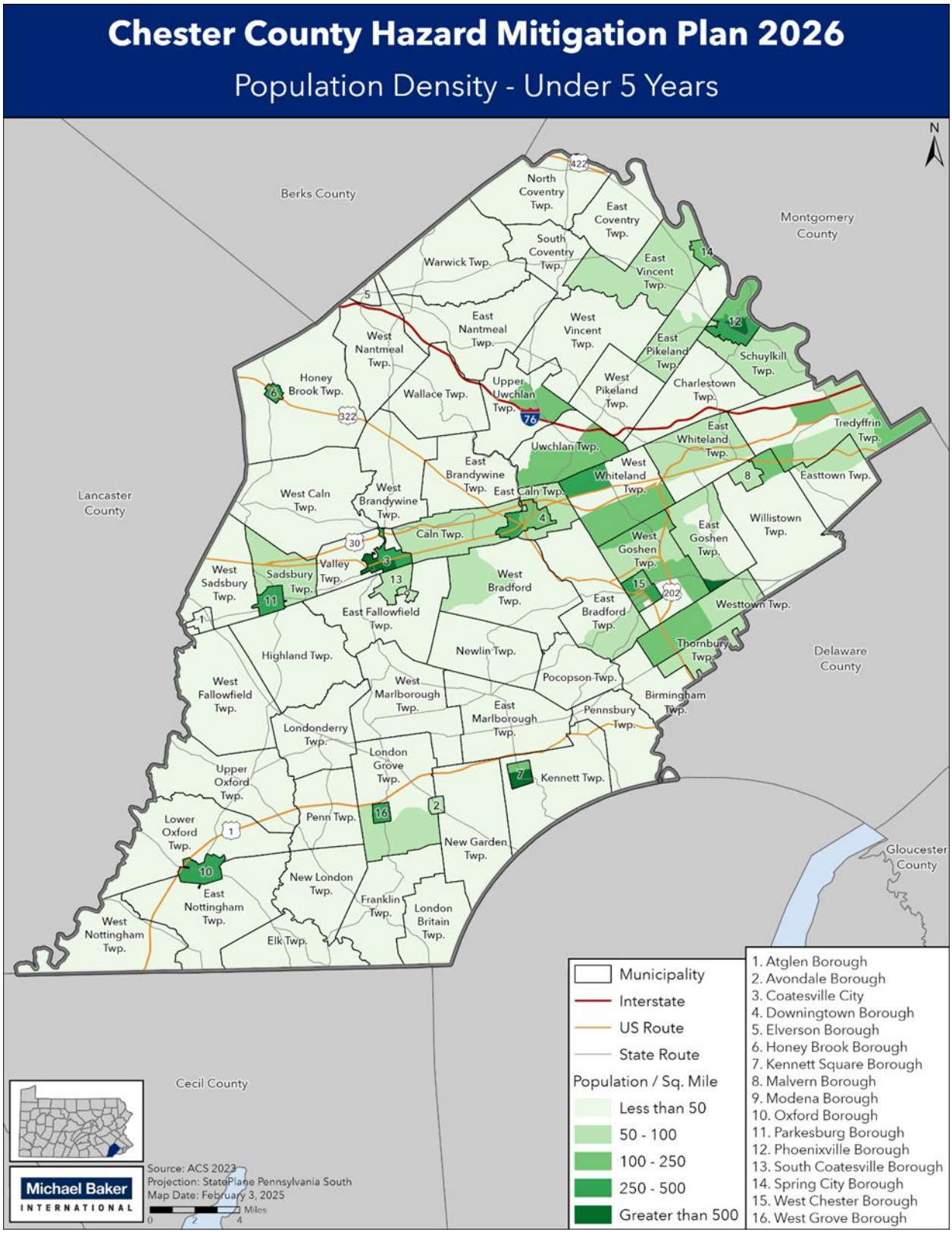
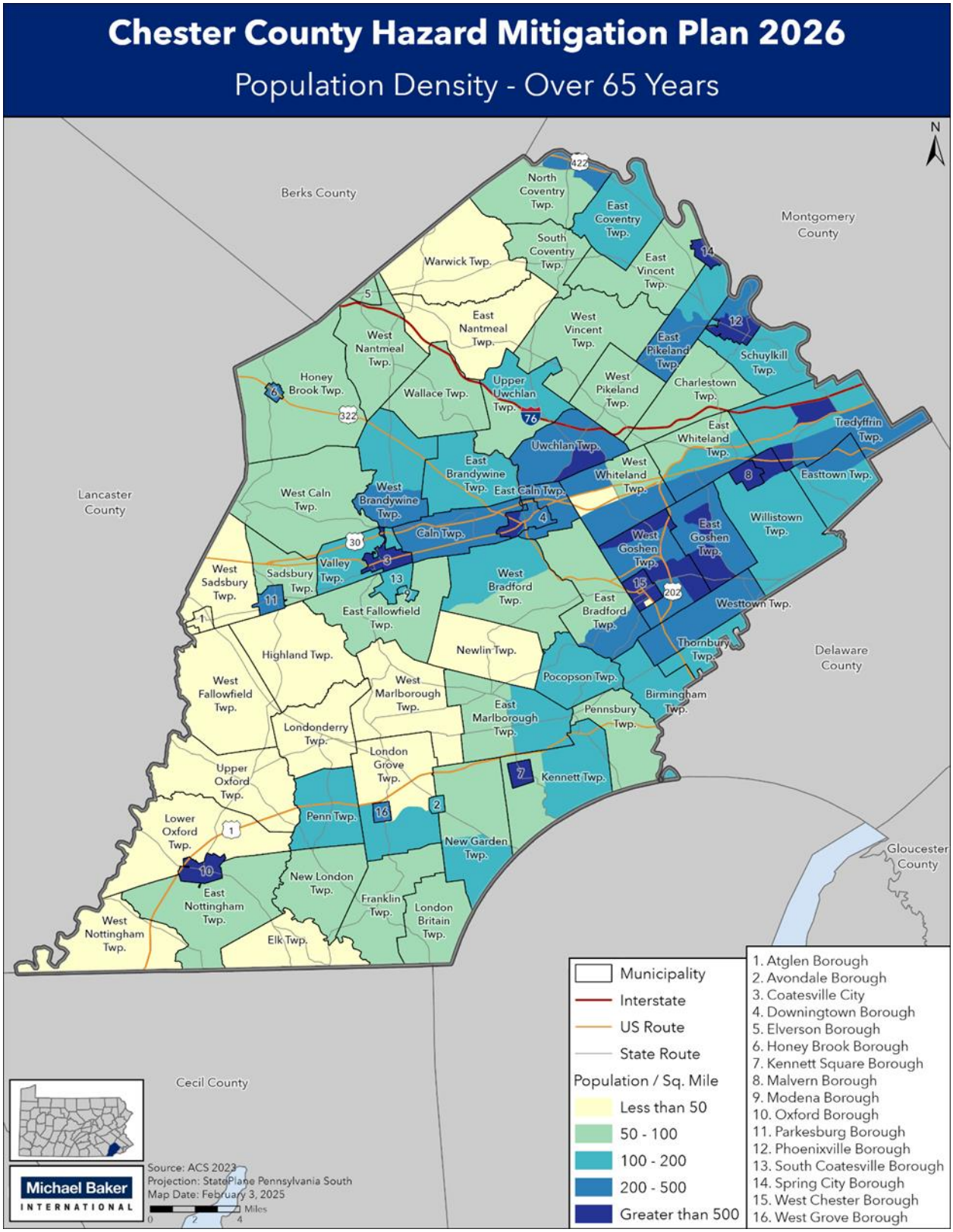


Figure 2.3-4 Population Density 65 Years and Older in Chester County



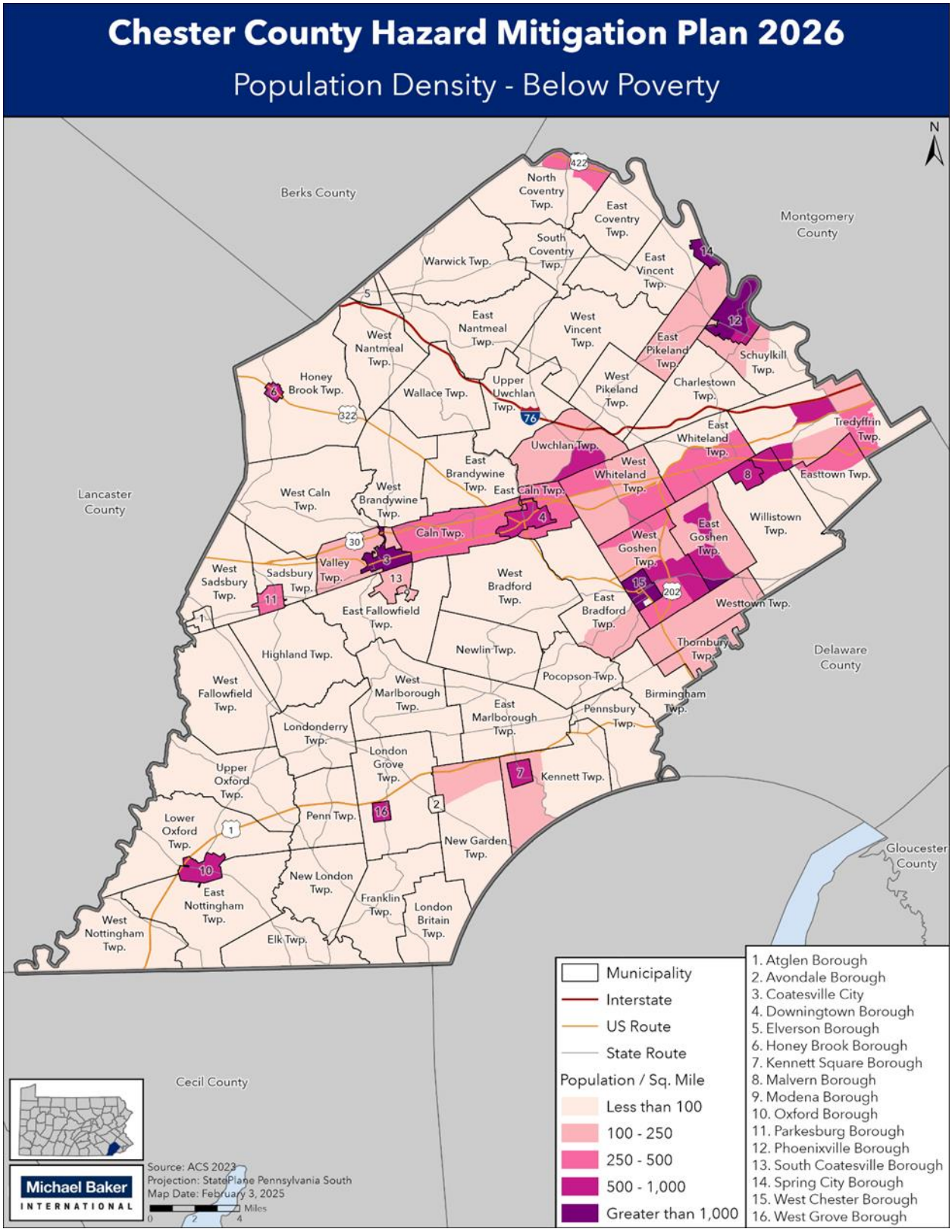
In 2023, the median household income in the county was $123,041, which was higher than the Commonwealth's estimated median household income ($76,081). The county's 2023 estimated per capita income of $62,011 was higher than the Commonwealth's 2023 estimated per capita income of $42,605. Approximately 5.9% of the population lives in poverty. Emergency responders may face challenges communicating with lower-income residents due to limited internet access and lower rates of smartphone ownership. Additionally, some low-income families and individuals may not own vehicles and therefore could be more vulnerable during an evacuation. Table 2.3-4 summarizes economic characteristics of Chester County's population and population distribution of residents with poverty status. Figure 2.3-4 showcases the population density of individuals below the poverty line by municipality. Similar to findings in the maps above, boroughs in general, and boroughs and townships in the northeast of the county have higher densities of individuals experiencing poverty.

Table 2.3-4 Demographic Breakdown of Residents Experiencing Poverty Over Time (1-Year ACS, 2023)

YEAR	TOTAL POPULATION		CHILDREN (UNDER 18)		SENIORS (65 AND OVER)	
	#	%	#	%	#	%
2018	34,217	6.8%	9,969	8.2%	3,588	4.6%
2020	31,889	6.3%	8,649	7.4%	4,084	4.9%
2023	31,305	5.9%	8,914	7.4%	4,772	5.2%

According to the 2019-2023 American Community Survey, 13.3% of the county's population speaks a language other than English at home. Future hazard mitigation strategies should consider addressing language barriers to ensure that all residents can receive emergency instructions.

Figure 2.3-5 Population Density Below the Poverty Line in Chester County



2.4. EQUITY IN HAZARD MITIGATION PLANNING

When planning for natural disasters or other hazardous events, accounting for underserved communities through an equitable approach is critical for minimizing negative impacts. Underserved communities are those that have been marginalized and lack adequate access to essential services, resources, and opportunities, often including low-income neighborhoods, communities of color, and rural areas. An equitable approach ensures fair distribution of resources and support tailored to the unique needs of different groups

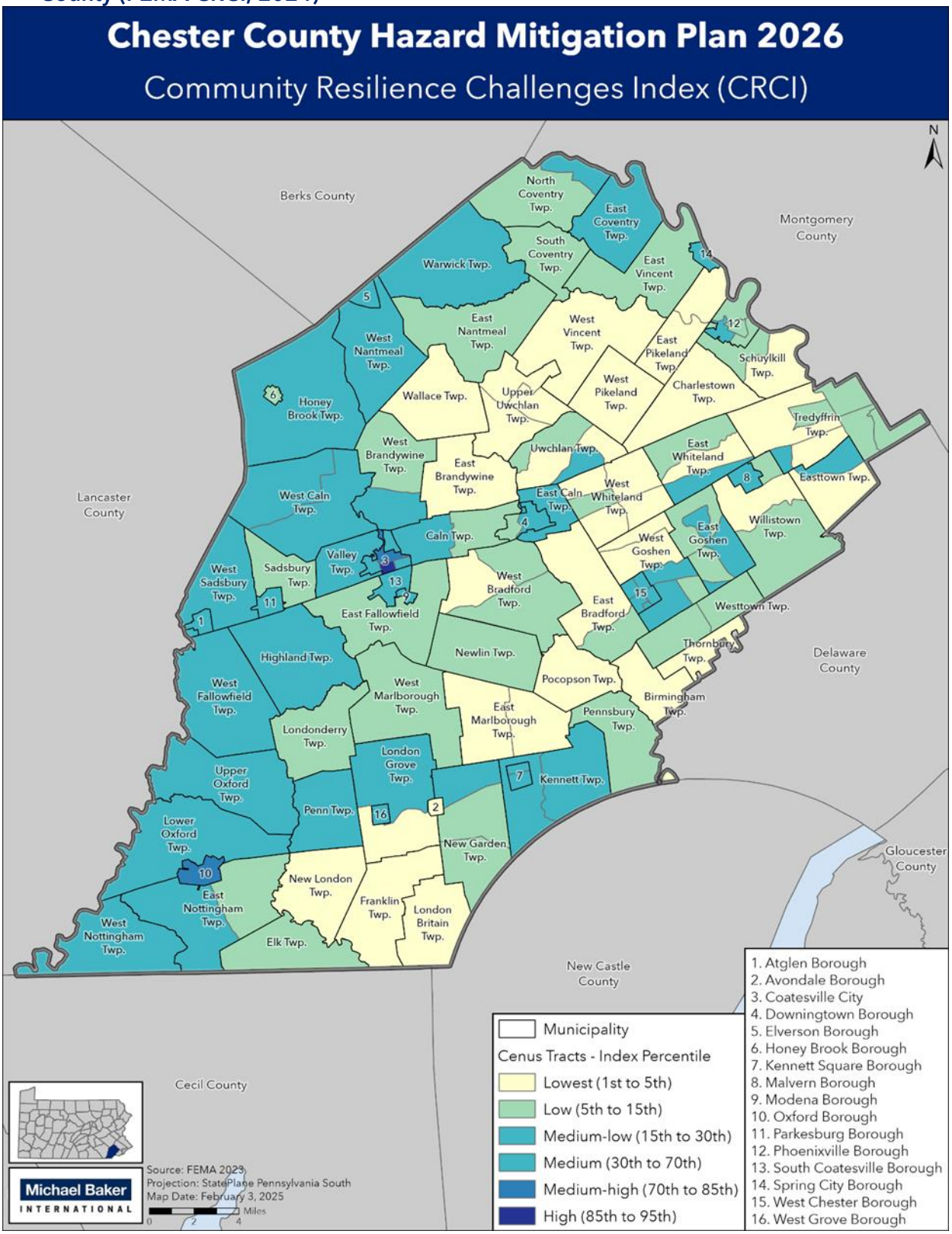
Incorporating equity into mitigation plans ensures that these vulnerable populations receive the attention and resources necessary to reduce their risk and enhance their resilience. This approach not only addresses existing social inequalities but also leads to more effective and sustainable disaster management outcomes, ensuring that all communities have the opportunity to thrive in the face of adversity.

Chester County has three census tracts that have medium-high challenges or are in the 70th or higher percentile for challenges, listed in Table 2.4-1. To adequately target these underserved communities, targeted outreach was a fundamental part of the County's hazard mitigation plan. The HMP's outreach strategy (**Appendix H**) discusses the Steering Committee's work to identify underserved communities using local knowledge and tools. Local knowledge, gained through work with representative groups, was used to identify stakeholders in underserved communities who later shared their input to help make the plan and mitigation strategy more inclusive. Equity tools published by FEMA simultaneously helped to corroborate findings from the outreach plan.

Table 2.4-1 Chester County Census Tracts in Medium-High to High Challenge Percentiles

CENSUS TRACT	MUNICIPALITY	PERCENTILE	CHALLENGE PERCENTILE
3055	Coatesville	78	Medium-High Challenges (70th-85th percentile)
3056	Coatesville	88	High Challenges (85th-95th percentile)
3080	Oxford	73	Medium-High Challenges (70th-85th percentile)

Figure 2.4-1 FEMA Community Resilience Challenges Index (CRCI) Census Tracts in Chester County (FEMA CRCI, 2024)

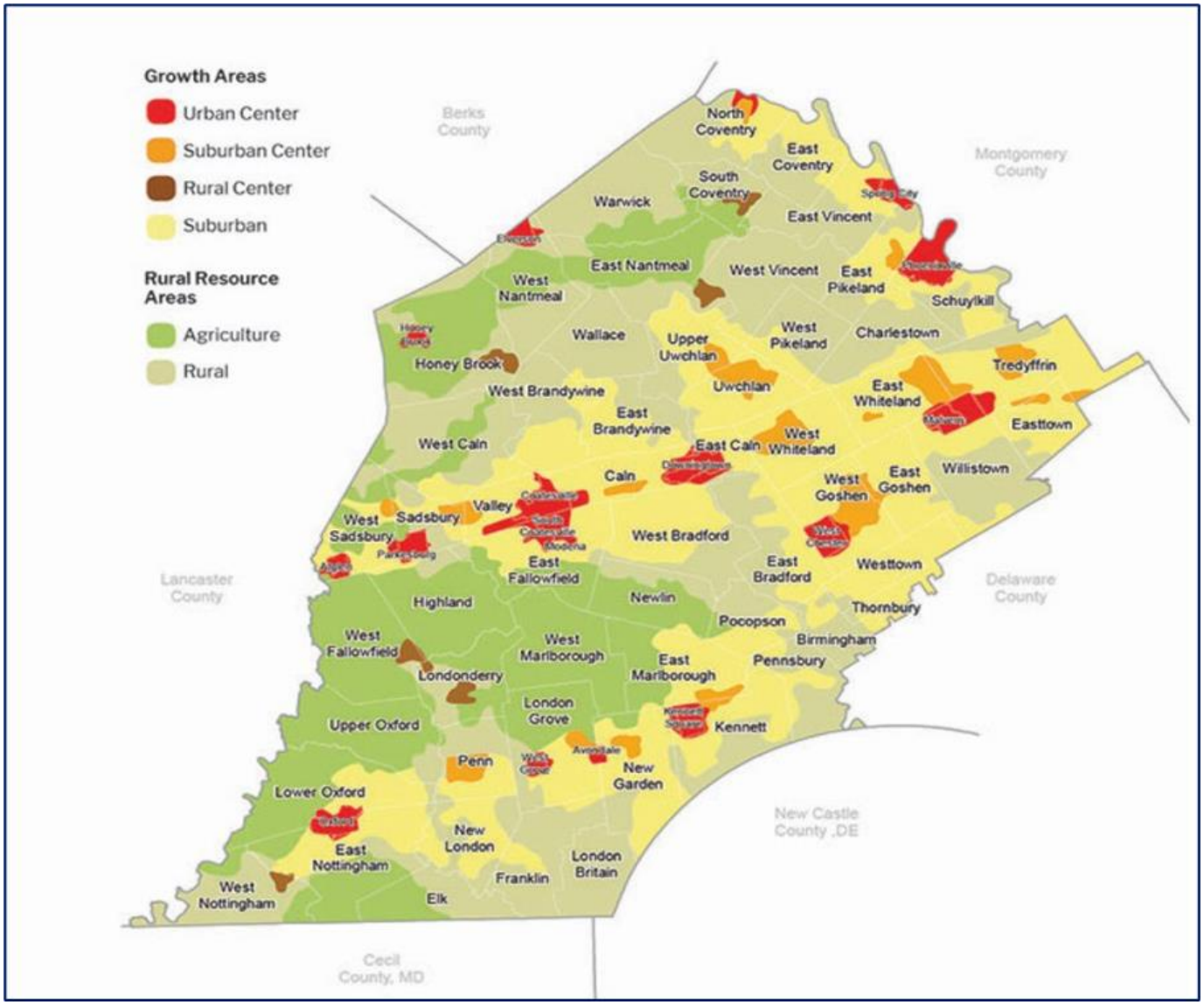


2.5. LAND USE AND DEVELOPMENT

Chester County's land use patterns are influenced by its topography and existing infrastructure. The existing land use pattern reflects suburban expansion from Philadelphia into eastern Chester County, making the eastern side into a more urban area. The rest of Chester County reflects the continued spread of residential development into rural areas, making them less rural and more suburban in character. A good portion of Chester County is still used for agriculture, but the major portion of the county's economy is spread through the health care, professional, retail, finance, and manufacturing industries. Most development in Chester County is concentrated in the eastern part of the county and along Route 30 through the center of the county and along Route 1 in the south. There is a high density of employment in Tredyffrin, East Whiteland, Malvern, West Whiteland, Uwchlan, Downingtown, West Goshen, and West Chester. Outside of those areas, the county is composed of small towns and residential neighborhoods interspersed with farms, and forested lands.

Locations for development are primarily located along the major transportation corridors in more populated areas and underutilized properties to provide viable options to potential new businesses. Figure 2.5-1 illustrates potential growth areas in Chester County included in the 2018 Chester County Comprehensive Plan: Landscapes3. The Landscapes Map is the county's guide for growth and rural resource protection. Landscapes may be appropriate for multiple land uses, with the mix and intensity varying to reflect the character of the specific area.

Figure 2.5-1 Landscapes Map (Chester County Planning Commission, 2018)



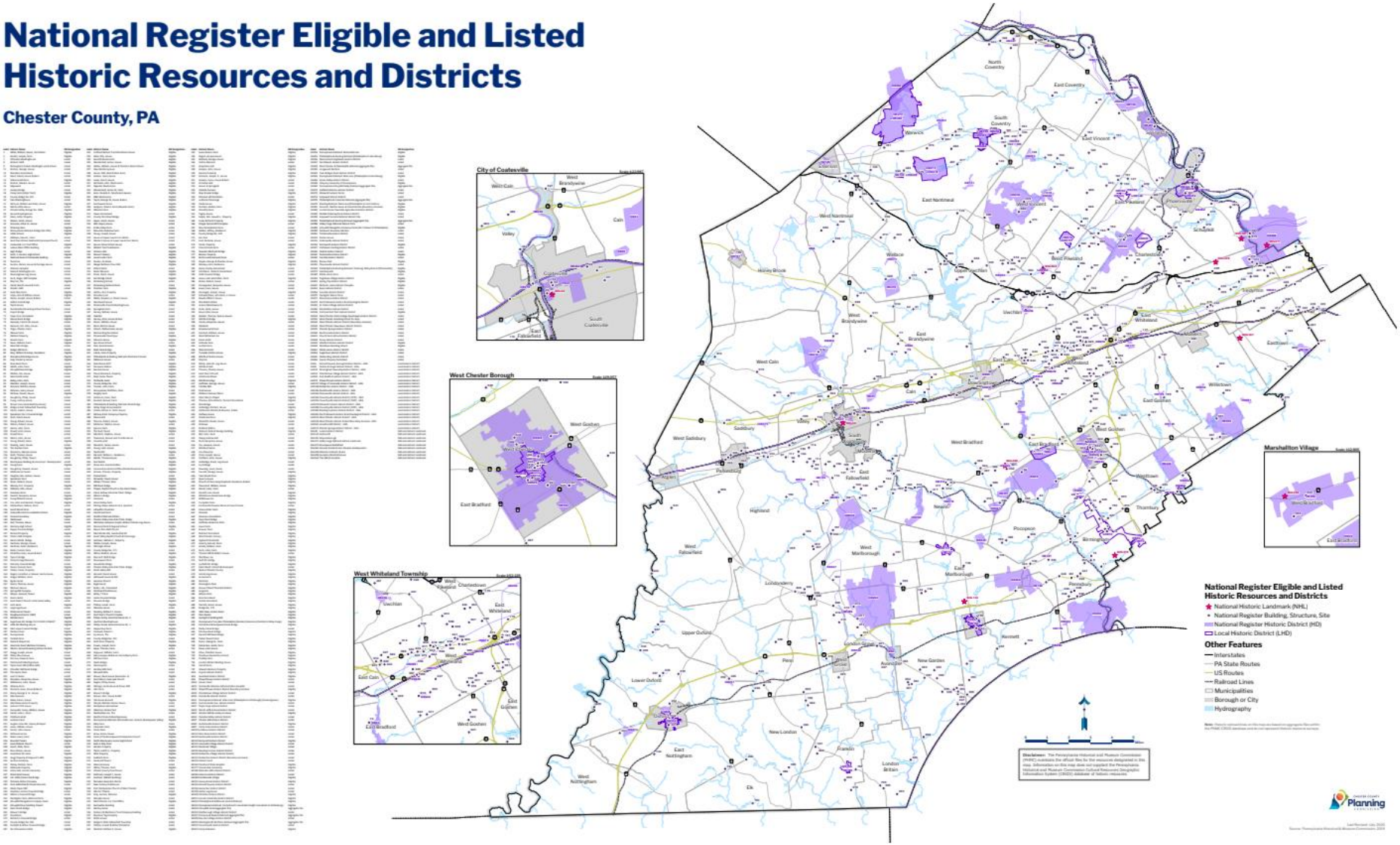
Landscapes3 establishes a balance of growth and preservation for the county, municipalities, the public, and the business community by guiding decision making and local municipal planning and implementation. The plan incorporates smart growth principles and promotes programs that build community and environmental resilience. Information on how hazard risk relates to these growth areas is discussed in **Section 4.4**.

Chester County's older and historic places make important contributions to its communities' overall quality of life, economy, and sense of place. In the wake of several disasters in recent years including hurricanes Sandy and Irene and Tropical Storm Lee, the Pennsylvania State Historic Preservation Office (PA SHPO) and the Pennsylvania Emergency Management Agency (PEMA) are encouraging counties to integrate historic preservation considerations into local

hazard mitigation plans. By prioritizing historic resources for mitigation, local officials and hazard mitigation planners can help preserve communities' historic built environments—and sense of place—for many years to come.

Figure 2.5-2 identifies the historic resources of Chester County, including National Historic Landmarks, National Register resources, and local historic districts. It can also be found at https://www.chescoplanning.org/Resources/PDFmaps/NationalRegisterHistoricResources.pdf.

Figure 2.5-2 Historic Resources and Districts (Chester County Planning Commission, 2018)



According to 2023 ACS 5-Year estimates, Chester County contains 210,730 housing units. These properties may be vulnerable to various natural hazards, particularly those located in defined hazard areas. Damage to residential properties is not only costly to repair or rebuild but devastating to the displaced residents.

Approximately 3.9% of the county's residential properties are vacant. Most vacancies are in the form of units available for rent. Vacant buildings are especially vulnerable to arson and other criminal activity. Because vacant properties are not inhabited year-round or may not be adequately maintained, many are structurally deficient and at risk of collapse.

Approximately 25.1% of the county's population live in rented homes. Because renters are more transient than homeowners, communicating with renters may be more difficult than communicating with homeowners. Similarly, communication with tourists would be more challenging during an emergency event. Communication strategies should be developed to ensure that these populations receive proper notifications.

Table 2.5-1 summarizes characteristics of the residential properties in Chester County.

Table 2.5-1 Housing Characteristics in Chester County (5-Year ACS, 2018; 5-Year ACS 2023)

HOUSING CHARACTERISTICS	2018	2023
Owner-occupied housing units	142,649	202,405
Renter-occupied housing units	46,943	50,711
Vacant housing units	9,458	8,325
Total housing units	199,050	210,730
Median value (dollars)	$347,000	$461,800

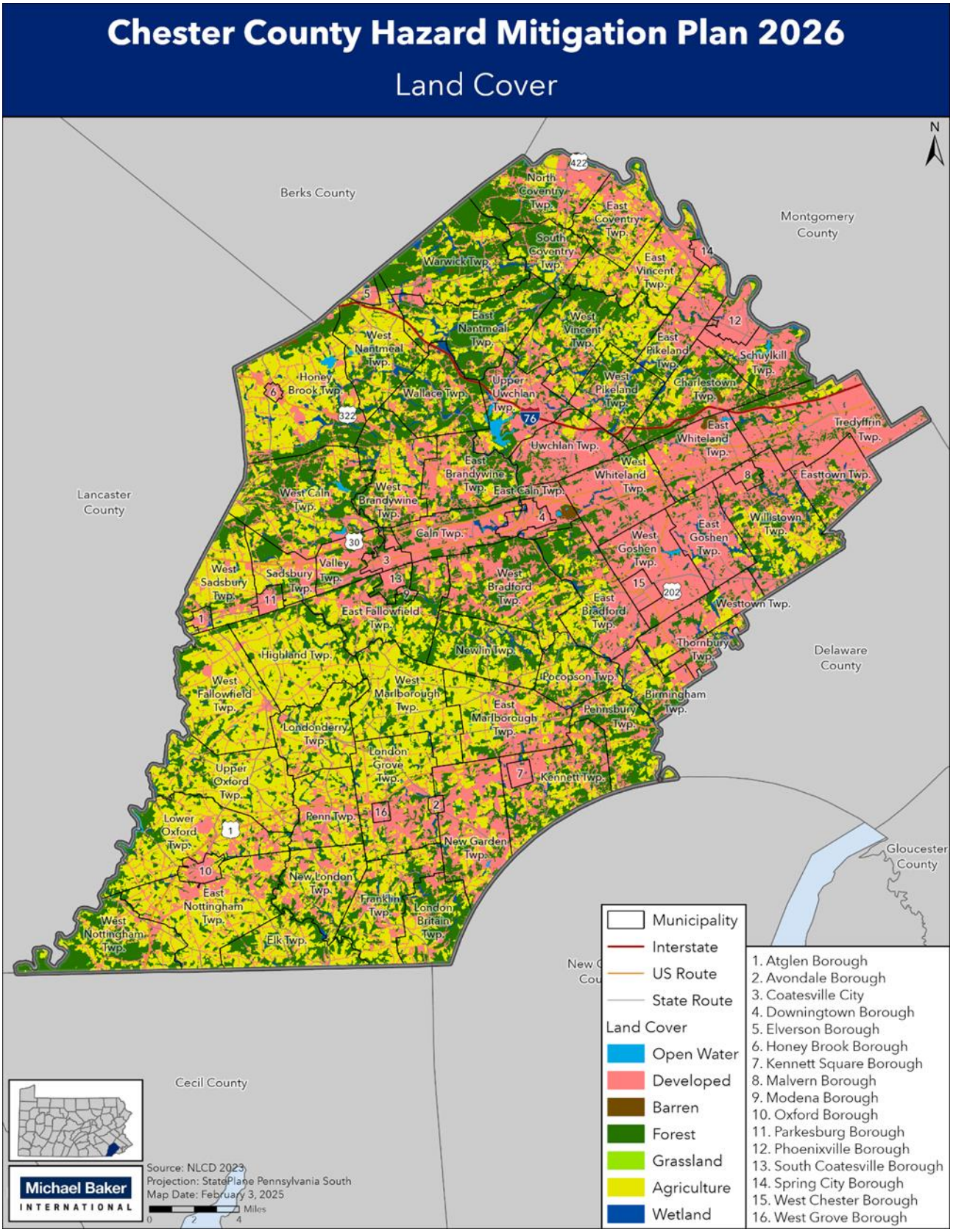
According to the U.S. Geologic Survey's National Land Cover Dataset, the primary land cover classifications of Chester County are developed land (34.7% of area), agricultural land (33.5%), and wooded or forest land (28.5%). Figure 2.5-2 shows the county land use and land cover. In the 2021 HMP, agricultural land was reported as the most prominent land cover classification. Both agricultural land and forested land have declined slightly, while developed land has increased. The northern half of Chester County is primarily composed of forested land. Agricultural land is located in the southern part of the county and, while spread throughout the county residential land is concentrated in the center and eastern parts of the county, particularly along major roadways and in boroughs and villages.

The total sum of agricultural land and market value of products sold increased 3.3% from 2017 to 2022 (USDA, 2022). Using Chester County's agricultural land for agritourism can help small and family-owned farms remain profitable, retain jobs, and sustain the county's agricultural base.

Chester County's Agricultural Land Preservation Board (ALPB) was established in 1989. The ALPB administers the Commonwealth Agricultural Conservation Easement Purchase Program

and the Chester County Challenge Grant Program. The easement programs ensure preservation of viable agricultural lands to protect the agricultural economy and resources of the county. The program is approved by the Pennsylvania Department of Agriculture and operates under the Agricultural Area Security Law (PA Act 43 of 1981).

Figure 2.5-3 Chester County Land Cover (NLCD, 2023)



2.6. DATA SOURCES

Gathering and analyzing new data about natural hazards and the community was critical to the process of updating the plan. The Chester County Geographic Information System (GIS) HUB provided many datasets to inform the plan: https://chester-county-s-gis-hub-chesco.hub.arcgis.com/.

Chester County's Effective Flood Insurance Rate Map (FIRM), issued September 29, 2017, was obtained from FEMA's Flood Map Service Center: https://msc.fema.gov/portal/home. This data provides flood frequency and elevation information used in the flood hazard risk assessment.

Additional spatial data was provided by the Pennsylvania Department of Conservation and Natural Resources (DCNR), the Pennsylvania Department of Transportation (PennDOT) and other state agencies. Numerous GIS datasets were obtained from the Pennsylvania Spatial Data Access (PASDA) website: http://www.pasda.psu.edu/. PASDA is the official public access geospatial information clearinghouse for the Commonwealth of Pennsylvania. PASDA was developed by Penn State as a service to the citizens, governments, and businesses of the Commonwealth. PASDA is a cooperative project of the Governor's Office of Administration, Office for Information Technology, Geospatial Technologies Office and the Penn State Institutes of Energy and the Environment of the Pennsylvania State University. The Pennsylvania Department of Environmental Protection (PA DEP) provided data utilized for radon summaries and maps.

Population and demographic data from the 2020 Decennial Census and 2019-2023 ACS five-year estimates were obtained from the U.S. Census Bureau. Throughout the course of the planning process, the Steering Committee continually sought additional data sources to augment the information included in the HMP. Additional information used to complete the risk assessment for this plan was taken from various government agency and non-government agency sources, such as the Chester County 2018 Comprehensive Plan (Landscapes3). Those sources are cited where appropriate throughout the plan and on each map with full references listed in **Appendix A – Bibliography**.

In order to assess the vulnerability of different jurisdictions to the hazards, hazard data from the National Centers for Environmental Information (NCEI) database was utilized. NCEI is a division of the US Department of Commerce's National Oceanic and Atmospheric Administration (NOAA). Information on hazard events is compiled by NCEI from data gathered by the National Weather Service (NWS), another division of NOAA. NCEI then presents it on its website in various formats. The data used for this plan came from the U.S. Storm Events database, which "documents the occurrence of storms and other significant weather phenomena having sufficient intensity to cause loss of life, injuries, significant property damage, and/or disruption to commerce" (NOAA, 2025). The database currently contains hazard event data from January 1950 to July 2025. Other federal datasets were sourced from USGS, the National Hurricane Center, and NOAA's Storm Prediction Center. High Hazard Potential Dam (HHPD) data was collected from PA DEP and USACE's National Dam Inventory (NDI) and incorporated into the

Dam Failure profile (**Appendix G**). PA DEP provided information on dams and the County provided information from Emergency Action Plans including risk and population vulnerability. Additional spatial data sources include the National Interagency Fire Center (NIFC) which provides current and historic wildfire origins information, and NOAA's tornado tracks and climate normals (1990-2020).

Hazus is a powerful risk assessment methodology for analyzing potential losses from floods, hurricane winds, and earthquakes. In Hazus, current scientific and engineering knowledge is coupled with the latest GIS technology to produce estimates of hazard-related damage before or after a disaster occurs. Version 6.1 of this software was used to estimate losses for floods in Chester County; this plan incorporates an enhanced analysis, meaning that county-specific data was incorporated into the model to make it more precise. In addition, the planning team developed a 1% annual chance flood depth grid based off of the effective Digital Flood Insurance Rate Map (DFIRM) to incorporate the most accurate and precise flood estimations. For more information about the methodology employed to prepare the Hazus model and estimate losses, see **Appendix F**.

Throughout the risk and vulnerability assessments included in **Section 4 – Risk Assessment,** descriptions of data indicate some areas in which the county and municipalities can improve their ability to identify vulnerable structures and improve loss estimates. As the county and municipal governments work to increase their overall technical capacity and implement comprehensive planning goals, they will also attempt to improve the ability to identify areas of increased vulnerability.

The plan describes the vulnerability of assets to the identified hazards and looks at the risk that makes them susceptible to damage from the identified hazards. Assets considered include:

- People (including underserved communities and socially vulnerable populations).
- Structures (including facilities, lifelines and critical infrastructure).
- Systems (including networks and capabilities).
- Natural, historic, and cultural resources.
- Activities that have value to the community.

Assets were identified using multiple methods. One of those methods was through reviewing FEMA's community lifelines. FEMA community lifelines are essential services that enable the continuous operation of critical government and business functions, which are crucial for human health, safety, and well-being. These lifelines, which are listed in Figure 2.6-1, form the backbone of a community's resilience to disasters. Additionally, community lifelines will serve as a focal point for assessing vulnerabilities and implementing strategies to minimize disruptions.

Figure 2.6-1 FEMA's Community Lifelines

 Law Enforcement/ Security, Fire Service, Search and Rescue, Government Service, Community Safety	 Food, Hydration, Shelter, Agriculture	 Medical Care, Public Health, Patient Movement, Medical Supply Chain, Fatality Management	 Power Grid, Fuel
 Infrastructure, Responder Communications, Alerts Warnings and Messages, Finance, 911 and Dispatch	 Highway/Roadway/ Motor Vehicle, Mass Transit, Railway, Aviation, Maritime	 Facilities, HAZMAT, Pollutants, Contaminants	 Potable Water Infrastructure, Wastewater Management

This 2026 HMP Update evaluates the vulnerability of the county's critical facilities. For the purposes of this plan, critical facilities are those entities that are essential to the health and welfare of the community. The list of critical facilities was developed in conjunction with Chester County Department of Emergency Services. Chester County has identified 21 types of critical facilities essential to community health and welfare. Table 2.6-1 summarizes the critical facilities in Chester County by type and data source. Table 2.6-2 provides a list of critical facility types with definitions. Table 2.6-3 lists the number of critical facilities by type in each municipality. For a complete listing of critical facilities and their vulnerability to individual hazards, please see **Appendix E**.

Several critical facility GIS datasets were obtained from the Department of Homeland Security's (DHS) Homeland Infrastructure Foundation-Level Data (HIFLD) Open data portal, and FEMA's Comprehensive Data Management System (CDMS). The HIFLD Open data portal aggregates data from hundreds of regional and local data providers to compile national datasets of essential assets and infrastructure. As of 2025, this data portal provided access to over 400 national geospatial data layers within the open public domain (DHS HIFLD, 2025). FEMA's CDMS was used to gather geospatial data for additional types of critical facilities not compiled

through the HIFLD Open Data portal. A component of FEMA's Hazus software, the CDMS allows users to export the default geospatial data that Hazus uses to estimate potential losses. This default geospatial data includes national data for essential facilities, high potential loss facilities, selected transportation and lifeline systems, agriculture, vehicles, and demographics. More information on the sources for the Hazus default data can be found at https://www.fema.gov/summary-databases-hazus-multi-hazard.

Table 2.6-1 Number of Critical Facilities in Chester County by Type and Data Source

TYPE	NUMBER IN COUNTY	DATA SOURCE
Airport	3	CDMS
Bridge	1,059	County
Communication Structure	6	CDMS
Court House	16	County
Dam	179	PA DEP
Day Care Center	216	HIFLD
EMS Station	24	County
Energy Facility	6	CDMS
EOC	4	CDMS, County
Fire Station	51	County
Medical Facility	11	CDMS
Misc.	5	County
Municipal	75	County
Nursing Home	25	HIFLD
Police Station	43	County
Prison	1	County
School	215	CDMS
Train Station	16	SEPTA, Amtrak
TRI	37	US EPA
Waste Water Facility	29	CDMS
Water Treatment Facility	7	CDMS

Table 2.6-2 Critical Facility Definitions for Chester County

TYPE	DEFINITION	WHY IT IS CRITICAL
Airports	Facilities with paved runways, maintenance services, and often passenger terminals, supporting the movement of people and goods.	Important for the movement of people and goods and services.
Congregate Care Facilities	A facility licensed by the department or the Department of Human Services, including, but not limited to, a long-term care nursing facility, a skilled nursing facility, an assisted living facility, a personal care	Provide shelter and continuous care for vulnerable populations requiring 24/7 monitoring

Table 2.6-2 Critical Facility Definitions for Chester County

TYPE	DEFINITION	WHY IT IS CRITICAL
	home, an independent long-term care facility or an intermediate care facility for individuals with intellectual disabilities.	
Dams	A barrier that stops or restricts the flow of surface water or underground streams.	Important infrastructure, providing flood protection, water supply reservoirs, hydroelectric power, and irrigation. Their failure may result in significant damage and loss of life.
Day Care Centers	An institution that provides supervision and care of infants and young children during the daytime.	Necessary for a community's economy by providing employment and for the day-to-day life for many families by providing care for children while parents go to work.
EMS Stations	A facility where emergency medical service (EMS) personnel are stationed or based out of, or where equipment that such personnel use in carrying out their jobs is stored for ready use.	Important for the storage and maintenance of EMS equipment.
Fire Stations	A facility where fire engines and other equipment of a fire department are housed.	Important for the storage and maintenance of firefighting equipment.
Jails	A place for the confinement of people accused or convicted of a crime.	Buildings where many people are present 24/7.
Medical Facilities	A place where sick or injured people are given care or treatment (as a hospital, urgent care center, or a clinic).	Buildings where people may be present 24/7, provide important care services, and may serve as a local shelter.
Police Stations	A building which serves to accommodate police officers, other members of police staff, and their equipment.	Important for the storage and maintenance of emergency response equipment.
Private Schools	A school supported by a private organization or private individuals rather than by the government.	Buildings where many people and young vulnerable populations are present during the day, may also serve as a local shelter.
Public Schools	A school supported by public funds.	Buildings where many people and young vulnerable populations are present during the day, may also serve as a local shelter.
Sewer Treatment	A facility that collects and treats wastewater to make it appropriate for a	Provide an essential service that promotes environmental

Table 2.6-2 Critical Facility Definitions for Chester County

TYPE	DEFINITION	WHY IT IS CRITICAL
Plants	specific end-use.	and public health.
Shelters	A place giving temporary protection from bad weather or danger.	Provide physical safety from hazards, including place to sleep, meals, access to clean clothes, and/or medical care or counseling. A place where many people may gather during a hazard event.
Toxic Release Inventory (TRI) Facilities	A facility that stores toxic chemicals listed on the publicly available TRI database that may pose a threat to human health and the environment.	Provide safe storage of chemicals that are harmful to the environment and public health.
Water Treatment Plants	A facility that collects and treats water to make it appropriate for a specific end-use.	Provides water for safe drinking, industrial supply, irrigation, river flow maintenance, and other needs.
Wells - Conventional	A gas or oil well that uses standard drilling methods, such as drilling vertically into rock.	Provide energy resources while also presenting an environmental and public health risk from contamination.
Wells - Unconventional	A gas or oil well that uses technologically advanced drilling methods, such as fracking, to target energy reserves in harder to reach areas.	Provide energy resources while also presenting an environmental and public health risk from contamination.

Table 2.6-3 Critical Facilities by Type for Each Municipality

MUNICIPALITY	AIRPORT	BRIDGE	COMMUNICATION	COURT HOUSE	DAM	DAY CARE CENTER	EMS STATION	ENERGY FACILITY	EOC	FIRE STATION	MEDICAL FACILITY	MISCELLANEOUS	MUNICIPAL	NURSING HOME	POLICE STATION	PRISON	SCHOOL	TRAIN STATION	TRI SITE	WASTE WATER FACILITY	WATER TREATMENT FACILITY	TOTAL
Atglen Borough	0	7	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	8
Avondale Borough	0	4	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	5
Birmingham Township	0	5	0	0	3	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	11
Caln Township	0	32	0	0	0	12	0	0	0	2	1	0	1	1	1	0	5	1	1	0	0	57
Charlestown Township	0	22	0	0	3	1	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	29
Coatesville City	0	11	0	1	2	3	1	0	0	3	0	0	1	0	1	0	2	1	1	0	0	27
Downingtown Borough	0	15	0	0	2	4	1	0	0	3	1	0	1	0	1	0	9	2	2	0	0	41
East Bradford Township	0	25	1	0	6	4	1	0	0	1	0	0	1	1	0	0	2	0	0	1	0	43
East Brandywine Township	0	24	0	0	4	2	0	0	0	1	0	1	1	0	1	0	2	0	1	12	0	49
East Caln Township	0	16	0	1	2	4	0	0	0	0	1	0	1	2	0	0	1	0	0	0	0	28
East Coventry Township	0	23	0	0	2	1	0	0	0	1	0	0	1	1	1	0	2	0	2	0	0	34
East Fallowfield Township	0	15	0	0	5	2	0	0	0	0	0	0	1	0	1	0	1	0	1	0	0	26
East Goshen	0	14	0	1	6	3	2	0	0	1	0	0	1	1	0	0	2	0	1	0	0	32

Table 2.6-3 Critical Facilities by Type for Each Municipality

MUNICIPALITY	AIRPORT	BRIDGE	COMMUNICATION	COURT HOUSE	DAM	DAY CARE CENTER	EMS STATION	ENERGY FACILITY	EOC	FIRE STATION	MEDICAL FACILITY	MISCELLANEOUS	MUNICIPAL	NURSING HOME	POLICE STATION	PRISON	SCHOOL	TRAIN STATION	TRI SITE	WASTE WATER FACILITY	WATER TREATMENT FACILITY	TOTAL
Township																						
East Marlborough Township	0	11	0	0	4	4	0	0	0	1	0	0	1	0	1	0	3	0	0	0	0	25
East Nantmeal Township	0	11	0	0	3	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	16
East Nottingham Township	0	20	0	0	0	5	0	0	0	0	0	0	1	0	0	0	9	0	1	0	0	36
East Pikeland Township	0	11	1	0	3	3	0	0	0	1	0	0	1	1	1	0	0	0	1	0	0	23
East Vincent Township	0	14	0	0	2	4	0	0	0	0	1	0	1	1	1	0	4	0	0	0	0	28
East Whiteland Township	0	48	0	0	3	10	1	1	0	1	0	2	1	1	1	0	6	1	5	0	0	81
Easttown Township	0	6	0	0	6	10	1	0	0	1	0	0	1	0	1	0	6	2	0	1	0	35
Elk Township	0	11	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	12
Elverson Borough	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	4
Franklin Township	0	13	0	0	0	2	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	17
Highland Township	0	8	0	0	2	1	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	15
Honey Brook Borough	0	0	0	1	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	0	5
Honey Brook	0	10	0	0	4	1	0	0	0	0	0	0	1	2	0	0	12	0	1	0	0	31

Table 2.6-3 Critical Facilities by Type for Each Municipality

MUNICIPALITY	AIRPORT	BRIDGE	COMMUNICATION	COURT HOUSE	DAM	DAY CARE CENTER	EMS STATION	ENERGY FACILITY	EOC	FIRE STATION	MEDICAL FACILITY	MISCELLANEOUS	MUNICIPAL	NURSING HOME	POLICE STATION	PRISON	SCHOOL	TRAIN STATION	TRI SITE	WASTE WATER FACILITY	WATER TREATMENT FACILITY	TOTAL
Township																						
Kennett Square Borough	0	5	0	0	0	2	1	0	0	1	0	0	1	1	1	0	2	0	0	0	0	14
Kennett Township	0	28	0	0	5	2	1	0	0	1	0	0	1	1	1	0	2	0	0	2	0	44
London Britain Township	0	10	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	13
London Grove Township	0	27	0	0	1	2	1	0	0	0	0	0	1	1	0	0	5	0	0	0	0	38
Londonderry Township	0	7	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	9
Lower Oxford Township	0	23	1	0	4	2	0	0	0	0	0	0	1	0	0	0	4	0	0	1	0	36
Malvern Borough	0	2	0	0	2	0	1	0	0	1	0	0	1	0	1	0	1	1	0	0	0	10
Modena Borough	0	2	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	5
New Garden Township	1	17	0	2	9	6	1	0	0	1	0	0	1	0	1	0	3	0	1	1	0	44
New London Township	0	11	0	0	0	2	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	15
Newlin Township	0	16	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	18
North Coventry Township	0	18	1	0	5	3	1	0	1	1	0	2	1	0	1	0	2	0	0	0	1	37

Table 2.6-3 Critical Facilities by Type for Each Municipality

MUNICIPALITY	AIRPORT	BRIDGE	COMMUNICATION	COURT HOUSE	DAM	DAY CARE CENTER	EMS STATION	ENERGY FACILITY	EOC	FIRE STATION	MEDICAL FACILITY	MISCELLANEOUS	MUNICIPAL	NURSING HOME	POLICE STATION	PRISON	SCHOOL	TRAIN STATION	TRI SITE	WASTE WATER FACILITY	WATER TREATMENT FACILITY	TOTAL
Oxford Borough	0	3	0	1	0	3	1	0	0	1	0	0	2	1	1	0	3	0	0	0	1	17
Parkesburg Borough	0	7	0	1	1	1	1	0	0	1	0	0	1	0	1	0	0	1	0	0	0	15
Penn Township	0	12	0	0	1	3	0	0	0	1	1	0	1	1	0	0	3	0	1	1	0	25
Pennsbury Township	0	10	0	0	6	4	0	0	0	0	0	0	1	1	0	0	3	0	0	0	0	25
Phoenixville Borough	0	11	0	1	2	5	1	0	0	2	1	0	1	1	1	0	6	0	0	0	0	32
Pocopson Township	0	17	0	0	1	2	0	0	1	0	0	0	2	1	0	1	1	0	1	0	0	27
Sadsbury Township	0	12	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	0	2	0	0	18
Schuylkill Township	0	11	0	0	8	6	0	0	0	1	0	0	1	0	1	0	6	0	1	0	1	36
South Coatesville Borough	0	1	0	0	1	0	0	0	1	0	0	0	1	0	1	0	0	0	0	1	0	6
South Coventry Township	0	9	0	1	1	2	0	0	0	0	0	0	1	1	0	0	3	0	0	0	0	18
Spring City Borough	0	2	0	0	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	0	1	6
Thornbury Township	0	7	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	10
Tredyffrin	0	89	0	1	11	12	1	0	0	1	0	0	1	0	1	0	17	4	1	0	0	139

Table 2.6-3 Critical Facilities by Type for Each Municipality

MUNICIPALITY	AIRPORT	BRIDGE	COMMUNICATION	COURT HOUSE	DAM	DAY CARE CENTER	EMS STATION	ENERGY FACILITY	EOC	FIRE STATION	MEDICAL FACILITY	MISCELLANEOUS	MUNICIPAL	NURSING HOME	POLICE STATION	PRISON	SCHOOL	TRAIN STATION	TRI SITE	WASTE WATER FACILITY	WATER TREATMENT FACILITY	TOTAL
Township																						
Upper Oxford Township	0	16	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	18
Upper Uwchlan Township	0	12	0	0	2	3	0	1	0	0	0	0	1	0	1	0	5	0	1	0	1	27
Uwchlan Township	0	9	0	1	4	11	1	1	0	2	0	0	1	0	1	0	10	0	1	0	0	42
Valley Township	1	22	0	0	1	2	1	0	0	1	0	0	1	0	1	0	2	0	1	0	0	33
Wallace Township	0	13	0	0	2	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	19
Warwick Township	0	9	0	0	1	1	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	13
West Bradford Township	0	16	0	0	1	7	0	1	0	2	0	0	1	0	1	0	2	0	0	0	2	33
West Brandywine Township	0	18	1	0	0	5	0	0	0	0	0	0	1	1	2	0	1	0	1	0	0	30
West Caln Township	0	7	0	0	2	3	0	0	0	1	0	0	1	0	0	0	6	0	0	0	0	20
West Chester Borough	0	4	1	2	0	5	1	0	0	2	2	0	1	1	1	0	5	0	1	0	0	26
West Fallowfield Township	0	10	0	0	3	0	0	0	0	1	0	0	1	0	1	0	4	0	1	0	0	21
West Goshen Township	0	36	0	1	6	13	2	0	1	3	0	0	1	1	1	0	8	0	3	2	0	78

Table 2.6-3 Critical Facilities by Type for Each Municipality

MUNICIPALITY	AIRPORT	BRIDGE	COMMUNICATION	COURT HOUSE	DAM	DAY CARE CENTER	EMS STATION	ENERGY FACILITY	EOC	FIRE STATION	MEDICAL FACILITY	MISCELLANEOUS	MUNICIPAL	NURSING HOME	POLICE STATION	PRISON	SCHOOL	TRAIN STATION	TRI SITE	WASTE WATER FACILITY	WATER TREATMENT FACILITY	TOTAL
West Grove Borough	0	0	0	0	0	2	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	6
West Marlborough Township	0	16	0	0	1	1	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	21
West Nantmeal Township	0	17	0	0	2	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	21
West Nottingham Township	0	8	0	0	1	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	12
West Pikeland Township	0	16	0	0	2	0	0	0	0	0	0	0	2	0	1	0	1	0	0	0	0	22
West Sadsbury Township	0	8	0	0	0	2	0	0	0	0	0	0	1	0	1	0	3	0	1	0	0	16
West Vincent Township	0	13	0	0	5	2	0	1	0	1	0	0	1	0	1	0	1	0	0	0	0	25
West Whiteland Township	0	51	0	1	8	8	0	1	0	1	0	0	1	1	1	0	9	3	1	0	0	86
Westtown Township	0	9	0	0	3	7	0	0	0	0	0	0	1	0	1	0	7	0	0	0	0	28
Willistown Township	0	16	0	0	12	6	0	0	0	0	3	0	1	1	1	0	7	0	1	7	0	55
Total	2	1,059	6	16	179	216	24	6	4	51	11	5	75	25	43	1	215	16	37	29	7	2,027

3. PLANNING PROCESS

3.1. UPDATE PROCESS SUMMARY

The Chester County 2026 HMP Update was developed by the Chester County Department of Emergency Services in partnership with the Hazard Mitigation Planning Team (HMPT). This update also included representatives from the Chester County municipalities and other local and regional stakeholders. Specifically, the 2026 HMPT included stakeholders from the groups listed in Figure 3.1-1. A full list of stakeholders invited to participate is included in **Appendix C – Meeting and Other Participation Documentation**. The contact list in **Appendix C** specifies which stakeholder category (1 through 5 listed in Figure 3.1-1) each contact falls within.

Figure 3.1-1 Chester County HMP Stakeholder Types



All 73 municipalities in Chester County were considered in the vulnerability assessment and the development of the mitigation strategy to address vulnerabilities. Details on the members of the HMPT are included in **Section 3.2 – The Planning Team**.

To begin this process, the Chester County Department of Emergency Services hosted an internal kick-off meeting with the contract support to begin the update process on September 6, 2024. This established the Hazard Mitigation Steering Committee (HMSC) to lead the plan update process. During this meeting, attendees reviewed the Hazard Mitigation Planning process, as well as changes to that process and the requirements in FEMA's updated Local Mitigation Planning Policy Guide. Attendees also reviewed the goals and priorities from the 2021 plan update and made additional goals for the 2026 update. These goals and priorities included planning process goals like equity considerations, climate change considerations, and

existing and planned development. For this plan, the county also discussed new goals for full municipality participation and identifying new key stakeholders like the Brandywine Conservancy and the Chester Water Authority. Additionally, the attendees discussed the scheduling of HMSC, HMPT and public meetings and participation for the 2026 update process. Details on this and other meetings are included in **Section 3.3 – Meetings and Documentation**. Detailed information about stakeholder participation is included in **Section 3.4 – Public and Stakeholder Participation**. The municipal involvement in developing the 2026 HMP Update is detailed in **Section 3.5 – Multi-Jurisdictional Planning**.

The HMPT used several worksheets to gather information from each municipality and participant in the planning process. These worksheets were designed to inform the planning process, from gathering information about the hazards that affected the county and each of the municipalities to updating the mitigation strategy. The use of these forms is detailed in Section **3.3 – Meetings and Documentation** and the submitted forms are included in **Appendix C – Meeting and Other Participation Documentation.**

A Stakeholder Outreach and Engagement Plan was developed for the plan update to clearly identify and document an approach for the planning process. This strategy established methods for ongoing opportunities for input, collaboration, and feedback during the HMP Update. There are two main sections of the strategy. The Plan Participant Identification section focuses on target audiences, HMSC roles and responsibilities, building the HMPT, public involvement and identifying and including underserved communities. The Outreach and Engagement Methods section focuses on key meetings and touchpoints and leveraging different outreach tools. This strategy can be referenced in **Appendix H – Outreach and Engagement Plan.**

The Outreach and Engagement Plan is new to the 2025 planning process, and it significantly informed how outreach was approached. It was intentionally implemented throughout the planning process. Details on how the Outreach and Engagement Plan was implemented through the planning process is documented in **Section 3.2 – The Planning Team, Section 3.3 – Meetings and Documentation, Section 3.4 – Public & Stakeholder Participation, Section 3.5 – Multi-Jurisdictional Planning, and Appendix C – Meeting and Other Participation Documentation.**

3.2. THE PLANNING TEAM

The HMSC was assembled to guide the overall direction of the HMP Update and make day-to-day decisions pertaining to its completion. Table 3.2-1 details the members of the 2026 HMSC.

Table 3.2-1 Chester County Hazard Mitigation Plan Steering Committee (HMSC)

PARTICIPANT	TITLE
CHESTER COUNTY DEPARTMENT OF EMERGENCY SERVICES	
Kelly Tinsman	Deputy Director
Chris Christensen	Planning Coordinator

PARTICIPANT	TITLE
Scott McLaughlin	Health & Human Services Coordinator
MICHAEL BAKER INTERNATIONAL	
Bianca Panunto	Project Manager
Kyle Dool	Lead Planner

While the HMSC led the overall process, they assembled a HMPT that included representatives from Chester County, the Chester County municipalities, and additional stakeholders representing the groups identified in Figure 3.1-1. The stakeholders listed in Table 3.2-2 served on the HMPT and actively participated in the planning process by attending meetings, completing assessment surveys, or submitted comments. Participants representing multiple jurisdictions are listed with each jurisdiction they are affiliated with. Stakeholder and other participation documentation, including the titles and positions of participants, is provided in **Appendix C – Meeting and Other Participation Documentation.**

All 73 municipalities participated in the hazard mitigation planning process. A wide variety of stakeholders also participated in the process, covering all five types of stakeholders defined in Figure 3.1-1. The Downingtown Area Regional Authority (DARA) is the only special district seeking adoption for this plan update.

Table 3.2-2 HMPT Members

MUNICIPALITY OR ORGANIZATION	PARTICIPANT(S)	STAKEHOLDER TYPE (SEE FIGURE 3.1-1)
MUNICIPALITIES- & SPECIAL DISTRICTS		
Atglen Borough	Cristi Hahn, Borough Manager; Beckett Walters, Emergency Management Coordinator (EMC)	1 & 2
Avondale Borough	Susan Rzucidlo, Mayor; Ulises Aguilera, EMC	1 & 2
Birmingham Township	Tom Nelling, Public Works Director/EMC; Michael Pisano, EMC Coordinator	1 & 2
Caln Township	Ray Stackhouse, EMC	1 & 2
Charlestown Township	Chris Heleniak, Township Manager/EMC	1 & 2
Coatesville City	James Logan, City Manager; Roberta Cosentino, Assistant City Manager; Peter Huf, Fire Chief	1 & 2
Downingtown Borough	Corinne Badman, Assistant Borough Manager/EMC; Matthew Bush, Borough Engineer	1 & 2
East Bradford Township	Andrea Campisi, Assistant Township Manager; Mandie Cantlin, Township Manager	1 & 2
East Brandywine Township	Matthew Vanlew, Public Works Director; Derrick Claas, Roadmaster	1 & 2

MUNICIPALITY OR ORGANIZATION	PARTICIPANT(S)	STAKEHOLDER TYPE (SEE FIGURE 3.1-1)
East Caln Township	Michael O'Brien, Assistant Township Manager; Rich Hicks, Fire Marshal; Gary Sheridan, EMC	1 & 2
East Coventry Township	Jonathan Brackbill, EMC; Ray Kolb, Public Works Director; Dave Rishel, Public Works Director; Eugene C. Briggs, Jr., Township Manager	1 & 2
East Fallowfield Township	Jim Reagan, Fire Marshal; Anthony Sirna, EMC	1 & 2
East Goshen Township	Derek Davis, Township Manager; Duane Brady Sr., Fire Marshall/EMC	1 & 2
East Marlborough Township	Robert Clarke, EMC	1 & 2
East Nantmeal Township	Fred Minahan, EMC	1 & 2
East Nottingham Township	John Reynolds, Jr., EMC	1 & 2
East Pikeland Township	Michelle Major, EMC; Steve Bono, Road Foreman	1 & 2
East Vincent Township	Jason McCann, Public Works Director; Matthew Williams, Police Department	1 & 2
East Whiteland Township	Loren Nafziger, EMC	1 & 2
Easttown Township	David Wildfeuer, Township Manager/Public Works Director; Robert Schnorr, EMC; Joe O'Leary, Fire Administrator	1 & 2
Elk Township	Milt Rudy, EMC	1 & 2
Elverson Borough	Barclay Hargreaves, EMC	1 & 2
Franklin Township	Harold Walls, EMC	1 & 2
Highland Township	Ted Jasinski, Zoning Officer	1 & 2
Honey Brook Borough	Bill Ford, Public Works Director	1 & 2
Honey Brook Township	Steve Jones, EMC; Warren Obenski, Township Manager	1 & 2
Kennett Square Borough	Sonny Greco, Deputy Manager/EMC	1 & 2
Kennett Township	Theodore Otteni, Public Works Director; Alison Dobbins, Municipal Manager; Kate Morgenstern, Director of Planning & Zoning	1 & 2
London Britain Township	Carolyn Matalon, Secretary; Ryan Mullin, Road Master; Hunter Warnick, Road Master	1 & 2
London Grove Township	Tim Shannon, Fire Marsal/EMC	1 & 2
Londonderry Township	Ted Jasinski, Zoning Officer	1 & 2
Lower Oxford Township	Deborah Kinney, Secretary	1 & 2
Malvern Borough	Corinne Badman, Assistant Manager/EMC; Kyle Vaughn, Fire Chief	1 & 2
Modena Borough	Jennifer Daywalt, Public Works Director	1 & 2
New Garden Township	Kenny Reed, Public Works Director; Chris Himes, Township Manager; Robert Weer,	1 & 2

MUNICIPALITY OR ORGANIZATION	PARTICIPANT(S)	STAKEHOLDER TYPE (SEE FIGURE 3.1-1)
	Director of Community Development and Safety	
New London Township	David Flad, EMC	1 & 2
Newlin Township	Rich Hicks, EMC	1 & 2
North Coventry Township	Erica Batdorf, Municipal Manager; Katelyn Collemacine, EMC; Ron Contois, Fire Marshal; Robert Esposito, Deputy EMC	1 & 2
Oxford Borough	Pauline Garcia-Allen, Municipal Manager; John Reynolds, Jr., EMC; John Schaible, Public Works Director	1 & 2
Parkesburg Borough	Scot Kreger, EMC	1 & 2
Penn Township	Karen Versuk, Municipal Manager; Martin Wilson, Deputy EMC; Ralph Churchill, Planning Commissioner	1 & 2
Pennsbury Township	Michael Pisano, EMC; Dan Boyle, Township Manager	1 & 2
Phoenixville Borough	E. Jean Krack, Borough Manager; Karin Williams, EMC; Eamon Brazunas, Fire Chief	1 & 2
Pocopson Township	Neil D. Vaughn, Township Manager; Jordan Marzolf, EMC	1 & 2
Sadsbury Township	Tony Przychodzien, Municipal Manager	1 & 2
Schuylkill Township	Laurie Getz, Municipal Manager; Rafael Henin, EMC	1 & 2
South Coatesville Borough	Chris Corle, Public Works Director/EMC	1 & 2
South Coventry Township	Amanda Shaner, Administrator/Secretary-Treasurer/EMC; Alison Tincher, Supervisor	1 & 2
Spring City Borough	Kisha Tyler, Municipal Manager	1 & 2
Thornbury Township	Sandy Lutz, Assistant Manager; Judy Lizza, Municipal Manager/Pubic Works Director	1 & 2
Tredyffrin Township	Joseph O'Leary, Fire Administrator; Michael Beaty, Police Superintendent/EMC	1 & 2
Upper Oxford Township	Ted Jasinski, Zoning Officer	1 & 2
Upper Uwchlan Township	Thomas Jones, Police Chief; Steven Hirsh, Deputy EMC; Byron Nickerson, EMC; Cathy Tomlinson, Park & Recreation Board Member; Tony Scheivert, Municipal Manager	1 & 2
Uwchlan Township	Bobby Kagel, Municipal Manager; Tara Giordano, Building & Zoning Official; Scott Alexander, Chief of Police; Mike Holmes, EMC	1 & 2
Valley Township	Joe Sciandra, EMC; Kris Lenhart, Public Works Director	1 & 2

MUNICIPALITY OR ORGANIZATION	PARTICIPANT(S)	STAKEHOLDER TYPE (SEE FIGURE 3.1-1)
Wallace Township	Betty Randzin, Secretary/Treasurer; Steve Senn, Public Works Director; Paul Decarlo, EMC	1 & 2
Warwick Township	Colleen Patton, Municipal Administrator	1 & 2
West Bradford Township	Dennis Dougherty, Emergency Services Boardmember; Joseph Dell'Arciprete, EMC	1 & 2
West Brandywine Township	Dale Barnett, Municipal Manager	1 & 2
West Caln Township	Curt Martinez, Police Chief; Jason Cooper, EMC	1 & 2
West Chester Borough	Jon Brill, EMC; Donald Anderson, Director of Public Works (interim); Donald Edwards, Public Works Director; Sean Metrick, Municipal Manager	1 & 2
West Fallowfield Township	Gina Wheler, Secretary	1 & 2
West Goshen Township	Bryan D. Kulakowsky, Township Engineer; Andrea Testa, Fire Marshal/EMC	1 & 2
West Grove Borough	Gary Vinnacombe, EMS Chief; Eric Felker, Fire Chief; Tyler Simpson, Assistant Fire Chief	1 & 2
West Marlborough Township	Hugh Lofting, Public Works Director/EMC; William W. Wylie, Jr., Supervisor	1 & 2
West Nantmeal Township	Barclay Hargreaves, EMC	1 & 2
West Nottingham Township	Ted Jasinski, Zoning Officer; Robert Russel, Township Volunteer; John Reynolds, Jr., EMC	1 & 2
West Pikeland Township	Harold Hallman III, EMC	1 & 2
West Sadsbury Township	Jason Chapman, Public Works Director; Scot Kreger, EMC	1 & 2
West Vincent Township	James Gooding, EMC	1 & 2
West Whiteland Township	Pamela Gural-Bear, Municipal Manager; Jennifer Keller, Township Operations Manager; John Weller, Director of Planning & Zoning; George "Bud" Turner, EMC	1 & 2
Westtown Township	Gerald Dinunzio, Fire Marshal/EMC; L. Mila Carter, Township Manager	1 & 2
Willistown Township	Bill Hagan, Public Works Director	1 & 2
Downingtown Area Regional Authority	Herbert J. Mays, Executive Director; John Lavelle, Funding and Planning Specialist	3
NON-MUNICIPAL STAKEHOLDERS		
Alianzas De Phoenixville	Nina Guzman, Founder/Executive Director	5
American Red Cross	Lisa McGee, Regional Disaster Program Officer; Marty Westerman, Disaster Action Team Manager	5

MUNICIPALITY OR ORGANIZATION	PARTICIPANT(S)	STAKEHOLDER TYPE (SEE FIGURE 3.1-1)
Berks County Department of Emergency Services	Donnie Swope, Assistant Director for Emergency Management	3
Brandywine Conservancy	Grant DeCosta, Director	5
Brandywine Valley Active Aging (BVAA)	Bill Pierce, Executive Director	5
Cecil County, Maryland Department of Emergency Services	Michael Berth, Emergency Planner	3
Chester County Department of Aging Services	Heidi Carlson, Deputy Director	1
Chester County Department of Community Development	Dolores Colligan, Director; Kevin Murphy, Staff Member	2
Chester County Department of Human Services	Pat Bokovitz, Director; Jennifer Brion, Director of the Office of Managed Behavioral Healthcare	1
Chester County Department of Mental Health/Intellectual and Developmental Disabilities	Sarah Hill, Recovery Systems Coordinator; Tyree Lewis, Director of Quality Management	1
Chester County Department of Parks and Preservation	Emmett Henry, Park Ranger; Patrick Bryan, Park Ranger	2
Chester County Drug & Alcohol Services	Timothy Henshaw, Program Specialist	1
Chester County First	Dave Miller, Chair	5
Chester County Food Bank	Nicolle-Marie Romero, Nutrition Education Coordinator	5
Chester County HAZMAT Team	Bob Stewart, Fire Chief	1
Chester County Health Department	Casey Cummins, Assistant Program Manager for Public Health Emergency Preparedness; Suzanne Curtis, Public Health Emergency Preparedness & Response Program Manager; Emma Sharpe, Public Health Emergency Preparedness Planner; Lauren McNasby, Public Health Emergency Preparedness & Response Assistant Program Manager	1
Chester County History Center	Ellen Endslow, Director of Collections/Curator	4
Chester County Information & Referral Services	Joshua Bitler, Program Director	1
Chester County Planning Commission	Carrie Conwell, Environmental/Open Space Planner; Rachael Griffith, Sustainability Director; Matt Edmond, Executive Director	2
Chester County Veterans Affairs	Susanne Fink, Director	1

MUNICIPALITY OR ORGANIZATION	PARTICIPANT(S)	STAKEHOLDER TYPE (SEE FIGURE 3.1-1)
Chester County Water Resources Authority	Seung Ah Byun, Executive Director; Kate Hutelmyer, Water Resources Planner; Craig Thomas, Engineering and Operations Manager; Lydia Franks, Water Resources Analyst	1
Chester County Youth Center	Deb Maccariella, Youth Center Director	5
Coatesville Area School District	Nick Melchiorre, Director of School & Public Safety	4
Delaware Riverkeeper	Faith Zerbe, Delaware Riverkeeper Network	5
Downingtown Area School District	Tom Fortmann, Chief Security Officer	4
Downingtown Resilience Fund	Barry Cassidy, Member	5
Elverson-Honey Brook EMS	Matthew Welch, EMS Chief	1
Energy Transfer	R. Bloom, Operations Director	4
FEMA	Stacey Blankin, Community Planning Unit Supervisor; Matthew McCullough, Community Planner	1
Garage Community and Youth Center	Aaron Smith, Site Supervisor	5
Goshen EMS	Gary Weigel, EMS Chief	1
Green Valleys Watershed Association	Victoria Laubach, Executive Director	5
Housing Partnership of Chester County	Ken Hutton, Executive Director	1
Kennett Area Community Service (KACS)	Leah Reynolds, Chief Executive Officer	5
Krug Architects	Steve Krug, Founder	4
Main Line Health / Paoli Hospital	Armand Alessi, Director of Emergency Management	4
Maternal and Child Health Consortium	Ronnie Fitton, Development Associate; Milena Lanz, Executive Director	5
Montgomery County Department of Public Safety	Brian McKown, Director	3
National Alliance on Mental Illness (NAMI) Chester County	Cailey Crusemire, Education and Support Group Coordinator; Sara Wein, Executive Director	5
New Castle County, DE Emergency Management	Kristen Welch, Natural Emergency Management Planner	3
Office of State Representative Christina Sappey	Madison Jones, Bridget Bowser, Constituent Services Advisor; Molly Gallagher, Constituent Services and Communications Advisor; Shari Cooper, District Office Director; Sophia Heslep, Constituent Services Advisor	2

MUNICIPALITY OR ORGANIZATION	PARTICIPANT(S)	STAKEHOLDER TYPE (SEE FIGURE 3.1-1)
Owen J Roberts School District	John Yount, Chief of Police/Security	4
Pennsylvania American Water Co.	Justin Brame, Senior Manager of Southeast Operations	4
Philadelphia Office of Emergency Management	Noah Palau, Hazard Planning Coordinator	3
Salvation Army of West Chester	Luke Rodgers, Disaster Services Director	5
Serving, Inspiring, and Loving Others (SILO)	Melissa Pacella, Executive Director	5
Southern Chester County EMS Medic 94	Matt Collins, EMS Chief	1
Tredyffrin/Easttown School District	Chris Groppe, Director of Safety & Student Services	4
Tick Tock Early Learning Center	Susan Czerwin, Executive Director	4 & 5
Unionville-Chadds Ford School District	John Sanville, Superintendent; James Whitesel, Director of Facilities	4
Uwchlan Ambulance Corps	Jason Brooks, EMS Chief	1
Westtown School	Kate Donnelly, Director of Facilities	4
Westwood EMS	Joe Kennedy, EMS Chief	1
White Clay Watershed Association	Shane Morgan, Program Director	5

3.3. MEETINGS AND DOCUMENTATION

The following meetings were held during the plan update process. Meetings with an asterisk (*) were open to the public. Invitations, agendas, sign-in sheets, and minutes for these meetings are included in **Appendix C – Meeting and Other Participation Documentation**.

September 6, 2024 – Internal Kick-Off Meeting: This meeting was held virtually and was attended by county representatives and the consultant to review the planning process and major milestones including the schedule for HMPT meetings and anticipated HMP submission dates. The group also discussed goals and priorities, project management expectations, and engagement strategies.

October 11, 2024 – Chester County Stormwater Summit: The Stormwater Summit was held by the Chester County Water Resources Authority to convene municipalities and regional stakeholders regarding key flood and stormwater related projects and initiatives. Chester County DES and the consultant attended this meeting to introduce the HMP Update to attendees and advance conversations related to stormwater projects and partnerships. Topics included a Floodplain Management 101 presentation from PEMA, updates on the Brandywine Flood Study from the Brandywine Conservancy, the Chester County HMP Update, and upcoming Act 167 Planning Initiatives.

November 15, 2024 – Chester County Emergency Management Coordinator (EMC) Seminar: Chester County DES held the EMC seminar to provide county updates to EMCs, discuss technical support the county can provide municipalities, and hold a training session for EMCs. The HMSC attended this meeting to introduce the HMP Update to attendees and gather information on municipal and county capabilities.

December 6, 2024, and January 13, 2025 – Planning Team Kick-Off Meetings: County representatives, municipal representatives, regional stakeholders, and the consultant attended these virtual meetings. They included discussion of project scope, schedule, the planning process, roles and responsibilities, participation and engagement, and next steps. Email invitations were sent to each Chester County municipality, as well as other stakeholders spanning the five different types of required stakeholders (see Figure 3.1-1). Meeting attendees were asked to begin completing project forms, check out the project website and provide contact information for other stakeholders that should be included in the planning process.

December 20, 2024 – Meeting with PEMA and FEMA: The HMSC met with PEMA and FEMA to discuss the HMP Update process and timeline. Discussions covered data and considerations for the plan update, special district participation, analysis of substantial flood damage, and resources PEMA and FEMA can provide.

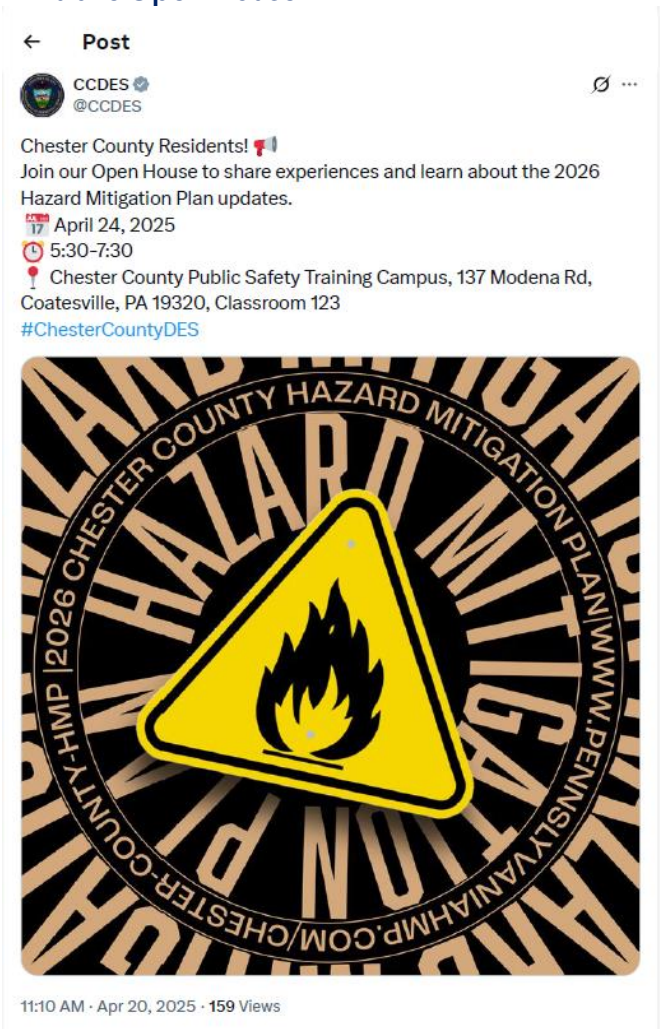
February 24, March 10, and March 13, 2025 – Regional Municipal Workshops: The HMSC hosted four hybrid meetings to solicit feedback from municipal participants for the HMP Update. These were held in different regions of the county to maximize participation. An overview of the 2026 HMP Update project was provided. Then, to provide context to the risk assessment section of the plan, some preliminary findings were presented. Time was taken to review and complete hazard risk forms. A brief overview of the type of information in the capability assessment was provided, which includes an evaluation of planning, regulatory, administrative, technical and financial capabilities, as well as participation in the National Flood Insurance Program (NFIP). Examples of each capability type were discussed. Participants were then provided with Mitigation Action Progress Report Forms so they can report on the status of their mitigation actions from the previous plan. A list of resources was provided for participants to review programs and identify opportunities that may align with their desired mitigation actions. Each meeting ended with a chance for municipalities to ask questions and establish action items for future meetings.

February 24, March 10, and March 13, 2025 – Stakeholder Workshops: Five topic-based stakeholder workshops were held to gather feedback from county and regional stakeholders involved in hazard mitigation, response, and recovery. A brief hybrid kick-off meeting was held on February 24th to introduce stakeholders to the workshop series, and the five hybrid workshops were held over March 10th and 13th. One workshop was held for each of the following topics: flood mitigation, health and human services, infrastructure, volunteer organizations active in disaster (VOADs), and the private sector. These meetings were an opportunity to discuss the populations and groups these organizations work with and the services that these

organizations provide. Attendees were asked a series of questions regarding data collection and other analysis resources they use to understand and/or catalogue their risks. They were then asked more specifically about their own capabilities, such as plans, resource limitations, and partnership opportunities they can identify. Finally, they were asked to describe their vulnerabilities to hazards to begin thinking about how they can mitigate them through the development of mitigation actions to include in the plan. Attendees were encouraged to fill out the Non-Municipal Stakeholder Participation Worksheet to provide this information to the project team.

April 24, 2025 – Public Open House*: An open house was held in person to provide an opportunity for the public to review information on the plan, ask questions, and provide feedback. Resources were provided that detailed the hazard mitigation planning process, information on the current update, the schedule for upcoming Draft Plan Review Meetings, and more. A short looping presentation provided a general overview on the hazard mitigation plan and update process. Members of the HMSC attended to field questions and engage in discussions. The open house was advertised on the project website, the Chester County website and social media accounts, the Chester County Commissioners' weekly newsletter, and County Commissioners' social media accounts. Municipalities spread the word by posting a flyer on their local websites and social media sites. Figure 3.3-1 shows a social media post from Chester County DES advertising the open house. Promotion for the open house is documented in **Appendix C – Meeting and Other Participation Documentation.**

Figure 3.3-1 Social Media Post Advertising the Public Open House

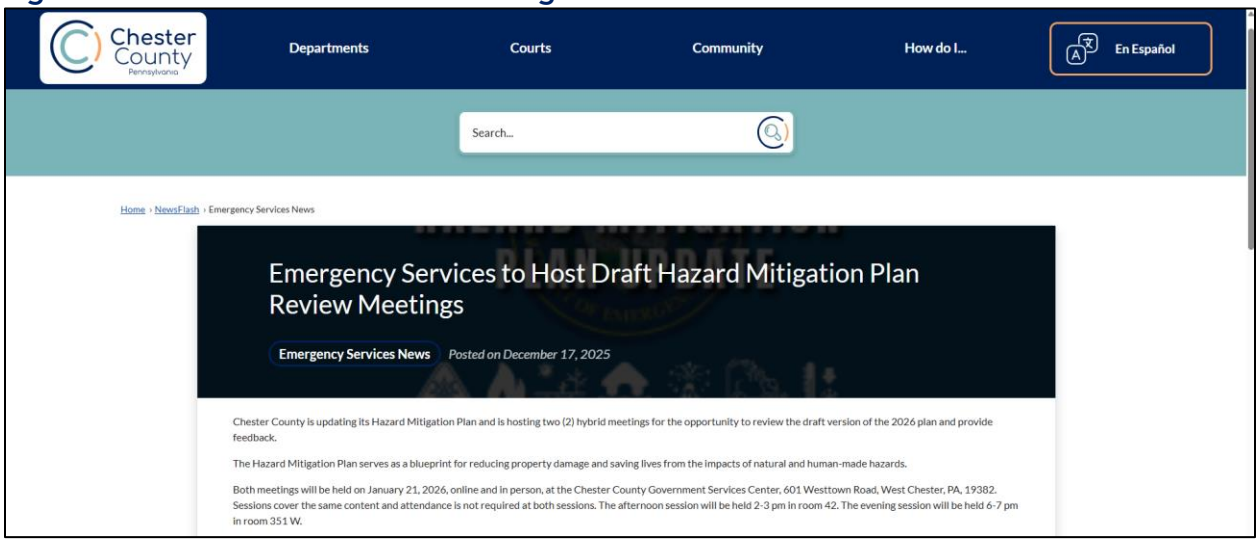


March through July 2025 – Meetings and Calls with Municipalities Still Needing to Participate: Chester County DES worked to encourage participation through targeted phone calls and in-person meetings with municipalities that had not participated in the planning process up to this point. Meetings were focused on discussing the HMP Update process with local officials and working to complete HMP municipal

participation forms. Through these phone calls and meetings, Chester County DES encouraged attendance at upcoming meetings and offered opportunities to meet participation requirements. This effort significantly bolstered the number of participating municipalities.

January 21, 2026 – Draft Plan Review Meetings*: Two hybrid virtual and in-person draft plan review meetings were held after the plan update was fully developed. The purpose of these final HMPT and public meetings was to provide information about the update process, evaluation, and findings in the HMP. Additionally, participants learned when and how to review the draft HMP as well as the timeline for the review and submission to PEMA and FEMA. Invitations were e-mailed to each municipality and stakeholder on the HMPT, as well as to community members who completed the Public Survey. The meetings were noticed on the Chester County website (see Figure 3.3-2). Meeting attendees were asked to provide feedback via the provided digital question/comment form or by sharing via e-mail.

Figure 3.3-2 Draft Plan Review Meeting Website Advertisement



January 23, 2026 through February 22, 2026 – Public Review: The draft 2026 HMP Update was posted to the project website on January 23, 2026, so the public could obtain information about the draft, review the HMP, and ask questions or provide comments and feedback. The availability of planning materials and Draft HMP review were advertised on the project website. A question/comment form was available to provide feedback. There were 10 submitted forms and significant additional feedback provided by CWRA and CCPC. Edits were made to the plan to address comments, such as updating mitigation actions, adding information to hazard profiles, and changing catalogued capabilities.

October 2024 – July 2026 – HMSC Meetings: Virtual HMSC meetings were held throughout the update process to review progress on the HMP Update and manage the day-to-day project items and timeline. Meeting topics included engagement activities, municipal and stakeholder participation, resources for the 2026 HMP Update, hazards to include in the 2026 HMP Update,

draft plan updates, mitigation goals and objectives, the process for submittal to PEMA and FEMA review, and more.

3.4. PUBLIC AND STAKEHOLDER PARTICIPATION

Stakeholders and the public were given multiple opportunities to participate in the HMP Update process:

- Invitation to meetings listed in **Section 3.3**. The public was invited to meetings with an asterisk (*).
- Reviewing risk assessment results and mitigation actions.
- Submitting feedback through the Community Hazard Mitigation Survey.
- Commenting on a final draft of the 2026 HMP Update.

Opportunities open to the public were advertised on the project website, on the county's website and through county and municipal social media accounts. The tools listed below were available on the HMP Update website to solicit information, data, and comments from local municipalities, regional stakeholders, and the public in Chester County. These forms were also distributed in-person at the HMPT meetings identified and by e-mail correspondence at different touchpoints throughout the planning process. Responses to these worksheets and surveys are included in **Appendix C – Meeting and Other Participation Documentation.** Information provided in these forms was incorporated throughout the plan. The sections they informed are outlined in the descriptions below.

Evaluation of Identified Hazards and Risk Worksheet: Collected information from the HMPT on whether there have been changes to the frequency of occurrence, magnitude of impact, or geographic extent of hazards identified in the 2021 Plan. In addition, the form asked respondents to identify any additional hazards they believe should be considered in the 2026 Plan. This form informed **Section 4 – Risk Assessment.**

Jurisdictional Hazard Risk Ranking Form: Collected information on the perceived risk of hazards in each municipality compared to the ranked hazards for the county. Communities listed whether the jurisdictional risk is greater, equal to, or less than the county's risk. This form informed **Section 4 – Risk Assessment.**

Critical Facilities Review Worksheet: Provided an opportunity for municipalities to review the critical facilities identified in their community. Critical facilities were initially collected from state and national datasets. This worksheet allowed for more local and accurate input. This form informed **Section 4 – Risk Assessment, Section 6 – Mitigation Strategy, and Appendix E – Critical Facilities.**

Community Lifelines Form: Collected information on the FEMA Community Lifelines in Chester County. Communities listed assets in their community that fall within the different lifeline categories. This form informed **Section 4 – Risk Assessment, Section 6 – Mitigation Strategy, and Appendix E – Critical Facilities.**

Capability Assessment Survey: Collected information on local planning, regulatory, administrative, technical, fiscal, political, and resiliency capabilities that can be included in the plan's capability assessment. This form informed **Section 5 – Capability Assessment.**

NFIP Survey: Collected community-level NFIP capabilities. This form informed **Section 5 – Capability Assessment.**

Mitigation Action Progress Form: This form is specific to each jurisdiction and included all actions for that jurisdiction in the 2021 HMP. Space was provided to note the status of each action and to document any progress made. This form informed **Section 6 – Mitigation Strategy.**

New Mitigation Action Form: Allowed communities to submit new mitigation actions for the HMP Update. This form collected details about the action, including priority, responsible parties, potential funding sources, implementation timeframe, and more. This form informed **Section 6 – Mitigation Strategy.**

Plan Comment Form: Provided an opportunity for communities and the public to comment on the plan during the review period.

Community participation and comment was encouraged throughout the planning process, particularly through the project website: https://www.pennsylvaniahmp.com/chester-county-hmp. Figure 3.3-2 shows an image of the draft plan meeting announcement on the project website's home page. The website was available at the beginning of the planning process and acted as a document and information repository throughout the planning process. The website houses presentations, agendas, minutes, and worksheets from each meeting as well as promulgated meeting dates and important announcements.

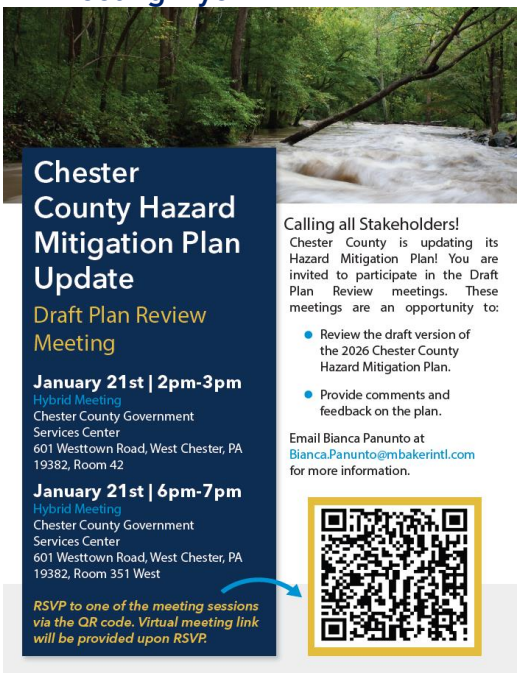
Figure 3.4-1 Public Survey Flyer



The HMSC also developed a Community Hazard Mitigation Survey intended to solicit public input regarding the understanding of hazard risk. It was posted to the website and shared with communities to post to their social media accounts. Figure 3.4-1 shows the flyer developed by Chester County DES to advertise the public survey. The survey received 1,101 responses while it was open to the public between December 1, 2024, and May 31, 2025. Findings are analyzed in **Section 4.4.5 Community Survey**.

Chester County posted the 2026 Draft HMP Update on the plan update website (www.pennsylvaniahmp.com/Chester-county-hmp) for review and comment on January 23, 2026 for a 30-day comment period. The invitation to the public to review and comment on the draft plan was posted on the project website and was e-mailed to local officials with a flyer to share with the public advertising the Draft Plan Review Meetings (Figure 3.4-2). An e-mail was also sent to members of the public who completed the Public Survey and provided their e-mail address in their response (496 people).

Figure 3.4-2 Draft Plan Review Meeting Flyer



The HMSC asked commenters to submit comments via the online comment form or to Bianca Panunto, consultant project manager, by e-mail. Copies of all comments received are in **Appendix C – Meeting and Other Participation Documentation.**

3.5. MULTI-JURISDICTIONAL PLANNING

This HMP was developed using a multi-jurisdictional approach. Although county level departments have resources such as technical expertise and data which local jurisdictions may lack, involvement from local municipalities is critical to the collection of local knowledge related to hazard events. Local municipalities also have the legal authority to enforce compliance with land use planning and development issues. The HMSC was committed to getting municipal participation. Table 3.5-1 lists jurisdictional participation in this update. All 73 municipalities and one special district participated in the planning process, achieving 100% participation.

To maximize participation, HMPT meetings were held in hybrid format, at different locations throughout the county, and at different days of the week and times of day. Stakeholders were e-mailed invitations and reminders to all meetings. This included all neighboring counties: Berks County, Delaware County, Lancaster County, Montgomery County, and Philadelphia County in PA, New Castle County, DE, and Cecil County, MD. Surveys and forms were provided at meetings, posted to the project website, e-mailed, or dropped off in person to jurisdictions. There was also targeted outreach to municipalities through e-mail and phone calls. Forms and

materials were shared with municipalities prior to and after each meeting. Chester County staff met or spoke with Warwick Township in May 2025, East Marlborough on 5/27/25, Modena Borough on 6/2/2025, East Fallowfield Township on 6/3/2025, and South Coventry Township on 6/12/25.

Table 3.5-1 2026 Chester County HMP Municipal and Special District Participation

MUNICIPALITY/ SPECIAL DISTRICT	COUNTY HMP MEETINGS					WORKSHEETS AND EXERCISES									
	PLAN KICK-OFF MEETINGS	REGIONAL	OPEN HOUSE	DRAFT PLAN REVIEW MEETING	COUNTY PHONE CALLS AND IN-PERSON MEETINGS	EVALUATION OF IDENTIFIED HAZARDS AND RISK WORKSHEET	RISK RANKING EVALUATION	CRITICAL FACILITIES FORM	COMMUNITY LIFELINES FORM	CAPABILITY ASSESSMENT SURVEY	NFIP COMPLIANCE AND CAPABILITIES	MITIGATION ACTION PROGRESS FORM	NEW MITIGATION ACTION FORM	DRAFT PLAN COMMENT FORM	MISCELLANEOUS WRITTEN FEEDBACK
Atglen Borough	X			X		X	X		X						
Avondale Borough					X	X	X		X						
Birmingham Township					X	X	X		X	X					
Caln Township					X	X	X		X	X	X	X	X		
Charlestown Township	X					X	X	X	X	X		X			
Coatesville City	X	X				X	X		X						
Downingtown Borough	X	X				X									
East Bradford Township		X		X		X	X	X	X	X	X	X			
East Brandywine Township	X	X				X	X	X	X	X	X	X	X		
East Caln Township	X	X		X		X	X	X	X	X	X	X			X
East Coventry Township	X				X	X	X		X	X	X				
East Fallowfield Township			X		X							X			
East Goshen Township	X	X		X		X	X								
East Marlborough Township					X		X								
East Nantmeal Township					X	X	X		X		X				
East Nottingham Township	X	X		X		X	X		X	X					
East Pikeland Township	X	X		X		X	X		X					X	
East Vincent Township	X					X	X		X						
East Whiteland Township	X	X		X		X	X	X	X	X		X	X	X	
Easttown Township	X					X	X		X						
Elk Township	X			X		X	X		X	X					

Table 3.5-1 2026 Chester County HMP Municipal and Special District Participation

MUNICIPALITY/ SPECIAL DISTRICT	COUNTY HMP MEETINGS					WORKSHEETS AND EXERCISES									
	PLAN KICK-OFF MEETINGS	REGIONAL	OPEN HOUSE	DRAFT PLAN REVIEW MEETING	COUNTY PHONE CALLS AND IN-PERSON MEETINGS	EVALUATION OF IDENTIFIED HAZARDS AND RISK WORKSHEET	RISK RANKING EVALUATION	CRITICAL FACILITIES FORM	COMMUNITY LIFELINES FORM	CAPABILITY ASSESSMENT SURVEY	NFIP COMPLIANCE AND CAPABILITIES	MITIGATION ACTION PROGRESS FORM	NEW MITIGATION ACTION FORM	DRAFT PLAN COMMENT FORM	MISCELLANEOUS WRITTEN FEEDBACK
Elverson Borough	X			X		X	X		X	X					
Franklin Township		X		X		X	X		X	X	X	X	X		
Highland Township	X	X		X		X	X								
Honey Brook Borough	X				X	X	X		X	X					
Honey Brook Township		X			X	X	X	X	X	X	X	X			
Kennett Square Borough	X	X		X		X	X	X	X		X	X			
Kennett Township	X			X		X	X		X		X				
London Britain Township	X	X		X		X	X	X	X	X	X				
London Grove Township	X	X				X	X		X			X			
Londonderry Township	X	X		X		X	X								
Lower Oxford Township					X	X	X		X	X	X				
Malvern Borough		X				X	X		X	X	X				
Modena Borough					X	X			X						
New Garden Township	X	X				X									
New London Township	X	X		X		X	X		X	X					
Newlin Township		X				X	X	X	X	X	X	X			
North Coventry Township	X	X		X		X	X	X	X	X				X	
Oxford Borough	X	X		X			X	X		X		X	X	X	
Parkesburg Borough					X	X	X		X						
Penn Township		X								X	X				
Pennsbury Township					X	X	X		X	X					

Table 3.5-1 2026 Chester County HMP Municipal and Special District Participation

MUNICIPALITY/ SPECIAL DISTRICT	COUNTY HMP MEETINGS					WORKSHEETS AND EXERCISES									
	PLAN KICK-OFF MEETINGS	REGIONAL	OPEN HOUSE	DRAFT PLAN REVIEW MEETING	COUNTY PHONE CALLS AND IN-PERSON MEETINGS	EVALUATION OF IDENTIFIED HAZARDS AND RISK WORKSHEET	RISK RANKING EVALUATION	CRITICAL FACILITIES FORM	COMMUNITY LIFELINES FORM	CAPABILITY ASSESSMENT SURVEY	NFIP COMPLIANCE AND CAPABILITIES	MITIGATION ACTION PROGRESS FORM	NEW MITIGATION ACTION FORM	DRAFT PLAN COMMENT FORM	MISCELLANEOUS WRITTEN FEEDBACK
Phoenixville Borough	X					X	X		X						
Pocopson Township	X	X	X	X		X	X	X	X	X	X	X	X		
Sadsbury Township	X			X		X	X		X				X		
Schuylkill Township	X					X	X		X	X					
South Coatesville Borough					X			X			X	X			
South Coventry Township					X	X									
Spring City Borough	X					X	X	X	X	X	X	X			
Thornbury Township		X				X	X		X	X	X				
Tredyffrin Township	X	X		X		X	X		X	X					
Upper Oxford Township	X	X		X		X	X								
Upper Uwchlan Township	X	X	X	X		X	X		X	X	X	X			
Uwchlan Township	X	X				X	X		X	X	X			X	
Valley Township	X					X	X		X	X			X		
Wallace Township	X			X		X	X								
Warwick Township					X	X									
West Bradford Township	X	X				X	X	X	X	X	X	X			
West Brandywine Township	X					X	X								
West Caln Township	X					X	X	X	X	X			X		
West Chester Borough	X	X		X		X	X	X	X	X	X	X	X		
West Fallowfield Township					X	X	X		X	X	X				
West Goshen Township					X	X	X		X						

Table 3.5-1 2026 Chester County HMP Municipal and Special District Participation

MUNICIPALITY/ SPECIAL DISTRICT	COUNTY HMP MEETINGS					WORKSHEETS AND EXERCISES									
	PLAN KICK-OFF MEETINGS	REGIONAL	OPEN HOUSE	DRAFT PLAN REVIEW MEETING	COUNTY PHONE CALLS AND IN-PERSON MEETINGS	EVALUATION OF IDENTIFIED HAZARDS AND RISK WORKSHEET	RISK RANKING EVALUATION	CRITICAL FACILITIES FORM	COMMUNITY LIFELINES FORM	CAPABILITY ASSESSMENT SURVEY	NFIP COMPLIANCE AND CAPABILITIES	MITIGATION ACTION PROGRESS FORM	NEW MITIGATION ACTION FORM	DRAFT PLAN COMMENT FORM	MISCELLANEOUS WRITTEN FEEDBACK
West Grove Borough		X				X									
West Marlborough Township	X					X	X		X	X	X		X	X	
West Nantmeal Township	X			X		X	X		X	X			X		
West Nottingham Township	X	X		X		X	X								
West Pikeland Township			X			X		X		X		X			
West Sadsbury Township	X				X	X	X		X	X	X		X		
West Vincent Township					X	X	X			X	X				
West Whiteland Township				X	X	X			X		X		X		
Westtown Township	X			X		X	X	X	X			X			X
Willistown Township		X		X		X	X	X	X	X	X	X	X		
Downingtown Area Regional Authority		X		X									X	X	

Table 3.5-2 Chester County HMP Stakeholder Participation

AGENCY / ORGANIZATION	COUNTY HMP MEETINGS					WORKSHEETS AND EXERCISES		
	PLAN KICK-OFF MEETINGS	STAKEHOLDER WORKSHOPS	OPEN HOUSE	DRAFT PLAN REVIEW MEETING	OTHER MEETINGS/ ENGAGEMENT	NON-MUNICIPAL STAKEHOLDER FORM	DRAFT PLAN COMMENT FORM	MISCELLANEOUS WRITTEN FEEDBACK
Alianzas De Phoenixville						X		
American Red Cross	X	X						
Berks County Department of Emergency Services	X			X				
Brandywine Conservancy		X						
Brandywine Valley Active Aging (BVAA)	X							
Cecil County Maryland Department of Emergency Services	X			X				
Chester County Department of Aging Services		X				X		
Chester County Department of Community Development	X	X						
Chester County Department of Human Services	X	X						
Chester County Department of Mental Health/Intellectual and Developmental Disabilities		X						
Chester County Department of Parks and Preservation	X							
Chester County Drug & Alcohol Services		X						
Chester County First		X		X				
Chester County Food Bank				X				
Chester County HAZMAT Team	X			X				
Chester County Health Department	X	X		X		X		
Chester County Information & Referral Services		X		X				
Chester County Planning Commission	X	X		X		X		
Chester County Veterans Affairs		X						
Chester County Water Resources Authority	X	X		X		X		
Chester County Youth Center		X						

Table 3.5-2 Chester County HMP Stakeholder Participation

AGENCY / ORGANIZATION	COUNTY HMP MEETINGS					WORKSHEETS AND EXERCISES		
	PLAN KICK-OFF MEETINGS	STAKEHOLDER WORKSHOPS	OPEN HOUSE	DRAFT PLAN REVIEW MEETING	OTHER MEETINGS/ ENGAGEMENT	NON-MUNICIPAL STAKEHOLDER FORM	DRAFT PLAN COMMENT FORM	MISCELLANEOUS WRITTEN FEEDBACK
Coatesville Area School District				X				
Delaware Riverkeeper				X				
Downingtown Area School District	X							
Downingtown Resilience Fund		X				X		
East Goshen Township Pipeline Task Force (PTF)				X				
Elverson-Honey Brook EMS	X			X				
Energy Transfer				X			X	
Krug Architects				X				
FEMA	X	X						
Garage Community and Youth Center	X							
Goshen EMS	X							
Green Valleys Watershed Association	X							
Housing Partnership of Chester County						X		
Kennett Area Community Service (KACS)	X	X				X		
Main Line Health / Paoli Hospital	X							
Maternal and Child Health Consortium						X		
Montgomery County Department of Public Safety	X							
National Alliance on Mental Illness (NAMI) Chester County	X	X		X				
New Castle County, DE Emergency Management				X				
Office of State Representative Christina Sappey				X				
Owen J Roberts School District				X				
Pennsylvania American Water Co.	X							

Table 3.5-2 Chester County HMP Stakeholder Participation

AGENCY / ORGANIZATION	COUNTY HMP MEETINGS					WORKSHEETS AND EXERCISES		
	PLAN KICK-OFF MEETINGS	STAKEHOLDER WORKSHOPS	OPEN HOUSE	DRAFT PLAN REVIEW MEETING	OTHER MEETINGS/ ENGAGEMENT	NON-MUNICIPAL STAKEHOLDER FORM	DRAFT PLAN COMMENT FORM	MISCELLANEOUS WRITTEN FEEDBACK
Philadelphia Office of Emergency Management	X			X				
Salvation Army of West Chester		X						
Serving, Inspiring, And Loving Others (SILO)		X						
Southern Chester County EMS Medic 94	X							
Tredyffrin/Easttown School District	X							
Tick Tock Early Learning Center				X				X
Unionville-Chadds Ford School District	X			X				
Uwchlan Ambulance Corps	X							
Westtown School	X			X				
Westwood EMS	X							
White Clay Watershed Association	X			X				

4. RISK ASSESSMENT

4.1. UPDATE PROCESS SUMMARY

This risk assessment provides a factual basis for activities proposed by the county in its Mitigation Strategy. Hazards that may affect Chester County are identified and defined in terms of location and geographic extent, magnitude of impact, previous events and likelihood of future occurrence. Information from the previous plan has been included or updated, as appropriate, in this plan update unless otherwise indicated. Chester County's risk assessment is organized into the following sections:

- **Section 4.2** outlines the hazard identification process for both natural and human-caused hazards.
- **Section 4.3** profiles the hazards of concern (location and extent, range of magnitude, past occurrence, and future occurrence) and assesses vulnerability.
- **Section 4.4** summarizes the risk assessment methodology, ranking results, potential losses, and future development and vulnerability.

Hazard profiles in the 2026 HMP include the following Natural and Human-Made Hazards:

- Drought
- Earthquakes
- Extreme Temperatures
- Flood, Flash Flood, & Ice Jam
- Hurricane, Tropical Storm, & Nor'easter
- Invasive Species
- Pandemic & Infectious Disease
- Radon Exposure
- Tornado & Windstorm
- Wildfire
- Winter Storm
- Cyber Terrorism
- Dam Failure
- Environmental Hazards – Gas and Liquid Pipelines
- Environmental Hazards - Hazardous Materials Release
- Nuclear Incidents
- Substance Use Disorder
- Terrorism
- Transportation Incidents
- Urban Fire and Explosion
- Utility Interruption

The Steering Committee and Planning Team evaluated the hazards identified in the 2021 HMP by examining the events that have taken place in the county since the last plan update and by reviewing the Commonwealth's 2023 HMP. For consistency, a number of hazards were renamed to match the state's hazard list: "Opioid Epidemic" became "Substance Use Disorder"; "Pandemic" became "Pandemic and Infectious Disease," and "Transportation Accidents" became "Transportation Incidents." "Structural Fires" became "Urban Fire and Explosion," and "Utility Failure" became "Utility Interruption." Finally, the "Environmental Hazards" and "Pipeline Incidents" sections were changed to the "Environmental Hazards – Hazardous Material Release" and "Environmental Hazards – Gas and Liquid Pipelines."

Then, the Steering Committee and Planning Team added their perspective via Evaluation of Identified Hazards and Risk Worksheet. The worksheet listed hazards profiled in the 2021 HMP and requested that participants identify whether the frequency of occurrence, magnitude of

impact, and/or geographic extent of each hazard increased, decreased, or did not change since the 2021 HMP. The worksheet also provided the opportunity to assess hazards not profiled in the 2021 HMP to determine if any should be included as part of the update. The Steering Committee reviewed responses to identify a list of hazards to profile in the 2026 HMP. **Appendix C** includes copies of the completed worksheets.



For this plan update, each profile has two new subsections. One discusses the effect of climate change on vulnerability. The second is an "Equity in Vulnerable Communities" section, which expands on how certain socioeconomic factors can result in hazards having a disproportionate impact on certain populations or communities. This assessment allows the county and its municipalities to focus mitigation and preparedness efforts by allocating resources more fairly, improving emergency responses, and enhancing overall community resilience.

Each hazard profile now identifies the community lifelines that may be affected by each hazard. The community lifelines are defined in Figure 2.6-1 and listed to the right. **Appendix E – Critical Facilities and Community Lifelines** also includes insights from the Community Lifelines Forms that were completed by communities. The appendix includes a table for each lifeline listing the assets that were identified as being a part of each lifeline per municipality.

In addition, the Downingtown Area Regional Authority is a participating jurisdiction in this plan as a special district. The authority is the responsible entity for the ownership and operation of the regional pollution control center that serves Downingtown Borough, Caln Township, East Caln Township, Uwchlan Township, and West Whiteland Township. The authority operates a wastewater treatment plant (WWTP), which is also included in this plan as a critical facility, located in East Caln Township. Therefore, the general vulnerability for DARA is the same as that of East Caln Township. That said, infrastructure utilized by DARA is also present in the other municipalities, so hazard events in those areas can also impact DARA's operations. Additional information on the specifics of DARA's risk to certain hazards is included in their profiles.

4.2. HAZARD IDENTIFICATION

4.2.1. Presidential Disaster Declarations

This section summarizes previous disaster and emergency declarations related to Chester County's hazards of concern.

In evaluating hazards for inclusion in the 2026 HMP, the Steering Committee and Planning Team reviewed recent information and historical records from a wide range of sources. This section discusses the Presidential Disaster and Emergency Declarations, Gubernatorial Disaster Declarations or Proclamations, and Small Business Administration Disaster Declarations on record that have affected Chester County.

Presidential Disaster and Emergency Declarations are issued when it has been determined that state and local governments need assistance in responding to a disaster event. Since 1955, declarations have been issued for hazard events, including hurricanes or tropical storms, severe winter storms, and flooding. A unique Presidential Emergency Declaration, Emergency Declaration 3235, was issued in September 2005. Through this declaration, President George W. Bush declared a state of emergency for the Commonwealth of Pennsylvania and ordered federal aid to supplement Commonwealth and local response efforts to help people evacuate from their homes due to Hurricane Katrina, though the Commonwealth was not directly impacted by Hurricane Katrina.

Table 4.2.1-1 identifies Presidential Disaster and Emergency Declarations issued between 1955 through 2025 that have affected Chester County. After the publication of this plan, newer declarations can be found on FEMA's website at: https://www.fema.gov/disasters/disaster-declarations.

Table 4.2.1-1 Presidential Disaster and Emergency Declarations for Chester County.

DECLARATION NUMBER	DATE	TYPE	EVENT
4618	9/10/2021	Major Disaster Declaration	Remnants of Hurricane Ida
3441	3/13/2020	Emergency Declaration	COVID-19
4506	3/30/2020	Major Disaster Declaration	COVID-19 Pandemic
4267	3/23/2016	Major Disaster Declaration	Severe Winter Storm and Snowstorm
3367	2/6/2014	Emergency Declaration	Severe Winter Storm
3356	10/29/2012	Emergency Declaration	Hurricane Sandy
3339	8/29/2011	Emergency Declaration	Hurricane Irene
4025	9/3/2011	Major Disaster Declaration	Hurricane Irene
3340	9/8/2011	Emergency Declaration	Remnants of Tropical Storm Lee
4030	9/12/2011	Major Disaster Declaration	Tropical Storm Lee
1898	4/16/2010	Major Disaster Declaration	Severe Winter Storms and Snowstorms
1649	6/30/2006	Major Disaster Declaration	Severe Storms, Flooding, and

Table 4.2.1-1 Presidential Disaster and Emergency Declarations for Chester County.

DECLARATION NUMBER	DATE	TYPE	EVENT
			Mudslides
3235	9/10/2005	Emergency Declaration	Hurricane Katrina
1557	9/19/2004	Major Disaster Declaration	Tropical Depression Ivan
1555	9/19/2004	Major Disaster Declaration	Severe Storms and Flooding associated with Tropical Depression Frances
3180	3/14/2003	Emergency Declaration	Snow
1497	9/26/2003	Major Disaster Declaration	Tropical Storms Henri and Isabel and Related Severe Storms and Flooding
1485	8/23/2003	Major Disaster Declaration	Severe Storms, Tornadoes, and Flooding
1294	9/18/1999	Major Disaster Declaration	Hurricane Floyd Major Disaster Declarations
1085	1/13/1996	Major Disaster Declaration	Blizzard of 96
1093	1/21/1996	Major Disaster Declaration	Severe Storms and Flooding
1015	3/10/1994	Major Disaster Declaration	Severe Winter Storms
3105	3/16/1993	Emergency Declaration	Severe Snowfall & Winter Storm
400	7/17/1973	Major Disaster Declaration	Severe Storms and Flooding
340	6/23/1972	Major Disaster Declaration	Tropical Storm Agnes
312	9/18/1971	Major Disaster Declaration	Floods
206	8/18/1965	Major Disaster Declaration	Water Shortage
89	1/23/1959	Major Disaster Declaration	Floods
61	8/9/1956	Major Disaster Declaration	Storm
58	5/21/1956	Major Disaster Declaration	Severe Storm
51	3/15/1956	Major Disaster Declaration	Flood
40	8/20/1955	Major Disaster Declaration	Floods and Rains

In addition to these Presidentially declared events, some events warranted Gubernatorial Disaster Declarations or Proclamations that included Chester County. Table 4.2.1-2 lists these Proclamations that have been issued for the Commonwealth of Pennsylvania and that have impacted Chester County between 2018 and 2025.

These proclamations and declarations occurring after 2025 can be found on the Pennsylvania

Table 4.2.1-2 Gubernatorial Disaster Declarations or Proclamations Affecting Chester County.

DATE	EVENT	DESCRIPTION
August 9, 2024	Tropical Storm	Heavy rain event causing severe flooding.

DATE	EVENT	DESCRIPTION
	Debby	
April 15, 2021	Civil Disturbance	Political and social disturbances in response to the murder of George Floyd.
February 1, 2021	Winter Storm	Severe winter weather event causing dangerous conditions including snow, ice accumulation, and high winds.
December 15, 2020	Winter Storm	Severe winter weather event causing snow, ice accumulation, and flooding.
August 31, 2021	Hurricane Ida	Heavy rainfall event causing threat of flooding and flash flooding.
March 6, 2020	COVID-19	Public health emergency caused by the outbreak of the COVID-19 spread to the United States.
January 18, 2019	Winter Storm	Severe winter weather event causing snow, ice accumulation, and flooding.
August 17, 2018	Storm	Slow-moving storms caused record-breaking rainfall and subsequent flooding.
January 10, 2018	Opioid Crisis	Public health emergency identifying opioid overdoses, deaths, and emergencies in a state of disaster.

Chester County has also received Small Business Administration Disaster Assistance for a number of disaster events. A Small Business Administration Disaster Declaration qualifies communities for affordable, timely, and accessible financial assistance. Table 4.2.1-3 lists Small Business Administration Disaster Declarations issued for Chester County from 1989 through 2025 (PEMA 2020), including those declarations for which Chester County was included as an adjacent county.

Table 4.2.1-3 Small Business Administration Disaster Declarations affecting Chester County.

DATE	EVENT
August 2024	Tropical Storm Debby
August 2024	Flooding, Flash Flooding, and Rain

4.2.2. Summary of Hazards

Based on all available information and input from the municipalities and the process described in **Section 4.1**, the Steering Committee and Planning Team selected the following natural and non-natural hazards for consideration in this plan:

Natural Hazards:

- Drought
- Earthquakes
- Extreme Temperatures
- Flood, Flash Flood, & Ice Jam

- Hurricane, Tropical Storm, & Nor'easter
- Invasive Species
- Pandemic & Infectious Disease
- Radon Exposure
- Tornado & Windstorm
- Wildfire
- Winter Storm

Human-made Hazards:

- Cyber-Terrorism
- Dam Failure
- Environmental Hazards – Gas and Liquid Pipelines
- Environmental Hazards - Hazardous Materials Release
- Nuclear Incidents
- Substance Use Disorder
- Terrorism
- Transportation Incidents
- Urban Fire and Explosion
- Utility Interruption

These hazards have been profiled individually in **Section 4.3** of this plan.

Table 4.2.2-1 List and Description of Natural and Manmade Hazards Profiled in the 2026 Hazard Mitigation Plan Update. (PA 2025 Standard Operating Guide)

HAZARD	HAZARD DESCRIPTION
NATURAL HAZARDS	
	Drought is defined as a deficiency of precipitation experienced over an extended period of time, usually a season or more. Droughts increase the risk of other hazards, like wildfires, flash floods, and landslides or debris flows. This hazard is of particular concern in Pennsylvania due to the prevalence of farms and other water-dependent industries, water-dependent recreation uses, and residents who depend on wells for drinking water. (National Drought Mitigation Center, 2025; Ready.gov, 2025a).
	An earthquake is the motion or trembling of the ground produced by sudden displacement of rock usually within the upper 10 to 20 miles of the Earth's crust. Earthquakes result from crustal strain, volcanism, landslides, or the collapse of underground caverns. Earthquakes can affect hundreds of thousands of square miles, cause damage to property measured in the tens of billions of dollars, result in loss of life and injury to hundreds of thousands of persons and disrupt the social and economic functioning of the affected area (Ready.gov, 2025b).

HAZARD	HAZARD DESCRIPTION
	Extreme heat often results in the highest number of annual deaths of all weather-related hazards. In most of the United States, extreme heat is defined as a long period (2 to 3 days) of high heat and humidity with temperatures above 90 degrees. Extremely cold air comes every winter in at least part of the country and affects millions of people across the United States. The arctic air, together with brisk winds, can lead to dangerously cold wind chill values. People exposed to extreme cold are susceptible to frostbite and hypothermia in a matter of minutes (Ready.gov, 2025c).
	Flooding is the temporary condition of partial or complete inundation of normally dry land, and it is the most frequent and costly of all natural hazards in Pennsylvania (PEMA, 2020). Flash flooding is usually a result of heavy localized precipitation falling in a short time period over a given location, often along mountain streams and in urban areas where much of the ground is covered by impervious surfaces. Winter flooding can include ice jams which occur when warm temperatures and heavy rain cause snow to melt rapidly. Snow melt combined with heavy rains can cause frozen rivers to swell, which breaks the ice layer on top of a river. The ice layer often breaks into large chunks, which float downstream, piling up in narrow passages and near other obstructions such as bridges and dams. (NESEC, 2025).
	Hurricanes, tropical storms, and nor'easters are classified as cyclones and are any closed circulation developing around a low-pressure center in which the winds rotate counterclockwise (in the Northern Hemisphere) and whose diameter averages 10 to 30 miles across. Potential threats from hurricanes include powerful winds, heavy rainfall, storm surges, coastal and inland flooding, rip currents, tornadoes, and landslides. In inland areas like Chester County, the primary concerns are wind, heavy rainfall and flooding. The Atlantic hurricane season runs from June 1 to November 30. (Ready.gov, 2025d).
	An invasive species is a species that is not indigenous to the ecosystem under consideration and whose introduction causes or is likely to cause economic, environmental, or human harm. These species can be any type of organism: amphibian, plant, fish, invertebrate, mammal, bird, disease, or pathogen. The magnitude of an invasive species threat is generally amplified when the ecosystem or host species is already stressed, such as in times of drought or after a wildfire, as the already weakened state of the native ecosystem causes it to succumb to an infestation more easily (Flory, et. al, 2022).
	A pandemic is a global outbreak of disease that occurs when a new virus emerges in the human population, spreading easily in a sustained manner, and causing serious illness. An epidemic describes a smaller-scale infectious outbreak, within a region or population, that emerges at a disproportional rate. Infectious disease outbreaks may be widely dispersed geographically, impact large numbers of the population, and could arrive in waves lasting several months at a time. (Ready.gov. 2025d).

HAZARD	HAZARD DESCRIPTION
	Radon is a radioactive gas produced by the breakdown of uranium in soil and rock that can lead to lung cancer in people exposed over a long period of time. Most exposure comes from breathing in radon gas that enters homes and buildings through foundation cracks and other openings. According to the DEP, approximately 40% of Pennsylvania homes have elevated radon levels (PA DEP, 2025c).
	A tornado is a narrow, violently rotating column of air that extends from the base of a thunderstorm to the ground. About 1,250 tornadoes hit the U.S. each year, with about 16 hitting Pennsylvania. Damaging winds exceeding 50 to 60 miles per hour can occur during tornadoes, severe thunderstorms, winter storms, or coastal storms. These winds can have severe impacts on buildings, pulling off the roof covering, roof deck, or wall siding and pushing or pulling off the windows (NOAA, 2025).
	A wildfire is an unplanned fire that burns in a natural area. Wildfires can cause injuries or death and can ruin homes in their path. Wildfires can be caused by humans or lightning, and can happen anytime, though the risk increases in period of little rain. In Pennsylvania, 98% of wildfires are caused by people (Ready.gov, 2025f and PA DCNR, 2025).
	A winter storm is a storm in which the main types of precipitation are snow, sleet, or freezing rain. A winter storm can range from a moderate snowfall or ice event over a period of a few hours to blizzard conditions with wind-driven snow that lasts for several days. Most deaths from winter storms are not directly related to the storm itself, but result from traffic accidents on icy roads, medical emergencies while shoveling snow, or hypothermia from prolonged exposure to cold. (NOAA, 2025).
HUMAN MADE HAZARDS	
	Cyber terrorism refers to acts of terrorism committed using computers, networks, and the Internet. The most widely cited definition comes from Denning's Testimony before the Special Oversight Panel on Terrorism: "Cyberterrorism…is generally understood to mean unlawful attacks and threats of attack against computers, networks, and the information stored therein when done to intimidate or coerce a government or its people in furtherance of political or social objectives. Further, to qualify as cyberterrorism, an attack should result in violence against persons or property, or at least cause enough harm to generate fear" (Denning, 2000).

HAZARD	HAZARD DESCRIPTION
	Dam failure is the uncontrolled release of water (and any associated wastes) from a dam. This hazard often results from a combination of natural and human causes, and can follow other hazards such as hurricanes, earthquakes, and landslides. The consequences of dam failures can include property and environmental damage and loss of life (ASDSO, 2025).
	Pipeline failures are low-probability, potentially high-consequence events. Although gas and liquid pipeline failures are infrequent, the hazardous and inflammable materials released by these events can pose a significant threat to public safety and the built and natural environment. Explosions associated with pipeline failures, for example, can cause severe injury to nearby residents and destroy homes and other property.
	Hazardous material releases can contaminate air, water, and soils and have the potential to cause injury or death. Dispersion can take place rapidly when transported by water and wind. While often accidental, releases can occur because of human carelessness, intentional acts, or natural hazards. When caused by natural hazards, these incidents are known as secondary events.
	Nuclear incidents can cause significant damage and casualties from blast, heat, and radiation. The primary concern following a nuclear accident or nuclear attack is the extent of radiation, inhalation, and ingestion of radioactive isotopes which can cause acute health effects (e.g. death, burns, severe impairment), chronic health effects (e.g. cancer), and psychological effects (EPA, 2025; Ready.gov, 2025g).
	Substance Use Disorder occurs when an individual becomes physically dependent on opioids, which include opiates and narcotics. Opioids are a synthetic substance found in certain prescription pain medications: morphine, codeine, methadone, oxycodone, hydrocodone, fentanyl, and hydromorphone, and street drugs like heroin. Opioids block the body's ability to feel pain and can create a sense of euphoria. Individuals often build a tolerance to opioid drugs, which leads them to take more of the medication than originally prescribed (Pennsylvania Department of Drug and Alcohol Programs, 2025).

HAZARD	HAZARD DESCRIPTION
	Terrorism can be defined by two categories: international terrorism, which are violent, criminal acts committed by individuals and/or groups who are inspired by, or associated with, designated foreign terrorist organizations or nations (state-sponsored) or domestic terrorism, which are violent, criminal acts committed by individuals and/or groups to further ideological goals stemming from domestic influences, such as those of a political, religious, social, racial, or environmental nature (FBI, 2025).
	Transportation incidents are manmade hazards involving the nation's system of land, sea, and air transportation infrastructure. A flaw or breakdown in any component of this system can and often does result in a major disaster involving loss of life, injuries, property and environmental damage, and economic consequences (FEMA, 2018). For Chester County, the primary concerns are vehicular, rail, and air travel incidents.
	Urban fire and explosion hazards include vehicle and building/structure fires as well as overpressure rupture, overheat, or other explosions that do not ignite. This hazard occurs in denser, more urbanized areas statewide and most often occurs in residential structures. Cooking was the leading cause of fire to residential buildings in 2023, causing 48.7% of reported fires in 2023 (US Fire Administration, 2023).
	Utility interruption hazards are hazards that impair the functioning of important utilities in the energy, telecommunications, public works, and information network sectors. Utility interruption hazards include the following: • Geomagnetic Storms • Fuel or Resource Shortage • Electromagnetic Pulse • Information Technology Failure • Ancillary Support Equipment • Public Works Failure • Telecommunications System Failure • Transmission Facility or Linear Utility Accident • Major Energy, Power, Utility Failure

4.3. HAZARD PROFILES AND VULNERABILITY ANALYSIS

NATURAL HAZARDS

4.3.1. Drought



4.3.1.1. Location and Extent

Drought is defined as the consequence of a natural reduction in the amount of precipitation expected over an extended period, usually a season or more in length. Droughts are regional climatic events, so they typically impact all communities in a relatively uniform fashion with only minor localized variations in rainfall events. Droughts often occur across county boundaries, affecting large areas of Pennsylvania at the same time. Therefore, a drought would affect all of Chester County, with the largest impact being on areas of the county with extensive agricultural uses.

Locations of droughts nationwide are monitored continuously by USGS, while PA DEP monitors conditions throughout the state. Maps showing locations currently experiencing drought conditions are posted on various websites (including http://waterwatch.usgs.gov) and show locations where stream flow is below normal and where drought conditions exist or are emerging. Chester County has also developed an online Drought Dashboard, https://www.chesco.org/Drought, which provides links to current conditions from PADEP, USGS, National Weather Service, and the National Drought Mitigation Center, forecasted conditions from the National Weather Service, and tips and answers to frequently asked questions. As this plan was being developed in 2025, Chester County was in a state declared drought watch from January 1 to July 2, a total of 182 days.

Water supplies are vulnerable to effects of drought and thus can impact the severity of a drought, particularly at locations where citizens rely on wells for drinking water. Residents depending on well water can more easily handle short-term droughts without major inconveniences than can populations that rely on surface water. However, longer-term droughts inhibit groundwater aquifers from recharging and can thus extend the problems of well owners for an indeterminate amount of time. Chester County residents who depend on private domestic wells have greater vulnerability to droughts. According to PA DEP, the 2022 average daily domestic self-supplied groundwater withdrawals of fresh water in Chester County was 14.36 million gallons (Mgal) per day (PA DEP, 2024).

Table 4.3.1-5, located in **Section 4.3.1.5**, lists the number of reported domestic wells within each municipality of Chester County. Well data was obtained from the Pennsylvania Groundwater Information System (PaGWIS). PaGWIS is maintained by PA DCNR and relies on voluntary submissions of well record data by well drillers; as a result, it is not a complete database of all domestic wells in the county. It is, however, the most complete dataset of domestic wells available.

In addition to domestic wells in the county, some residents also receive their water from municipal water providers. There are many water purveyors providing water to residents in the

county, including large utilities that span a dozen municipalities to small mobile home parks with less than a dozen residents. Large systems tend to be more resilient to drought than smaller ones. Primary water sources for Chester County include Octoraro Creek, Schuylkill River, the east and west branches of the Brandywine Creek, Crum Creek, and Pickering Creek. AQUA Pennsylvania Inc. is the largest public water provider, with private wells being the second most common water source for county residents. Additional water providers include Pennsylvania-American Water Company and Chester Water Authority.

Jurisdictions designated for agricultural use are particularly vulnerable to drought. Agriculture is over one-third of all land used in the county. A total of 1,267 acres of land in the county needs to be irrigated (USDA, 2022). In Chester County, the following municipalities have large portions zoned for agricultural use: Elk Township, Highland Township, Honey Brook Township, Londonderry Township, Upper Oxford Township, West Caln Township, and West Fallowfield Township. Areas designated for agricultural use are illustrated in Figure 2.5-2 in **Section 2**.

4.3.1.2. Range of Magnitude

Droughts can have varying effects, depending on the month in which they occur, as well as the severity, duration, and location of the event. Even short-term droughts can be devastating, especially in conjunction with extreme temperatures.

Hydrologic drought events result in a reduction of stream flows, reduction of lake/reservoir storage, and a lowering of groundwater levels. These events have adverse impacts on public water supplies for human consumption, rural water supplies for livestock consumption and agricultural operations, water quality, natural soil water or irrigation water for agriculture, soil moisture, conditions conducive to wildfire events, and water for navigation and recreation.

The Commonwealth uses five parameters to assess drought conditions:

1. Stream flows compared to benchmark records.
2. Precipitation, measured as the departure from normal, 30-year average precipitation.
3. Reservoir storage levels in a variety of locations.
4. Groundwater elevations in a number of counties, comparing to past month, past year, and historic record.
5. The Palmer Drought Severity Index (PDSI), a soil moisture algorithm calibrated for relatively homogeneous regions which measures dryness based on recent precipitation and temperature (see Table 4.3.1-1).

The Palmer Drought Severity Index (PDSI) is used to describe abnormally wet to abnormally dry conditions. Zero represents normal rainfall and temperature conditions; drought condition indices are described in the table below.

Table 4.3.1-1 Palmer Drought Severity Index (PSDI) Classifications (NOAA NWS, 2005)

INDEX	DESCRIPTION OF CONDITIONS
4.0 or more	Extremely moist
3.0 to 3.9	Very moist spell
2.0 to 2.9	Unusual moist spell
-1.9 to 1.9	Near normal
-2.0 to -2.9	Moderate drought
-3.0 to -3.9	Severe drought
-4.0 or less	Extreme drought

PA DEP and PEMA manage water supply droughts according to the following four conditions of drought, as defined in the Commonwealth of Pennsylvania 2023 Standard Hazard Mitigation Plan (PA HMP):

- Drought Watch: This is a period to alert government agencies, public water suppliers, water users, and the public regarding potential for future drought-related problems. The focus is on increased monitoring, awareness, and preparation for response in the event that conditions worsen. A request for voluntary water conservation is issued with the objective of reducing water use by 5 to 10% within the affected areas. Because of varying conditions, individual water suppliers or municipalities may propose more stringent conservation actions.
- Drought Warning: This is a drought stage involving a coordinated response to imminent drought conditions and potential water supply shortages through concerted voluntary conservation measures to avoid or reduce shortages, relieve stressed sources, develop new sources, and, if possible, forestall the need to impose mandatory water use restrictions. The objective of voluntary water conservation measures during a drought warning is to reduce overall water use by 10 to 15% within the affected areas. Because of varying conditions, individual water suppliers or municipalities may propose more stringent conservation actions.
- Drought Emergency: During this drought stage, water management entities assemble all available resources to respond to actual emergency conditions, avoid depletion of water sources, ensure at least minimum water supplies are available to protect public health and safety, support essential and high- priority water uses, and avoid unnecessary economic upsets. If deemed necessary and if ordered by the Governor during this stage, imposition of mandatory restrictions on nonessential water usage could occur as provided for in 4 Pa. Code Chapter 119. Objectives of water use restrictions (mandatory or voluntary) and other conservation measures during a drought emergency are to reduce consumptive water use within the affected areas by up to 25%, and to reduce total use to the extent necessary to preserve public water system supplies, avoid or mitigate local or area shortages, and ensure equitable sharing of limited supplies.
- Local Water Rationing: This fourth condition of drought is not defined as a drought stage. Local municipalities may, with the approval of the PEMA Council, implement local

water rationing to share a rapidly dwindling or severely depleted water supply within designated service areas. These individual water rationing plans, authorized through provisions of 4 Pa. Code Chapter 120, require specific limits on individual water consumption to achieve significant reductions in use. Under both mandatory restrictions imposed by the Commonwealth and local water rationing practices, procedures are specified for granting variances in consideration of individual hardships and economic dislocations (PA DEP, 2023).

Availability and management of water supply are discussed in the 2022 Pennsylvania State Water Plan, a joint effort by the Statewide Water Resources Committee and PADEP. In 2022, the PADEP Secretary approved an updated State Water Plan to guide management of Pennsylvania's water resources over a 15-year planning horizon. As a functional planning tool for all Pennsylvania municipalities, counties, and regional planning partnerships, the State Water Plan profiles drought and resource constraints and encourages implementation of new technology and use policies to facilitate reduced water uses and resource demands at critical peak times. The State Water Plan provides inventories of water availability, and an assessment of current and future water use demands and trends. It also offers strategies for improving management of water resources and waterway corridors that aim to reduce damage from extreme drought and flooding conditions (PA DEP, 2022).

Environmental impacts of drought include:

- Hydrologic effects: Lower water levels in reservoirs, lakes, and ponds; reduced streamflow; loss of wetlands; estuarine impacts; groundwater depletion and land subsidence; effects on water quality such as increases in salt concentration and water temperature.
- Damage to animal species: Lack of feed and drinking water; disease; loss of biodiversity; migration or concentration; and reduction and degradation of fish and wildlife habitat.
- Damage to plant communities: Loss of biodiversity; loss of trees from urban landscapes and wooded conservation areas.
- Increased number and severity of fires.
- Reduced soil quality.
- Air quality effects such as dust and pollutants.
- Loss of quality in landscape.
- Loss of water for navigation and recreation.
- Increase in nitrate levels which can have health impacts on pregnant women and children.

These impacts vary depending on drought severity, timing, duration, and location. Some droughts may exert their greatest impact on agriculture, while others may have stronger effects on water supply or recreational activities. Droughts can adversely affect the following significantly:

- Public water supplies for human consumption
- Rural water supplies for livestock consumption and agricultural operations
- Water quality
- Natural soil water or irrigation water for agriculture
- Water for forests and for fighting forest fires
- Water for navigation and recreation

Drought and water supply deficiencies can also affect many sectors of the economy and can reach beyond an area undergoing physical drought. Because water is essential for producing goods and providing services, drought can reduce crop yield, increase fire hazard, lower water levels, and damage wildlife and fish habitats. Further consequences include reductions in crop yields, rangeland, and forest productivity that may lower incomes of farmers and agribusinesses; increase in prices of food and timber; increase in unemployment; reduction of tax revenues as expenditures decline; increase in crime, foreclosures, and migration; and depletion of disaster relief funds. The many impacts of drought can be categorized as economic, environmental, or social. Community lifelines most impacted by droughts are listed in Table 4.3.1-2.

The potential impacts of drought on community lifelines are as follows:

Table 4.3.1-2 Most Likely Lifelines Impacted by Drought

LIFELINES	NOTES
	Drought will require significant personnel in response, and some in recovery, and mitigation.
	Crops may be lost and there are water regulation concerns.
	Food and water shortages could exacerbate health challenges, especially for food-vulnerable populations.

4.3.1.3. Past Occurrence

Historical information has been drawn from many sources regarding previous occurrences and losses associated with drought events throughout Pennsylvania and Chester County. Note that loss and impact information pertaining to many events can vary depending on the source. Therefore, accuracy of cited monetary values is based only on the available information identified during research for this plan.

Declared drought status for Chester County from November 1980 to July 2025 is listed in Table 4.3.1-3. Descriptions for drought status categories (i.e. watch, warning, and emergency) are

included in **Section 4.3.1.2**. Between 1930 and 2025, the Commonwealth of Pennsylvania experienced seven significant droughts extending from 1930-1934, 1939-1942, 1953-1955, 1961-1967, 1980-1983, 1991-1992 and 1999-2003. These were considered emergency events. The 1980-1983 event resulted in $196,000,000 in damages to crops across the Commonwealth. Below average rainfall created water shortages in many municipalities in 1988, 1989, 1991, 1995, 1998, and early 1999. In addition to these events, between 1980 and 2025, PADEP indicated that Chester County has undergone 21 drought watch declarations, 18 drought warning declarations, and 14 drought emergency declarations (PA DEP, 2025a).

Table 4.3.1-3 Drought Status for Chester County from 1980 to 2025 (PA DEP, 2025a).

DATE	DROUGHT STATUS
November 18, 1980 – April 20, 1982	Emergency
November 10, 1982- March 28, 1983	Warning
January 23, 1985 – April 26, 1985	Warning
April 26, 1985 – December 19, 1985	Emergency
July 7, 1988 – December 12, 1988	Watch
March 3, 1989 – May 15, 1989	Warning
September 13, 1991 – June 23, 1992	Warning
June 23, 1992 – January 15, 1993	Watch
September 1, 1995 – September 20, 1995	Warning
September 20, 1995 – December 18, 1995	Emergency
October 27, 1997 – January 16, 1998	Warning
January 16, 1998 – Spring 1998	Watch
December 3, 1998 – December 14, 1998	Watch
December 14, 1998 – March 15, 1999	Warning
March 15, 1999 – June 10, 1999	Watch
June 10, 1999 – July 20, 1999	Warning
July 20, 1999 – September 30, 1999	Emergency
September 30, 1999 – May 5, 2000	Watch
August 24, 2001 – November 6, 2001	Watch
November 6, 2001 – February 12, 2002	Warning
February 12, 2002 – December 19, 2002	Emergency
December 19, 2002 – January 8, 2003	Watch
April 11, 2006 – June 30, 2006	Watch
October 5, 2007 – January 11, 2008	Watch
September 16, 2010 – November 10, 2010	Watch
August 5, 2011 – September 2, 2011	Watch
September 6, 2016 – May 16, 2017	Watch
June 15, 2023 – October 20, 2023	Watch
November 1, 2024 – July 2, 2025	Watch

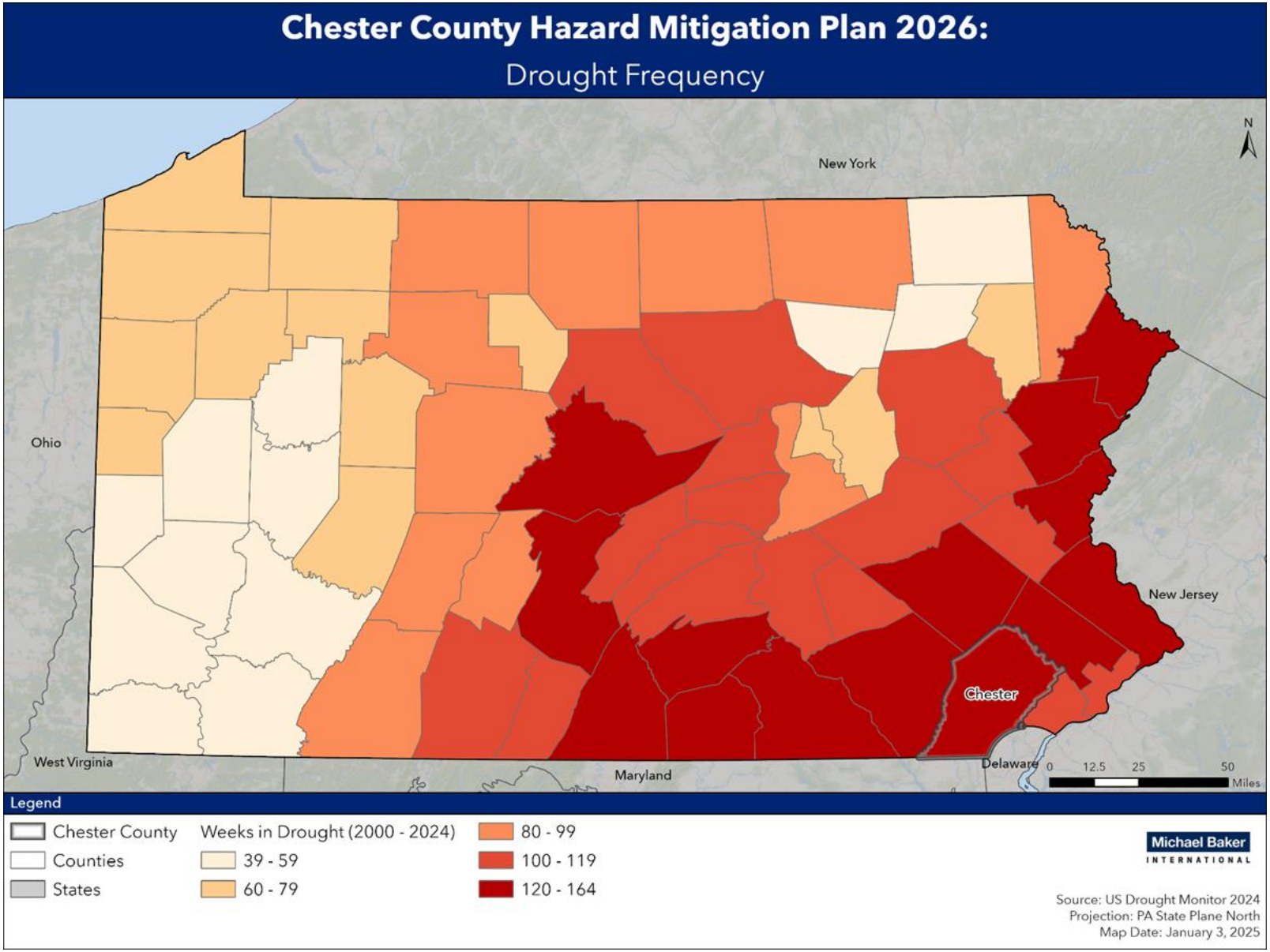
Table 4.3.1-4 lists the crop loss insurance payments on claims from Chester County caused by drought events since 2020.

Table 4.3.1-4 Crop Loss Insurance Compensation Due to Drought (USDA, 2025)

CROP YEAR	INDEMNITY AMOUNT
2020	$238,505
2021	$207,319
2022	$428,563
2023	$330,940
2024	$726,958

Figure 4.3.1-1 shows drought frequency for counties in Pennsylvania from the US Drought Monitor. This data shows that Chester County has experienced drought at a higher rate than most counties in the state.

Figure 4.3.1-1 **Drought Frequency in Chester County (US Drought Monitor, 2024)**



4.3.1.4. Future Occurrence

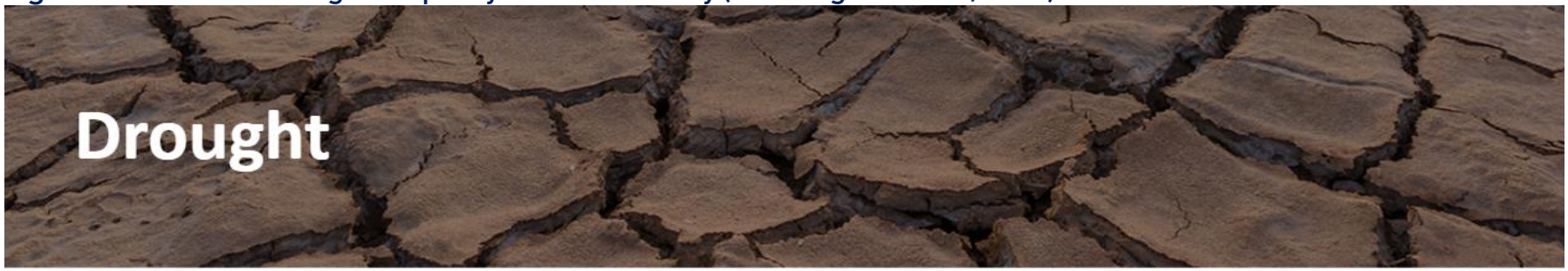
The frequency of droughts is difficult to forecast. Based on the history of drought in the county, future occurrences of drought events are considered likely, as defined by the Risk Factor Methodology probability criteria (described in **Section 4.4.1**).

Additionally, drought was rated as one of the top five hazards facing Chester County in the public survey administered for this plan update, showing the general concern people have for drought events.

According to PEMA, uncertainty regarding the future occurrence of droughts exists due to the potential impacts of climate change. The 2021 update to the Pennsylvania Climate Impacts Assessment suggests that the likelihood for drought will slightly increase through the 21st century. While average and extreme precipitation are projected to increase, higher temperatures and an increase in days without rain could reduce water availability (PA DEP, 2021).

The Climate Mapping for Resilience and Adaptation (CMRA) Tool provides county-level assessment reports for certain hazards, including drought. Figure 4.3.1-2 shows the report for drought in Chester County. The future climate indicators that may contribute to drought include precipitation and temperature thresholds. According to this tool, the number of days per year with no precipitation may increase slightly depending on emission scenarios, even if the total annual precipitation is expected to increase. In addition, the annual number of days above 90 degrees Fahrenheit is expected to significantly increase in the future under all emission scenarios.

Figure 4.3.1-2 Drought Frequency in Chester County (US Drought Monitor, 2024)



Future Climate Indicators

Indicator	Modeled History (1976 - 2005)	Early Century (2015 - 2044)		Mid Century (2035 - 2064)		Late Century (2070 - 2099)	
		Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions
	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max
Precipitation:							
Average annual total precipitation	**45"** 44 - 47	**48"** 44 - 53	**48"** 43 - 53	**48"** 45 - 56	**49"** 46 - 55	**49"** 45 - 56	**51"** 45 - 58
Days per year with precipitation (wet days)	**185 days** 180 - 190	**184 days** 173 - 196	**184 days** 170 - 195	**184 days** 169 - 197	**183 days** 166 - 196	**184 days** 170 - 196	**182 days** 154 - 201
Days per year with no precipitation (dry days)	**180 days** 175 - 185	**181 days** 169 - 192	**181 days** 170 - 195	**181 days** 168 - 196	**182 days** 169 - 199	**181 days** 169 - 195	**184 days** 164 - 212
Maximum number of consecutive dry days	**12 days** 11 - 13	**12 days** 10 - 14	**12 days** 10 - 14	**12** days 10 - 15	**12 days** 11 - 15	**12 days** 11 - 14	**13 days** 11 - 17
Temperature thresholds:							
Annual days with maximum temperature > 90 °F	**11 days** 11 - 17	**32 days** 17 - 44	**34 days** 19 - 48	**41 days** 22 - 59	**50 days** 25 - 69	**50 days** 26 - 75	**82 days** 36 - 107
Annual days with maximum temperature > 100 °F	**0 days** 0 - 0	**2 days** 0 - 5	**2 days** 0 - 5	**3 days** 1 - 10	**5 days** 1 - 15	**5 days** 1 - 10	**19 days** 2 - 47

N/A = Data Not Available for the selected area

4.3.1.5. Vulnerability Assessment

All of Chester County has been identified as being in the drought hazard area. There are no anticipated impacts on structures, as negative impacts of drought would be experienced by the population and agricultural interests. That said, structures could become vulnerable due to increased risks associated with wildfire if prolonged droughts lead to more favorable conditions for wildfires to occur. Droughts may also result in decreased firefighting capacity as water is scarce.

The entire population of Chester County is considered vulnerable to drought. The most vulnerable populations include children, the elderly, and those that are sick due to their age and health conditions.

Chester County residents that use private domestic wells are also vulnerable to droughts because their wells can dry up. Table 4.3.1-6 lists the number of domestic wells in each municipality. There are over 23,000 domestic wells in Chester County. West Caln Township is the only municipality with over 1,000 wells, while West Bradford Township (879) and West Brandywine Township (800) are the only others with at least 800.

Table 4.3.1-5 Domestic Wells by Municipality (PaGWIS, 2025)

MUNICIPALITY	Number of Wells
Atglen Borough	10
Avondale Borough	27
Birmingham Township	240
Caln Township	346
Charlestown Township	514
Coatesville City	20
Downingtown Borough	30
East Bradford Township	507
East Brandywine Township	578
East Caln Township	54
East Coventry Township	558
East Fallowfield Township	585
East Goshen Township	291
East Marlborough Township	722
East Nantmeal Township	214
East Nottingham Township	532
East Pikeland Township	451
Easttown Township	422
East Vincent Township	285
East Whiteland Township	138
Elk Township	181
Elverson Borough	58
Franklin Township	424
Highland Township	171
Honey Brook Borough	490*

Table 4.3.1-5 Domestic Wells by Municipality (PaGWIS, 2025)

MUNICIPALITY	Number of Wells
Honey Brook Township	
Kennett Township	650
Kennett Square Borough	36
London Britain Township	546
Londonderry Township	165
London Grove Township	512
Lower Oxford Township	470
Malvern Borough	15
Modena Borough	36
New Garden Township	596
Newlin Township	299
New London Township	378
North Coventry Township	593
Oxford Borough	18
Parkesburg Borough	38
Penn Township	372
Pennsbury Township	410
Phoenixville Borough	81
Pocopson Township	345
Sadsbury Township	257
Schuylkill Township	184
South Coatesville Borough	10
South Coventry Township	298
Spring City Borough	9
Thornbury Township	193
Tredyffrin Township	238
Upper Oxford Township	282
Upper Uwchlan Township	637
Uwchlan Township	245
Valley Township	238
Wallace Township	556
Warwick Township	310
West Bradford Township	879
West Brandywine Township	800
West Caln Township	1,031
West Chester Borough	141
West Fallowfield Township	229
West Goshen Township	417
West Grove Borough	17
West Marlborough Township	159
West Nantmeal Township	295
West Nottingham Township	249
West Pikeland Township	443

Table 4.3.1-5 Domestic Wells by Municipality (PaGWIS, 2025)

MUNICIPALITY	Number of Wells
West Sadsbury Township	335
Westtown Township	253
West Vincent Township	531
West Whiteland Township	316
Willistown Township	415
Unknown	35
TOTAL	23,410
*Wells reported as "Honey Brook"	

In relation to DARA, drought can reduce streamflow in receiving waters, which means there is less natural dilution available and water quality conditions can become more sensitive. Drought can also strain regional water resources which can lead to changes in planning assumptions for operations and compliance.

Prolonged drought would affect the 1,558 farms located in Chester County, which sold approximately $736,075,000 in agricultural products in 2022. Most sales to date have come from crop sales, which amounted to $608,174,000 or about 83% of the total market value sold. Livestock sales made up the remaining 17% (USDA, 2022). Figure 2.5-2 in the Community Profile shows land use across Chester County.

Table 4.3.1-6 below lists the expected annual losses to drought by census tract in Chester County.

Table 4.3.1-6 Expected Annual Losses to Drought by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3001.01	Tredyffrin Township	$0.00	No Expected Annual Losses
3001.03	Tredyffrin Township	$0.00	No Expected Annual Losses
3001.04	Tredyffrin Township	$0.00	No Expected Annual Losses
3001.06	Tredyffrin Township	$0.00	No Expected Annual Losses
3001.07	Tredyffrin Township	$407.65	Relatively Low
3001.08	Tredyffrin Township	$0.00	No Expected Annual Losses
3001.09	Tredyffrin Township	$0.00	No Expected Annual Losses
3002.01	Easttown Township	$0.00	No Expected Annual Losses
3002.02	Easttown Township	$1,916.28	Relatively Low
3003.01	Willistown Township	$32,602.44	Relatively Moderate
3003.02	Willistown Township	$14,578.89	Relatively Moderate
3003.03	Willistown Township	$0.00	No Expected Annual Losses

Table 4.3.1-6 Expected Annual Losses to Drought by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3004	Malvern Borough	$0.00	No Expected Annual Losses
3005.01	Schuylkill Township	$4,595.93	Relatively Low
3005.02	Schuylkill Township	$4,739.92	Relatively Low
3006	Phoenixville	$56.20	Very Low
3007	Phoenixville	$0.00	No Expected Annual Losses
3008	Phoenixville	$589.98	Relatively Low
3009	Phoenixville	$0.00	No Expected Annual Losses
3010.01	East Pikeland Township	$17,940.13	Relatively Moderate
3010.02	East Pikeland Township	$42,824.88	Relatively Moderate
3011	Spring City Borough	$3,933.15	Relatively Low
3013	East Coventry Township	$65,749.65	Relatively Moderate
3014.01	North Coventry Township	$13,371.33	Relatively Low
3014.02	North Coventry Township	$38,826.89	Relatively Moderate
3015	South Coventry Township	$33,207.99	Relatively Moderate
3016	Warwick Township	$107,366.49	Relatively Moderate
3017	East Nantmeal Township	$151,104.97	Relatively High
3018	West Vincent Township	$146,472.66	Relatively Moderate
3019	West Pikeland Township	$29,855.55	Relatively Moderate
3020	Charlestown Township	$10,955.40	Relatively Low
3021.02	East Whiteland Township	$4,555.79	Relatively Low
3021.03	East Whiteland Township	$482.30	Relatively Low
3021.04	East Whiteland Township	$10,167.98	Relatively Low
3022.03	West Whiteland Township	$0.00	No Expected Annual Losses
3022.04	West Whiteland Township	$0.00	No Expected Annual Losses
3022.05	West Whiteland Township	$58,508.71	Relatively Moderate
3022.06	West Whiteland Township	$477.50	Relatively Low
3022.07	West Whiteland Township	$0.00	No Expected Annual Losses

Table 4.3.1-6 Expected Annual Losses to Drought by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3023	West Chester Borough	$0.00	No Expected Annual Losses
3024	West Chester Borough	$0.00	No Expected Annual Losses
3025	West Chester Borough	$0.00	No Expected Annual Losses
3026	West Chester Borough	$0.00	No Expected Annual Losses
3027.02	West Goshen Township	$0.00	No Expected Annual Losses
3027.03	West Goshen Township	$383.40	Very Low
3027.04	West Goshen Township	$1,050.72	Relatively Low
3027.05	West Goshen Township	$0.00	No Expected Annual Losses
3027.06	West Goshen Township	$0.00	No Expected Annual Losses
3028.02	East Goshen Township	$1,717.79	Relatively Low
3028.03	East Goshen Township	$0.00	No Expected Annual Losses
3028.04	East Goshen Township	$0.00	No Expected Annual Losses
3028.06	East Goshen Township	$0.00	No Expected Annual Losses
3028.07	East Goshen Township	$573.12	Relatively Low
3029.01	Westtown Township	$7,167.82	Relatively Low
3029.02	Westtown Township	$19,041.92	Relatively Moderate
3030	Thornbury Township	$5,850.80	Relatively Low
3031	Birmingham Township	$14,641.16	Relatively Moderate
3033.01	Kennett Township	$12,474.74	Relatively Low
3033.02	Kennett Township	$31,263.17	Relatively Moderate
3034.01	Kennett Square Borough	$1.32	Very Low
3034.02	Kennett Square Borough	$0.00	No Expected Annual Losses
3035.01	East Marlborough Township	$40,018.04	Relatively Moderate
3035.02	East Marlborough Township	$142,741.94	Relatively Moderate
3038.01	West Bradford Township	$50,139.19	Relatively Moderate
3038.03	West Bradford Township	$5,628.28	Relatively Low
3038.04	West Bradford Township	$24,666.62	Relatively Moderate
3039.01	East Bradford Township	$6,405.39	Relatively Low
3039.02	East Bradford Township	$47,915.51	Relatively Moderate
3040	East Caln Township	$0.00	No Expected Annual Losses
3041.01	Dowingtown Borough	$0.00	No Expected Annual Losses
3041.02	Dowingtown Borough	$0.00	No Expected Annual Losses
3042.01	Caln Township	$10,933.82	Relatively Low

Table 4.3.1-6 Expected Annual Losses to Drought by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3043	East Brandywine Township	$47,682.88	Relatively Moderate
3044.03	Uwchlan Township	$4,731.71	Relatively Low
3044.04	Uwchlan Township	$0.00	No Expected Annual Losses
3044.05	Uwchlan Township	$392.97	Relatively Low
3044.06	Uwchlan Township	$33,596.46	Relatively Moderate
3045.02	Upper Uwchlan Township	$11,182.96	Relatively Low
3045.03	Upper Uwchlan Township	$17,022.42	Relatively Moderate
3045.04	Upper Uwchlan Township	$14,029.47	Relatively Low
3046	Wallace Township	$59,705.67	Relatively Moderate
3049	Honey Brook Township	$646,302.80	Relatively High
3050	Honey Brook Borough	$2,720.03	Relatively Low
3051.01	West Caln Township	$169,155.69	Relatively High
3051.02	West Caln Township	$129,782.43	Relatively Moderate
3053	Valley Township	$16,144.33	Relatively Moderate
3054	Coatesville City	$0.00	No Expected Annual Losses
3055	Coatesville City	$0.00	No Expected Annual Losses
3056	Coatesville City	$0.00	No Expected Annual Losses
3057	Coatesville City	$2.43	Very Low
3060	East Fallowfield Township, Modena Borough	$100,008.26	Relatively Moderate
3063	West Grove Borough	$0.00	No Expected Annual Losses
3065.01	New Garden Township	$31,543.62	Relatively Moderate
3065.03	New Garden Township	$12,297.43	Relatively Low
3065.04	New Garden Township	$33,376.76	Relatively Moderate
3066	London Britain Township	$63,468.88	Relatively Moderate
3067	Franklin Township	$168,024.19	Relatively High
3068	Elk Township	$229,642.89	Relatively High
3069	New London Township	$184,987.33	Relatively High
3070	Penn Township	$256,255.15	Relatively High
3071	Londonderry Township	$338,487.49	Relatively High
3072	Highland Township	$747,280.31	Relatively High

Table 4.3.1-6 Expected Annual Losses to Drought by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3073	Parkesburg Borough	$134,272.37	Relatively Moderate
3074	Sadsbury Township	$7,170.34	Relatively Low
3077	West Fallowfield Township	$913,417.71	Relatively High
3078	Upper Oxford Township	$780,963.77	Relatively High
3079	Lower Oxford Township	$715,231.34	Relatively High
3080	Oxford Borough	$21,713.62	Relatively Moderate
3081.01	East Nottingham Township	$240,088.74	Relatively High
3081.02	East Nottingham Township	$525,604.89	Relatively High
3082	West Nottingham Township	$293,545.20	Relatively High
3110	East Vincent Township	$113,993.94	Relatively Moderate
3111	Pennsbury Township	$18,254.32	Relatively Moderate
3112	Newlin Township, West Marlborough Township	$315,078.99	Relatively High
3113	Pocopson Township	$34,184.21	Relatively Moderate
3114.01	Caln Township	$3,232.19	Relatively Low
3114.03	West Brandywine Township	$25,278.13	Relatively Moderate
3114.04	West Brandywine Township	$117,133.61	Relatively Moderate
3115	West Nantmeal Township, Elverson Borough	$318,488.90	Relatively High
3116	South Coatesville Borough	$1,126.89	Relatively Low
3117.01	London Grove Township	$285,859.74	Relatively High
3117.02	London Grove Township, Avondale Borough	$36,938.36	Relatively Moderate
3118	West Sadsbury Township, Atglen Borough	$429,485.67	Relatively High
9800	West Chester Borough	$0.00	No Expected Annual Losses
TOTAL		$9,866,790.90	

4.3.1.6. Equity in Vulnerable Communities

Communities within Chester County with higher concentrations of low-income households could be more susceptible to drought. This includes West Chester Borough, City of Coatesville, and Oxford Borough as they have areas with the highest percentage of population below the poverty level. These households are more likely to live in housing structures with lower-quality infrastructure and higher water bills relative to income.

4.3.2. Earthquake

4.3.2.1. Location and Extent

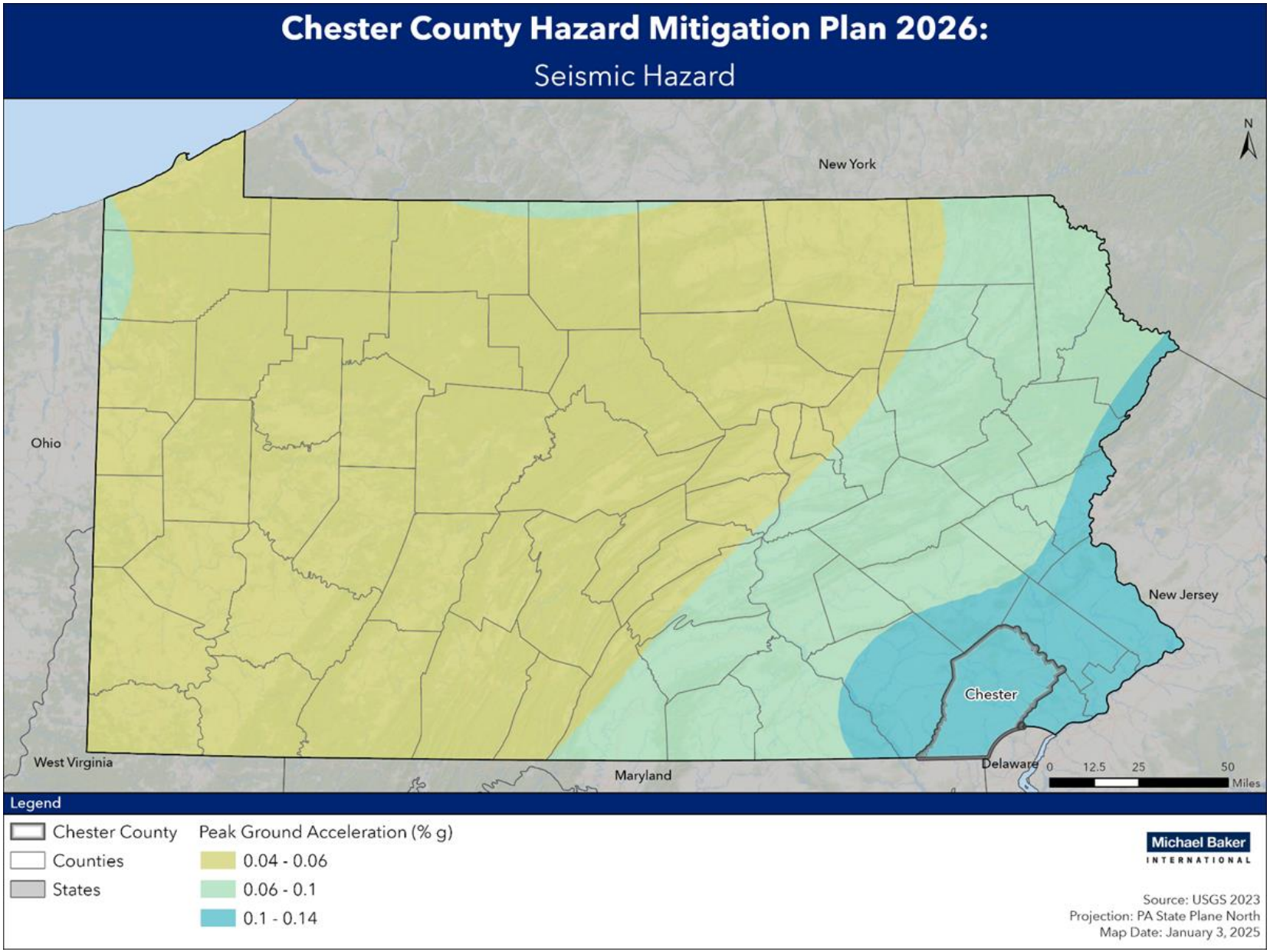


An earthquake is the motion or trembling of the ground produced by sudden displacement of rock usually within the upper 10 to 20 miles of the Earth's crust. Earthquakes result from crustal strain, volcanism, landslides, or the collapse of underground caverns. They can also result from human activity like mine blasts and nuclear experiments. The closest active fault line that might contribute to an earthquake in Chester County is the Mid-Atlantic Ridge, which is approximately 2,000 miles to the east of Pennsylvania (DCNR, 2003).

As regional hazards, an earthquake would affect all of Chester County. Earthquakes can cause damage to buildings and other rigid superstructures, depending on factors like earthquake magnitude, distance of local areas to the earthquake epicenter, and local geologic conditions. It remains incredibly difficult to predict when and where an earthquake will occur in the northeast U.S. and Pennsylvania.

Earthquake events in Pennsylvania typically do not impact areas greater than 100 km (62 miles) from the epicenter, and earthquake epicenters in Chester County are rare. The area is generally not known for seismicity, and USGS downgraded the probabilistic seismic hazard for much of Pennsylvania in 2014. Figure 4.3.2-1 shows the earthquake hazard in Pennsylvania and Chester County, expressed as the two-percent probability of exceedance in 50 years of peak ground acceleration (g). The following map was digitized from the National Seismic Hazard report. Chester County is in the 0.1 zone, indicating that the hazard is moderate. However, earthquakes originating outside Pennsylvania can affect Chester County, though they are not expected to cause significant damage. This was the most current data available at the time this plan was updated.

Figure 4.3.2-1 Approximate USGS Seismic Hazard for Pennsylvania, 2023



4.3.2.2. Range of Magnitude

There are several different ways of describing the magnitude of an earthquake. One method measures peak ground acceleration. Peak ground acceleration is the maximum horizontal ground acceleration measured in centimeters per second per second (cm/sec2) (USGS, 2019a). Peak ground acceleration can range from zero for an earthquake that is noticed by very few people to 350, which would be categorized as a catastrophic event. A peak ground acceleration of 10 cm/sec2 means that the shaking is equivalent to about one percent of the acceleration due to gravity. Generally, ground acceleration must exceed 15 cm/sec2 for significant damage to occur.

Earthquake magnitude is also often measured using the Richter Scale, an open-ended logarithmic scale that describes the energy release of an earthquake (DCNR, 2003). Table 4.3.2-1 summarizes Richter Scale Magnitudes as they relate to the spatial extent of impacted areas. Pennsylvania has not experienced any earthquakes with a magnitude greater than 6.0.

Table 4.3.2-1 Richter Scale Magnitudes and Associated Earthquake Size Effects

RICHTER MAGNITUDES	EARTHQUAKE EFFECTS
Less than 3.5	Generally, not felt but recorded.
3.5-5.4	Often felt but rarely causes damage.
Under 6.0	At most, slight damage to well-designed buildings. Can cause major damage to poorly constructed buildings over small regions.
6.1-6.9	Can be destructive in areas where people live up to about 100 kilometers across.
7.0-7.9	Major earthquake. Can cause serious damage over large areas.
8.0 or greater	Great earthquake. Can cause serious damage in areas several hundred kilometers across.

The Richter Scale does not give any indication of the impact or damage of an earthquake, although it can be inferred that higher magnitude events cause more damage. Therefore, another way of measuring the intensity of an earthquake is the Modified Mercalli Intensity Scale (DCNR, 2003). Measures on this scale range from I, an earthquake that is not generally noticeable, to XII, an earthquake that causes complete destruction. Table 4.3.2-2 summarizes Modified Mercalli Intensity Scale impacts of earthquake events, measured in terms of earthquake intensity.

Table 4.3.2-2 Modified Mercalli Intensity Scale with associated impacts

SCALE	INTENSITY	DESCRIPTION OF EFFECTS	CORRESPONDING RICHTER SCALE MAGNITUDE
I	Instrumental	Detected only on seismographs.	<4.2
II	Feeble	Some people feel it.	<4.2
III	Slight	Felt by people resting; like a truck rumbling by.	<4.2
IV	Moderate	Felt by people walking.	<4.2
V	Slightly Strong	Sleepers awake; church bells ring.	<4.8
VI	Strong	Trees sway; suspended objects swing; objects fall off shelves.	<5.4
VII	Very Strong	Mild alarm, walls crack, plaster falls.	<6.1
VIII	Destructive	Moving cars uncontrollable, masonry fractures, poorly constructed buildings damaged.	<6.9
IX	Ruinous	Some houses collapse, ground cracks, pipes break open.	<6.9
X	Disastrous	Ground cracks profusely, many buildings destroyed, liquefaction and landslides widespread.	<7.3
XI	Very Disastrous	Most buildings and bridges collapse, roads, railways, pipes, and cables destroyed, general triggering of other hazards.	<8.1
XII	Catastrophic	Total destruction, trees fall, ground rises and falls in waves.	>8.1

Recent earthquakes in Pennsylvania have been measured from IV to VI on the Modified Mercalli Intensity Scale. However, since the worst earthquake recorded in Pennsylvania was a magnitude 5.2, a worst-case scenario for this hazard would be if an earthquake of similar magnitude occurred in or around Chester County near a populated area.

The USGS Earthquake Hazards Program defines earthquake hazards as any disruption associated with an earthquake that may affect residents' normal activities. This includes surface faulting, ground motion (shaking), landslides, liquefaction, tectonic deformation, and seiches.

Each of these terms is defined below (USGS, 2025a):

- Surface Faulting: Displacement that reaches the Earth's surface during a slip along a fault. This commonly occurs with shallow earthquakes, those with an epicenter of less than 20 kilometers (km).

- Ground Motion (Shaking): Movement of the Earth's surface from earthquakes. Ground motion or shaking is produced by waves generated by a sudden slip on a fault and the waves travel through the Earth and along its surface.
- Landslide: Movement of surface material down a slope.
- Liquefaction: A process by which water-saturated sediment temporarily loses strength and acts as a fluid, like the wet sand near the water at the beach. Earthquake shaking can cause this effect.
- Tectonic Deformation: Change in the original shape of a material caused by stress and strain.
- Seiche: Sloshing of a closed body of water, such as a lake or bay, from earthquake shaking.

The available history of earthquake events in the US covers a period of less than 300 years, which is a relatively short period of time for an examination of earthquakes. Large earthquakes may only affect a location every several centuries or millennia. Environmental impacts of earthquakes can be numerous, widespread and devastating, particularly if indirect impacts are considered. Some secondary hazards caused by earthquakes may include fire, hazardous material release, landslides, flash flooding, avalanches, tsunamis, and dam failure. These secondary events could also result in disruptions to natural ecosystems, poor water quality, damage to vegetation, and the release of toxic materials and sewage. Impacts to infrastructure could include train derailments, pipeline failures, and utility interruptions. A very large earthquake affecting Chester County might cause structural damage in dilapidated structures or structures that do not meet current building codes. Thus, the impact of an earthquake might range from negligible to catastrophic. Based on historical data for Chester County, damage is likely to be minimal. The potential impacts of earthquakes on community lifelines are as follows:

Table 4.3.2-3 Most Likely Lifelines Impacted by Earthquakes

LIFELINES	NOTES
	Shelters may be affected depending on severity. Higher earthquake building standards can aid in mitigation.
	Personnel will likely be overutilized in response and recovery, leading to potential gaps in capability.
	Pipelines may be affected. Mitigation includes requiring earthquake-resistant maintenance, design and construction standards.

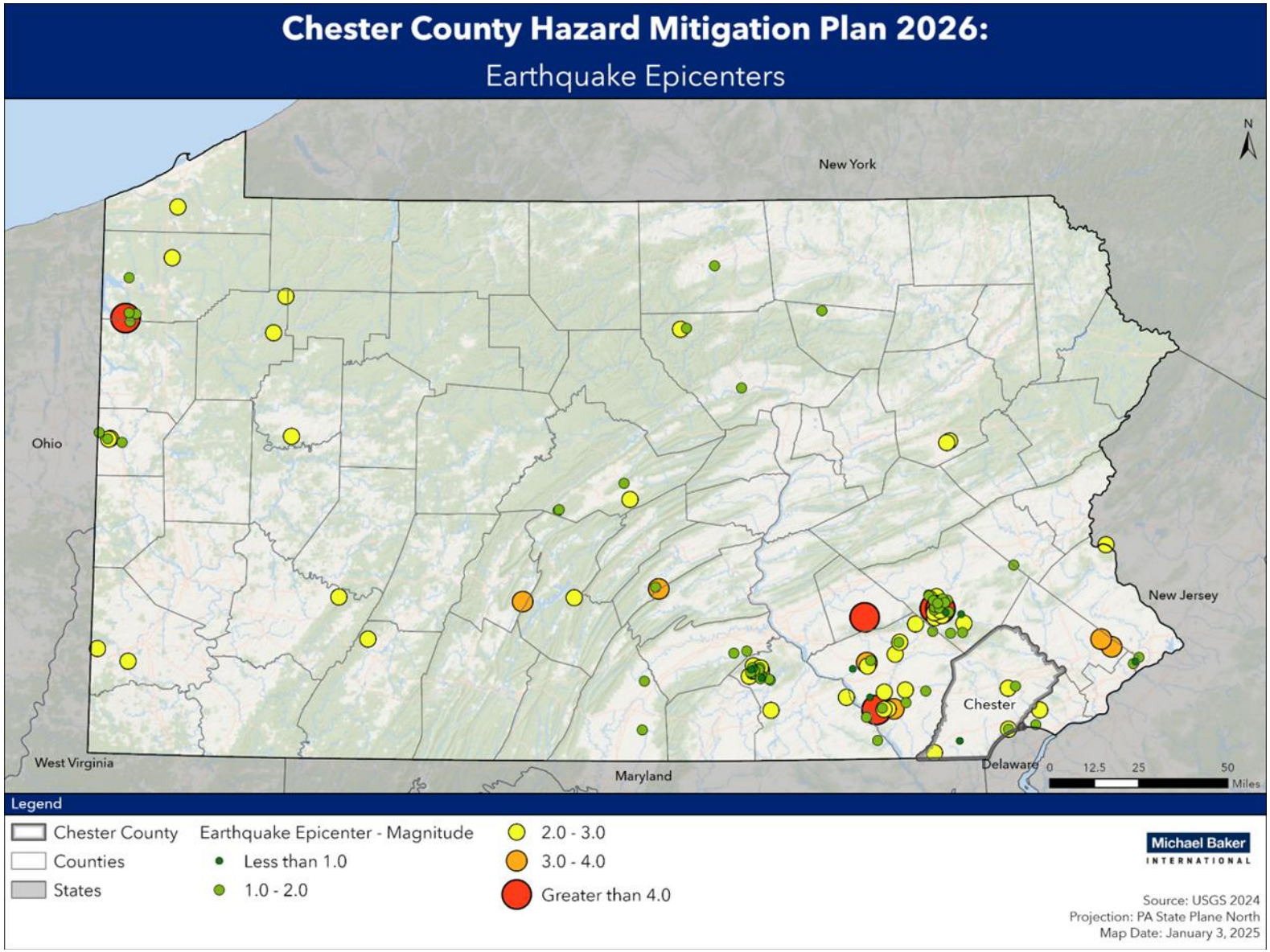
4.3.2.3. Past Occurrence

According to records maintained by the Pennsylvania Department of Conservation and Natural Resources (DCNR), there have been six earthquakes with epicenters in Chester County between 1724 and 2024, shown in Figure 4.3.2-2. Two of these earthquakes had a magnitude over 2.5 on the Richter scale. The lowest magnitude was a 0.6 magnitude earthquake on July 25, 2019, and the largest magnitude was a 3.6 magnitude earthquake on December 17, 1752 (USGS, 2025b). However, parts of the county have likely experienced shock waves from some minor earthquakes that have occurred around the region as shown in Figure 4.3.2-2.

PEMA's Pennsylvania Disaster History list includes no significant earthquake events in Pennsylvania, and no Federal Emergency Management Agency (FEMA) major disaster (DR)/emergency declarations (EM) have occurred for significant earthquake events in Pennsylvania.

The USGS operates a global network of seismic stations to monitor seismic activity. While no seismic stations are within Chester County, a nearby station is found in State College, Pennsylvania. The USGS provides the website Did You Feel It? (http://earthquake.usgs.gov/data/dyfi/) for citizens to report earthquake experiences and to share information regarding the earthquake and its effects. The website is intended to gather citizens' experiences during an earthquake and incorporate the information into detailed maps to illustrate shaking intensity and damage assessments (USGS, 2025c).

Figure 4.3.2-2 Map of Earthquake Epicenters in Pennsylvania



4.3.2.4. Future Occurrence

The probability of an earthquake occurring in Chester County is low. Chester County does not sit on any fault lines; therefore, it is reasonable to believe that the county will not experience earthquake damage anytime soon. Based on available historical data, future occurrences of earthquake events can be considered possible as defined by the Risk Factor Methodology probability criteria (see **Section 4.4**).

Secondary impacts of earthquakes could be magnified by climate change. Soils saturated by repetitive storms could undergo liquefaction during seismic activity as a result of the increased saturation. Droughts and the associated pumping of groundwater from underground aquifers can also impact the stress loads on the Earth's crust. Dams storing increased volumes of water, as a result of changes in the hydrograph, could fail during seismic events. No current models are available to estimate these impacts.

4.3.2.5. Vulnerability Assessment

All structures and infrastructure in Chester County are equally at risk of experiencing an earthquake. However, in a mild earthquake of the magnitude typically experienced in Pennsylvania, no structural damage is anticipated. In other cases, damages are expected to be limited, and examples of anticipated damages are broken dishes and windows and toppled file cabinets.

All existing structures have the potential to experience an earthquake; however, older structures are potentially at higher risk of damage due to an earthquake. 66,729 housing units in Chester County are at least 55 years old (built in 1969 or earlier) (US Census Bureau, 2023a). Table 4.3.2-4 lists the number of housing units 55 years or older by municipality.

Table 4.3.2-4 Housing Units At Least 55 Years Old by Municipality (U.S. Census Bureau, 5-Year ACS, 2023)

MUNICIPALITY	UNITS	PERCENT OF TOTAL UNITS
Atglen Borough	126	31.1%
Avondale Borough	338	67.1%
Birmingham Township	214	13.7%
Caln Township	1,596	28.2%
Charlestown Township	320	15.0%
Coatesville City	3,280	61.4%
Downingtown Borough	2,118	57.9%
East Bradford Township	502	13.7%
East Brandywine Township	571	16.5%
East Caln Township	399	14.9%
East Coventry Township	877	32.4%
East Fallowfield Township	581	21.7%
East Goshen Township	1,316	14.4%
East Marlborough Township	687	23.6%
East Nantmeal Township	248	38.9%

Table 4.3.2-4 Housing Units At Least 55 Years Old by Municipality (U.S. Census Bureau, 5-Year ACS, 2023)

MUNICIPALITY	UNITS	PERCENT OF TOTAL UNITS
East Nottingham Township	449	15.5%
East Pikeland Township	1,156	33.4%
Easttown Township	2,124	52.6%
East Vincent Township	843	33.2%
East Whiteland Township	1,363	24.7%
Elk Township	153	25.8%
Elverson Borough	173	28.0%
Franklin Township	211	12.3%
Highland Township	225	48.1%
Honey Brook Borough	368	47.1%
Honey Brook Township	547	17.4%
Kennett Township	712	19.5%
Kennett Square Borough	1,646	70.1%
London Britain Township	214	20.0%
Londonderry Township	157	16.7%
London Grove Township	474	16.1%
Lower Oxford Township	320	26.7%
Malvern Borough	744	42.5%
Modena Borough	130	90.3%
New Garden Township	703	17.1%
Newlin Township	164	35.0%
New London Township	259	12.1%
North Coventry Township	1,850	51.5%
Oxford Borough	840	36.6%
Parkesburg Borough	601	38.5%
Penn Township	171	7.6%
Pennsbury Township	339	23.9%
Phoenixville Borough	4,601	49.2%
Pocopson Township	259	23.1%
Sadsbury Township	435	25.9%
Schuylkill Township	1,487	47.0%
South Coatesville Borough	409	53.5%
South Coventry Township	356	32.2%
Spring City Borough	1,618	77.3%
Thornbury Township	203	17.2%
Tredyffrin Township	5,742	44.4%
Upper Oxford Township	268	30.8%
Upper Uwchlan Township	154	3.7%
Uwchlan Township	1,354	17.5%
Valley Township	1,104	36.8%

Table 4.3.2-4 Housing Units At Least 55 Years Old by Municipality (U.S. Census Bureau, 5-Year ACS, 2023)

MUNICIPALITY	UNITS	PERCENT OF TOTAL UNITS
Wallace Township	295	24.2%
Warwick Township	592	54.0%
West Bradford Township	1,031	20.1%
West Brandywine Township	548	18.3%
West Caln Township	604	17.7%
West Chester Borough	4,324	58.7%
West Fallowfield Township	297	34.6%
West Goshen Township	3,266	34.5%
West Grove Borough	463	49.6%
West Marlborough Township	333	72.5%
West Nantmeal Township	248	31.3%
West Nottingham Township	322	28.0%
West Pikeland Township	333	24.0%
West Sadsbury Township	293	34.2%
Westtown Township	1,487	33.9%
West Vincent Township	419	16.7%
West Whiteland Township	1,863	22.7%
Willistown Township	1,912	42.0%

All future structures will also have the potential to experience an earthquake. However, given that new structures must also meet current building codes and given the expected magnitude of earthquakes in the county, any future property damage is expected to be low and focused on contents, not structural damage.

Table 4.3.2-5 below shows the Expected Annual Losses for each census tract in the county according to FEMA's National Risk Index.

Table 4.3.2-5 Expected Annual Losses to Earthquake by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3001.01	Tredyffrin Township	$12,051.13	Very Low
3001.03	Tredyffrin Township	$4,699.82	Very Low
3001.04	Tredyffrin Township	$11,972.02	Very Low
3001.06	Tredyffrin Township	$10,909.83	Very Low
3001.07	Tredyffrin Township	$14,625.51	Relatively Low
3001.08	Tredyffrin Township	$18,479.43	Relatively Low
3001.09	Tredyffrin Township	$8,623.18	Very Low

Table 4.3.2-5 Expected Annual Losses to Earthquake by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3002.01	Easttown Township	$13,254.20	Relatively Low
3002.02	Easttown Township	$18,766.56	Relatively Low
3003.01	Willistown Township	$16,876.04	Relatively Low
3003.02	Willistown Township	$15,821.32	Relatively Low
3003.03	Willistown Township	$7,829.51	Very Low
3004	Malvern Borough	$5,435.93	Very Low
3005.01	Schuylkill Township	$11,725.58	Very Low
3005.02	Schuylkill Township	$8,280.04	Very Low
3006	Phoenixville	$6,105.85	Very Low
3007	Phoenixville	$6,591.35	Very Low
3008	Phoenixville	$5,709.56	Very Low
3009	Phoenixville	$4,426.24	Very Low
3010.01	East Pikeland Township	$9,181.30	Very Low
3010.02	East Pikeland Township	$7,648.65	Very Low
3011	Spring City Borough	$4,455.73	Very Low
3013	East Coventry Township	$15,876.70	Relatively Low
3014.01	North Coventry Township	$7,542.67	Very Low
3014.02	North Coventry Township	$10,833.92	Very Low
3015	South Coventry Township	$6,862.12	Very Low
3016	Warwick Township	$6,241.45	Very Low
3017	East Nantmeal Township	$9,219.97	Very Low
3018	West Vincent Township	$20,249.32	Relatively Low
3019	West Pikeland Township	$11,098.43	Very Low
3020	Charlestown Township	$16,181.02	Relatively Low
3021.02	East Whiteland Township	$14,253.59	Relatively Low
3021.03	East Whiteland Township	$35,260.46	Relatively Low
3021.04	East Whiteland Township	$27,766.13	Relatively Low
3022.03	West Whiteland Township	$9,693.47	Very Low
3022.04	West Whiteland Township	$12,739.23	Very Low
3022.05	West Whiteland Township	$16,390.30	Relatively Low
3022.06	West Whiteland Township	$14,174.41	Relatively Low
3022.07	West Whiteland Township	$11,215.89	Very Low
3023	West Chester Borough	$10,428.74	Very Low
3024	West Chester Borough	$11,589.14	Very Low

Table 4.3.2-5 Expected Annual Losses to Earthquake by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3025	West Chester Borough	$14,969.74	Relatively Low
3026	West Chester Borough	$15,006.62	Relatively Low
3027.02	West Goshen Township	$23,372.79	Relatively Low
3027.03	West Goshen Township	$24,960.17	Relatively Low
3027.04	West Goshen Township	$11,081.00	Very Low
3027.05	West Goshen Township	$5,721.61	Very Low
3027.06	West Goshen Township	$23,919.22	Relatively Low
3028.02	East Goshen Township	$32,504.89	Relatively Low
3028.03	East Goshen Township	$6,724.11	Very Low
3028.04	East Goshen Township	$12,323.10	Very Low
3028.06	East Goshen Township	$3,438.51	Very Low
3028.07	East Goshen Township	$9,506.39	Very Low
3029.01	Westtown Township	$9,090.73	Very Low
3029.02	Westtown Township	$13,989.21	Relatively Low
3030	Thornbury Township	$10,858.20	Very Low
3031	Birmingham Township	$10,315.27	Very Low
3033.01	Kennett Township	$16,991.40	Relatively Low
3033.02	Kennett Township	$17,745.22	Relatively Low
3034.01	Kennett Square Borough	$8,663.33	Very Low
3034.02	Kennett Square Borough	$7,418.85	Very Low
3035.01	East Marlborough Township	$16,669.55	Relatively Low
3035.02	East Marlborough Township	$17,572.93	Relatively Low
3038.01	West Bradford Township	$8,946.11	Very Low
3038.03	West Bradford Township	$5,869.58	Very Low
3038.04	West Bradford Township	$10,675.05	Very Low
3039.01	East Bradford Township	$14,579.62	Relatively Low
3039.02	East Bradford Township	$13,286.58	Relatively Low
3040	East Caln Township	$13,932.14	Relatively Low
3041.01	Downingtown Borough	$10,986.69	Very Low
3041.02	Downingtown Borough	$6,303.08	Very Low
3042.01	Caln Township	$19,417.68	Relatively Low
3043	East Brandywine Township	$19,224.20	Relatively Low
3044.03	Uwchlan Township	$13,072.72	Relatively Low
3044.04	Uwchlan Township	$13,994.85	Relatively Low

Table 4.3.2-5 Expected Annual Losses to Earthquake by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3044.05	Uwchlan Township	$23,202.76	Relatively Low
3044.06	Uwchlan Township	$24,712.39	Relatively Low
3045.02	Upper Uwchlan Township	$11,706.96	Very Low
3045.03	Upper Uwchlan Township	$11,304.27	Very Low
3045.04	Upper Uwchlan Township	$7,376.91	Very Low
3046	Wallace Township	$10,921.46	Very Low
3049	Honey Brook Township	$22,396.28	Relatively Low
3050	Honey Brook Borough	$5,485.42	Very Low
3051.01	West Caln Township	$9,026.79	Very Low
3051.02	West Caln Township	$5,997.19	Very Low
3053	Valley Township	$20,365.53	Relatively Low
3054	Coatesville City	$6,279.66	Very Low
3055	Coatesville City	$5,708.00	Very Low
3056	Coatesville City	$3,905.79	Very Low
3057	Coatesville City	$3,034.36	Very Low
3060	East Fallowfield Township, Modena Borough	$17,087.99	Relatively Low
3063	West Grove Borough	$5,106.14	Very Low
3065.01	New Garden Township	$16,426.23	Relatively Low
3065.03	New Garden Township	$19,258.91	Relatively Low
3065.04	New Garden Township	$27,026.73	Relatively Low
3066	London Britain Township	$8,133.24	Very Low
3067	Franklin Township	$14,151.07	Relatively Low
3068	Elk Township	$8,324.26	Very Low
3069	New London Township	$21,046.14	Relatively Low
3070	Penn Township	$17,517.40	Relatively Low
3071	Londonderry Township	$6,820.32	Very Low
3072	Highland Township	$6,661.82	Very Low
3073	Parkesburg Borough	$8,777.86	Very Low
3074	Sadsbury Township	$6,950.31	Very Low
3077	West Fallowfield Township	$10,944.73	Very Low
3078	Upper Oxford Township	$10,480.77	Very Low
3079	Lower Oxford Township	$16,222.31	Relatively Low
3080	Oxford Borough	$11,542.59	Very Low
3081.01	East Nottingham Township	$11,463.13	Very Low

Table 4.3.2-5 Expected Annual Losses to Earthquake by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3081.02	East Nottingham Township	$11,488.02	Very Low
3082	West Nottingham Township	$6,231.25	Very Low
3110	East Vincent Township	$18,412.36	Relatively Low
3111	Pennsbury Township	$16,539.86	Relatively Low
3112	Newlin Township, West Marlborough Township	$10,035.24	Very Low
3113	Pocopson Township	$15,888.72	Relatively Low
3114.01	Caln Township	$17,956.43	Relatively Low
3114.03	West Brandywine Township	$7,415.05	Very Low
3114.04	West Brandywine Township	$8,864.59	Very Low
3115	West Nantmeal Township, Elverson Borough	$12,331.73	Very Low
3116	South Coatesville Borough	$6,724.72	Very Low
3117.01	London Grove Township	$10,434.99	Very Low
3117.02	London Grove Township, Avondale Borough	$27,862.96	Relatively Low
3118	West Sadsbury Township, Atglen Borough	$17,030.20	Relatively Low
9800	West Chester Borough	$35,418.04	Relatively Low
TOTAL		$1,592,216.73	

4.3.2.6. Equity in Vulnerable Communities

Communities within Chester County with a large renter population may be more at risk during an earthquake due to a lack of control over the seismic safety of their buildings. This includes West Chester Borough, West Whiteland Township, City of Coatesville, Oxford Borough, City of Phoenixville, Downingtown Borough, East Goshen Township, Kennett Square Borough, Uwchlan Township, Spring City Borough, and North Coventry Township. All of these jurisdictions have census tracts where less than 50% of housing units are owner-occupied. Renter protections may also be affected due to a lack of renter protections or access to temporary housing after an earthquake. Low-income communities may also be at greater risk as these households often live in older or poorly constructed housing, which is more likely to sustain damage during an earthquake. People with disabilities or limited mobility also face greater challenges in evacuation during an earthquake and accessing post-disaster services. The City of Coatesville and Spring City Borough have census tracts where more than 20% of the population has a disability. In terms of emergency notification, households without smartphones and lack of access to the internet will affect how people get emergency communications. This includes Honey Brook Township, West Fallowfield Township, Oxford Borough, Penn Township, Lower Oxford Township, and City of Coatesville. Ensuring equitable

access to such technologies and providing information in multiple languages and formats is critical.

4.3.3. Extreme Temperature

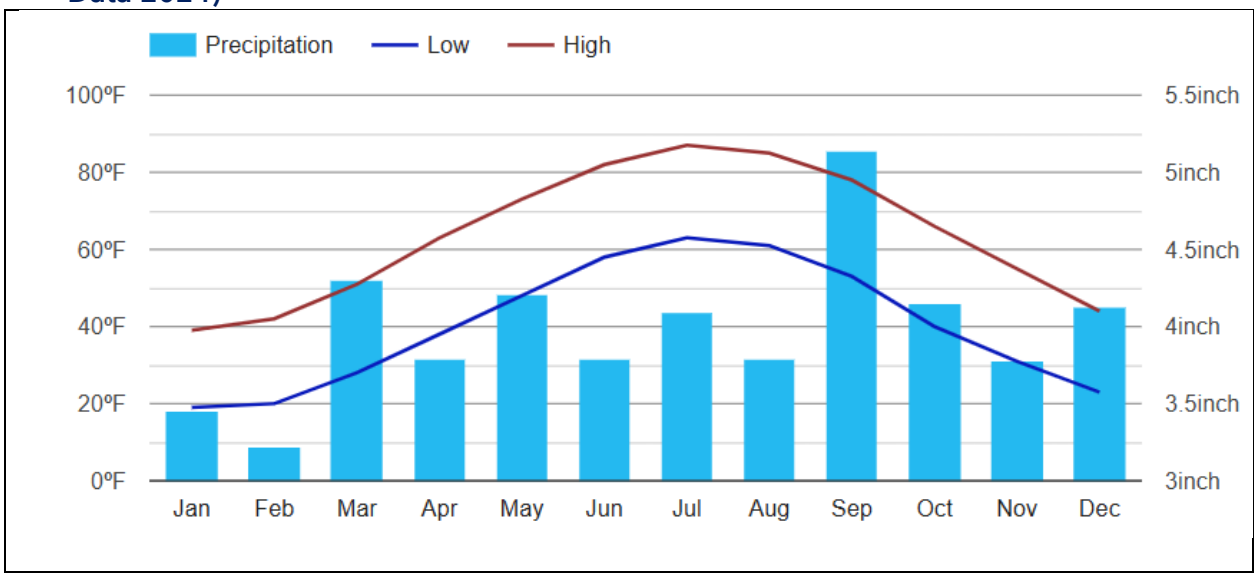
4.3.3.1. Location and Extent



Extreme temperatures include both extreme heat and cold events, which can have a significant impact to human health, commercial/agricultural businesses and primary and secondary effects to infrastructure (i.e., burst pipes, power failure, etc.). What constitutes "extreme heat" or "extreme cold" can vary across different areas of the county based on the conditions the population is accustomed to.

Chester County is susceptible to extreme temperatures in the summer and winter seasons, and they can occur anywhere in the county. The average low temperature in January is 19°F, and the average high temperature in July is 87°F (U.S. Climate Data 2024).

Figure 4.3.3-1 Average Temperatures at West Chester 2 NW PA, US (U.S. Climate Data 2024)



Extreme cold events are when temperatures drop well below normal in an area. In regions relatively unaccustomed to winter weather, near-freezing temperatures are considered "extreme cold." Extreme cold temperatures are generally characterized in temperate zones by the ambient air temperature dropping to approximately 0°F or below (CDC, 2013). Extremely cold temperatures often accompany a winter storm, which can cause power failures and icy roads. Although staying indoors as much as possible can help reduce the risk of car crashes and falls on the ice, individuals may also face indoor hazards. Many homes will be too cold—either due to a power failure or because the heating system is not adequate for the weather. The use of space heaters and fireplaces to keep warm increases the risk of household fires and carbon monoxide poisoning (CDC, 2024a).

Conditions of extreme heat are defined as summertime temperatures that are substantially hotter and/or more humid than average for a location at that time of year (CDC, 2024b). An

extended period of extreme heat of three or more consecutive days is typically called a heat wave and is often accompanied by high humidity (NOAA NWS, n.d.a). "Heat wave" has no universal definition because the term is relative to the usual weather in a particular area. The term heat wave is applied both to routine weather variations and to extraordinary spells of heat that may occur only once per century. A basic definition of a heat wave implies that it is an extended period of unusually high atmosphere-related heat stress, which causes temporary lifestyle modifications, and which may have adverse health consequences for the affected population (UNDRR, 2020). A heat wave is defined as three consecutive days of temperatures ≥90°F.

The term "heat island" describes built-up areas that are hotter than nearby rural areas. The annual mean air temperature of a city with more than 1 million people can be between 1.8 °F and 5.4°F warmer than its surrounding areas. In the evening, the difference in air temperatures can be as high as 22°F. Heat islands occur on the surface and in the atmosphere. On a hot, sunny day, the sun can heat dry, exposed urban surfaces to temperatures 50°F-90°F hotter than the air. Heat islands can affect communities by increasing peak energy demand during the summer, air conditioning costs, air pollution and greenhouse gas emissions, heat-related illness and death, and water quality degradation (EPA, 2024a).

Figure 4.3.3-2 below illustrates an urban heat island profile. The graphic demonstrates that heat islands are typically most intense over dense urban areas. Further, vegetation and parks within a downtown area may help reduce heat islands (EPA, 2024a). Figure 4.3.3-3 shows surface temperature differences from the county mean by census block. This helps visualize which areas tend to be warmer and which tend to be cooler. Figure 4.3.3-4 shows the average annual maximum temperature in Chester County while Figure 4.3.3-5 shows the average annual minimum temperature.

Figure 4.3.3-2 Urban Heat Island Profile (USGS, 2019b)

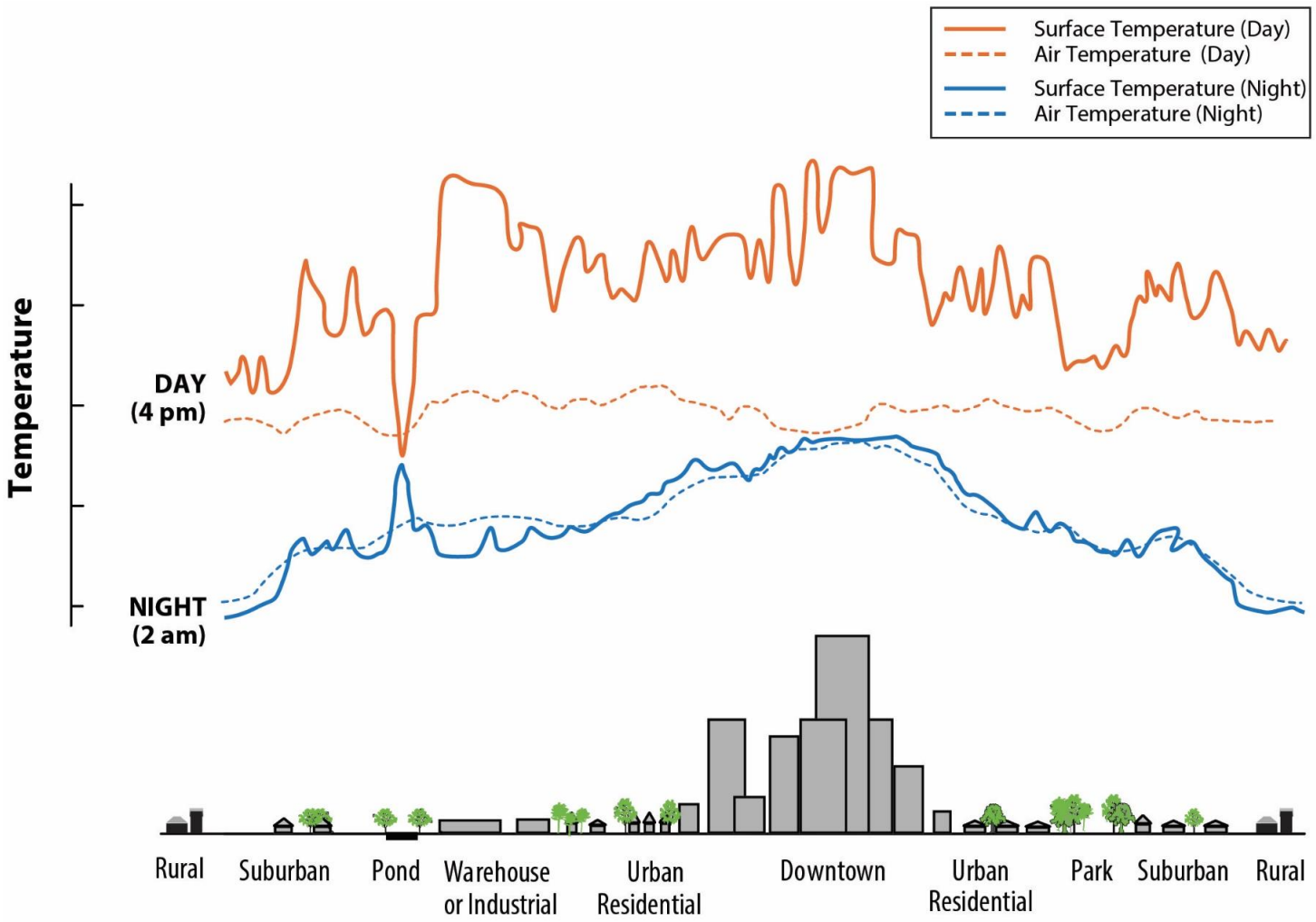


Figure 4.3.3-3 Surface Temperature Difference by Census Block (DVRPC, 2021)

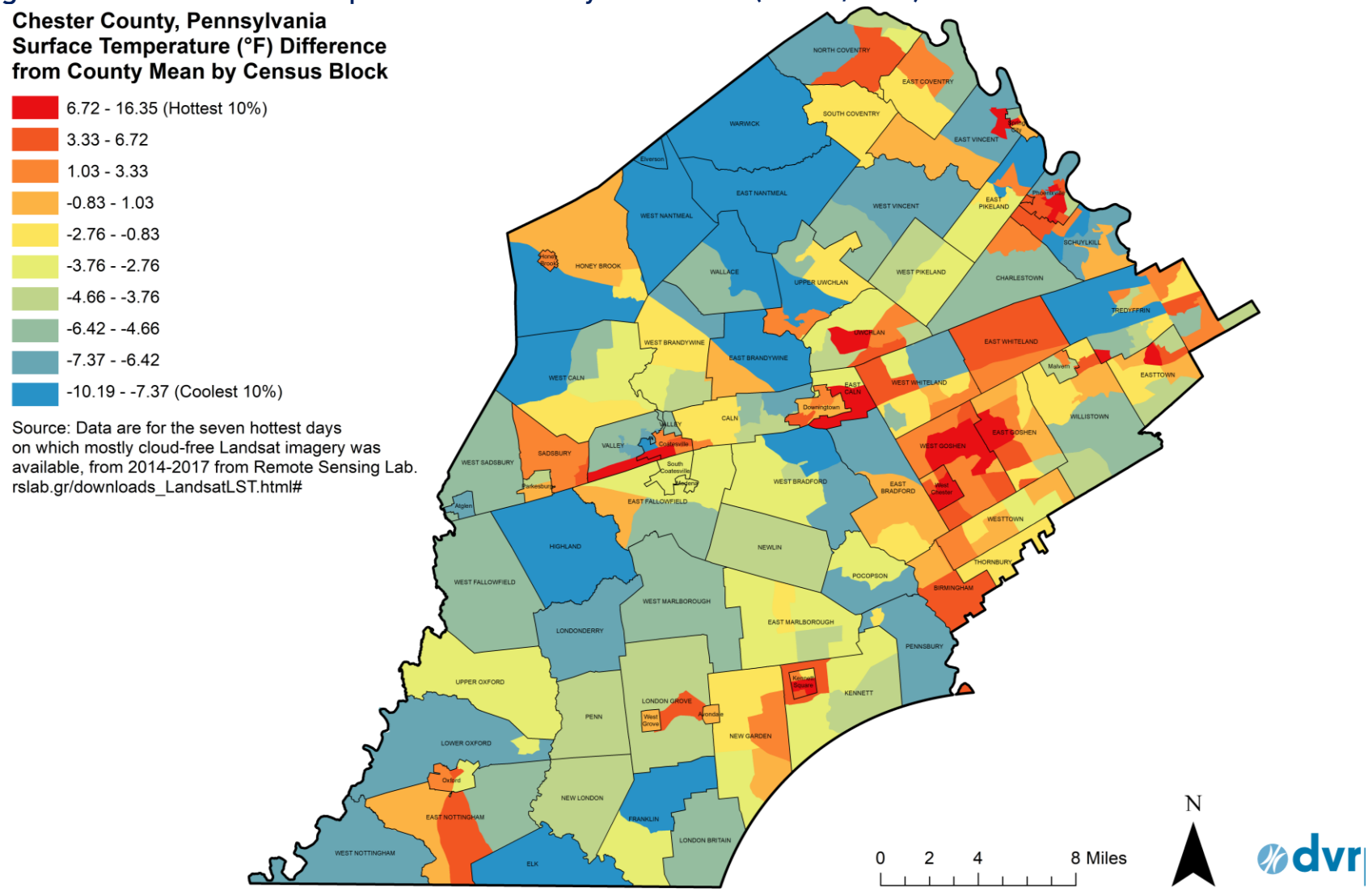


Figure 4.3.3-4 Average Maximum Temperature in Chester County, 2021

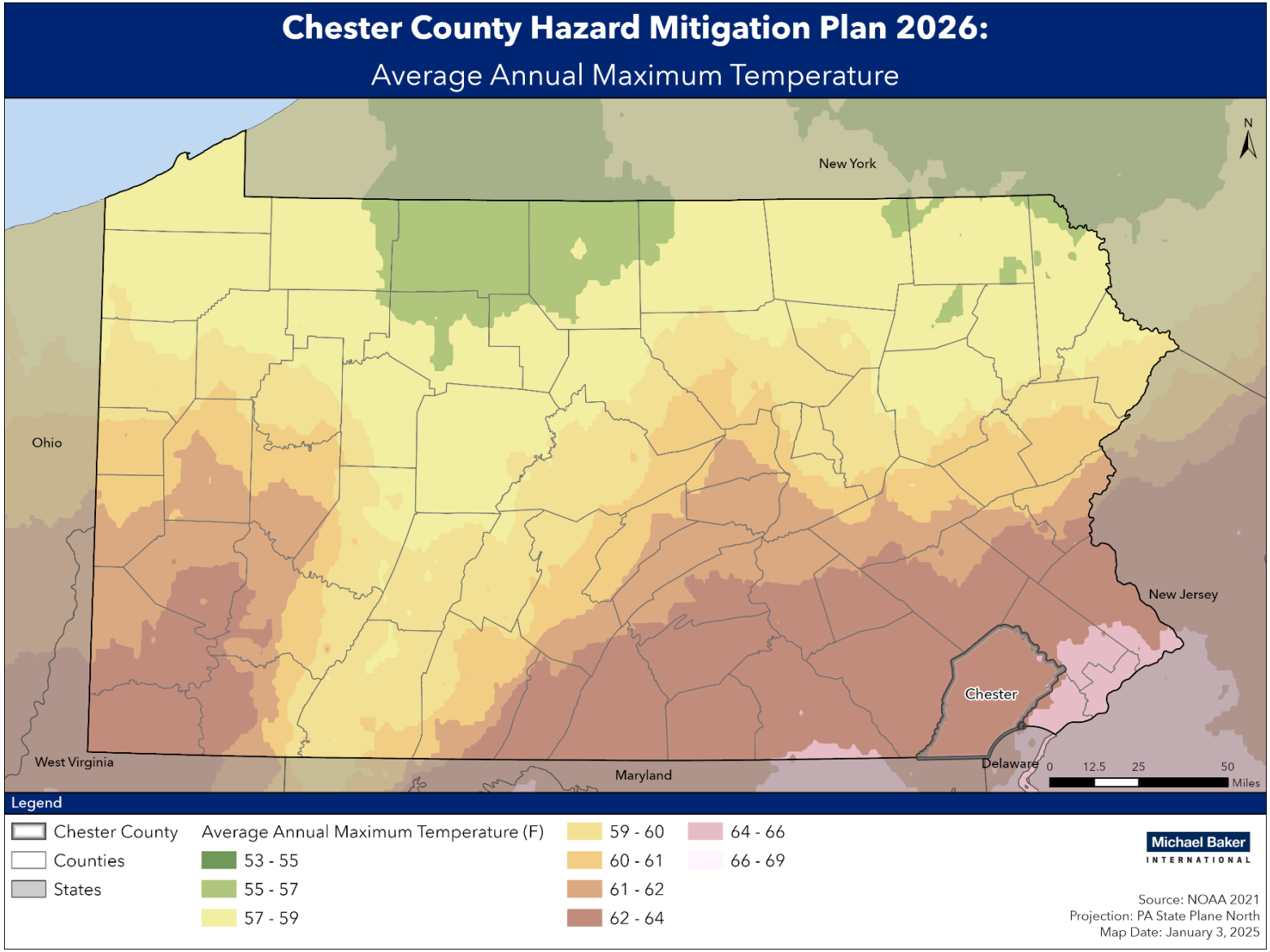
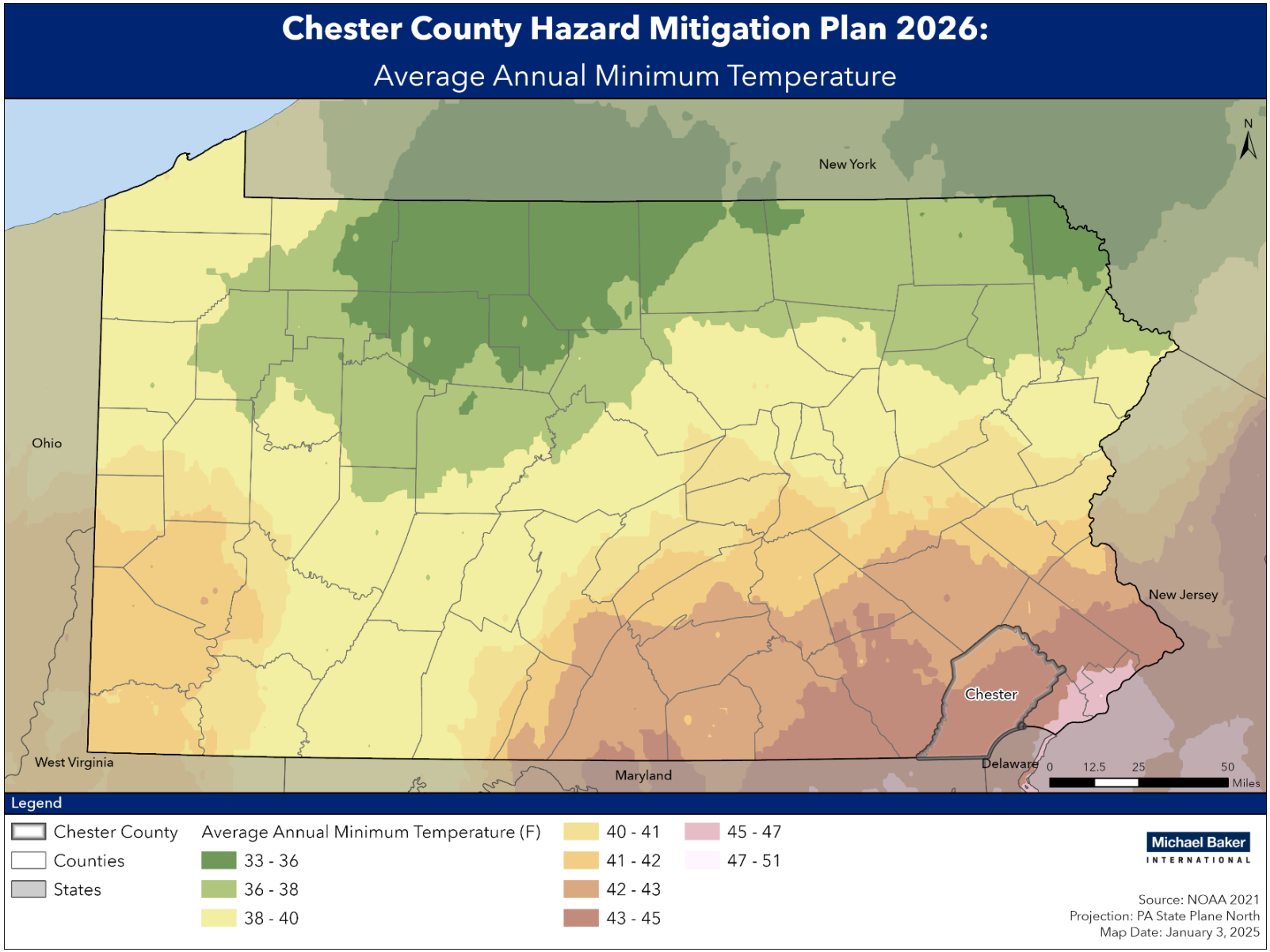


Figure 4.3.3-5 Average Minimum Temperature in Chester County, 2021



4.3.3.2. Range of Magnitude

Extreme temperatures can cause a range of impacts to communities including impacts to health, transportation, agriculture, and energy. Meteorologists can accurately forecast extreme temperature event development and the severity of the associated conditions with several days lead time. These forecasts provide an opportunity for public health and other officials to notify vulnerable populations.

The following impacts can be observed in conjunction with extreme temperature events:

- Health Impacts: Both extreme cold and extreme heat can cause severe health impacts. The impacts of severe cold include hypothermia and frostbite from prolonged exposure. Cold weather also raises the risk of injuries from falls, traffic incidents, carbon monoxide poisoning, and house fires. Health impacts of extreme heat include heat stroke and dehydration. The health impacts of extreme cold are greater in terms of mortality in humans, but often after more prolonged exposure versus a cold snap. Extreme heat waves, however, can prove more deadly over a shorter duration. Both extreme heat and extreme cold are most likely to impact the elderly, low-income individuals, residents with disabilities and pre-existing medical conditions, and laborers and farm workers.
- Transportation: Cold weather can impact automotive engines, possibly stranding motorists; limit or prevent travel by pedestrians, bicyclists, and users of public transportation; and stress metal bridge structures. Highways and railroad tracks can become distorted in high heat. Disruptions to the transportation network and accidents due to extreme temperatures represent an additional risk.
- Agriculture: Absolute temperature and duration of extreme cold can have devastating effects on trees and winter crops. Livestock is especially vulnerable to heat. Crop yields can be impacted by heat waves or cold snaps that occur during key development stages, even at levels that do not impact most of the population.
- Energy: Energy consumption rises significantly during extreme cold weather, and any fuel shortages or utility failures that prevent the heating of a dwelling place residents in extreme danger. Extreme heat also can result in utility interruptions, and sagging transmission lines due to the heat can lead to shorting out.
- Water Supply: Extreme heat can strain water supplies by increasing the rate of evaporation in water sources, such as nearby creeks and rivers. Higher temperatures may also increase the likelihood and intensity of droughts. They will likely increase demand for water from residential and agricultural users, straining supply. Both extreme heat and extreme cold can impact water supply infrastructure, potentially interrupting water access for homes and businesses.

The range of these impacts, especially health effects, can be mitigated through improved forecasts, warnings, community preparedness, and appropriate community response. A worst-case event for Chester County would include extreme cold temperatures combined with an interruption in energy supplies and loss of access to medical care from snow or ice impacting

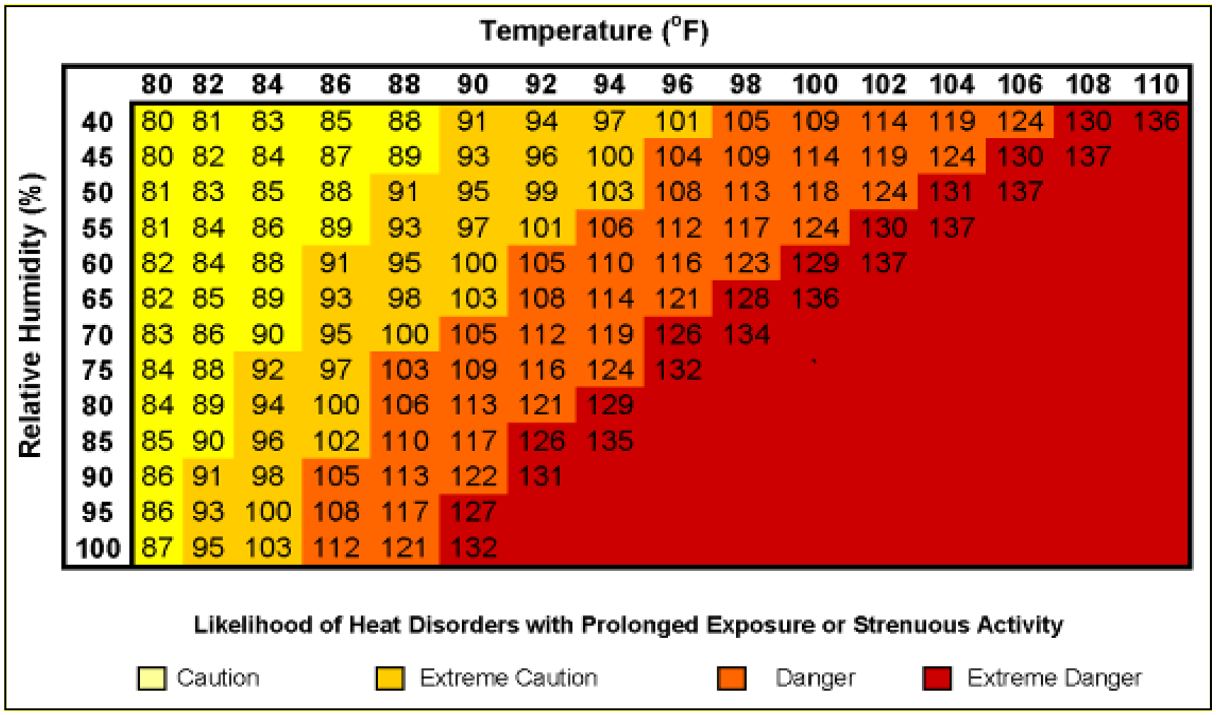
travel. Medical afflictions could result from direct influence on the coronary circulation system and the respiratory system; influenza and other infectious diseases would be secondary impacts.

Temporary periods of extreme hot or cold temperatures typically do not have significant environmental impacts. However, prolonged periods of hot temperatures could be associated with drought conditions and can damage or destroy vegetation, dry up rivers and streams, and reduce water quality. Prolonged exposure to extremely cold temperatures can kill wildlife and vegetation (PEMA, 2018).

Extreme Heat

NOAA's heat alert procedures are based mainly on heat index values. The heat index is given in degrees Fahrenheit. The heat index is a measure of how hot it really feels when relative humidity is factored in with the actual air temperature. To find the heat index temperature, the temperature and relative humidity need to be known. Once both values are known, the heat index will be the corresponding number with both values (Figure 4.3.3-6). The heat index indicates the temperature the body feels. It is important to know that the heat index values are devised for shady, light wind conditions. Exposure to full sunshine can increase heat index values by up to 15°F. Strong winds, particularly with very hot dry air, can also be extremely hazardous (NWS, 2024a).

Figure 4.3.3-6 NWS Heat Index Chart (NWS, 2024a)



For heat events, the NWS issues excessive heat outlooks when the potential exists for an excessive heat event in the next three to seven days. Watches are issued when conditions are

favorable for an excessive heat event in the next 24 to 72 hours. Excessive heat warning/advisories are issued when an excessive heat event is expected in the next 36 hours (NOAA NWS, n.d.a).

Extremely high temperatures cause heat stress. Major health risks for these temperatures include heat cramps, heat syncope, heat exhaustion, heatstroke, and death. The impacts of high temperatures will vary from person to person based on age, health, and other factors. The elderly, the very young, and those who work outdoors are most vulnerable to health-related impacts of extreme temperatures (CDC, 2023).

Extreme heat is the number one weather-related cause of death in the United States. In a 30-year average of weather fatalities across the nation from 1988 to 2017, excessive heat claimed more lives each year than floods, lightning, tornadoes, and hurricanes. In 2023, heat claimed 555 lives nationally, with one fatality occurring in Pennsylvania (NOAA NWS, 2023).

Extreme Cold

The extent (severity or magnitude) of extreme cold temperatures is generally measured through the wind chill temperature (WCT) index. WCT is the temperature that people and animals feel when outside, and it is based on the rate of heat loss from exposed skin by the effects of wind and cold. As the wind increases, the body is cooled at a faster rate causing the skin's temperature to drop (NOAA NWS, n.d.b).

On November 1, 2001, the NWS implemented a new WCT index. It was designed to calculate how cold air feels on human skin more accurately. The table below shows the new WCT index. The WCT index includes a frostbite indicator, showing points where temperature, wind speed, and exposure time will produce frostbite to humans. Figure 4.3.3-7 shows three shaded areas of frostbite danger. Each shaded area shows how long a person can be exposed before frostbite develops (NOAA NWS, n.d.b).

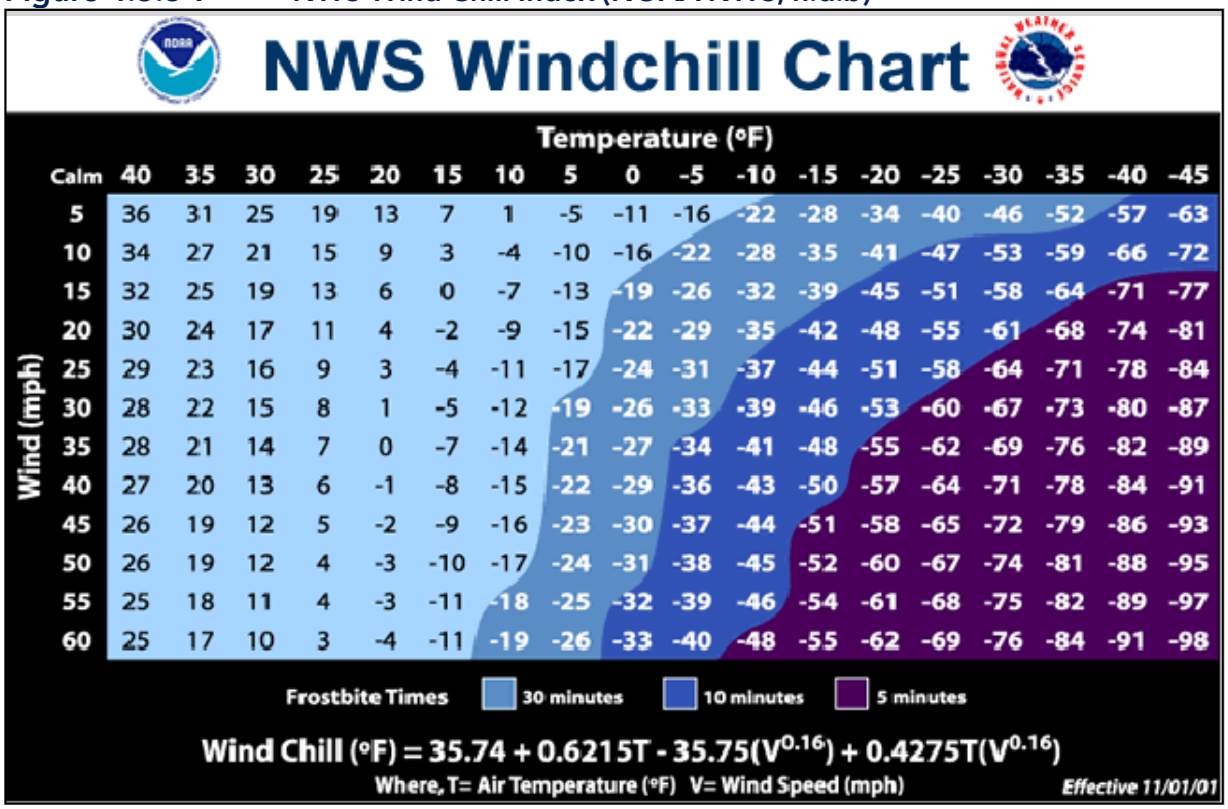
In Pennsylvania, wind chill warnings are issued when wind chills drop to -25°F or lower. While this threshold applies to the entire state, the threshold for advisories vary based on regions. Wind chill advisories are issued in the southeast and western sections of Pennsylvania when wind chill values drop to -10°F. South-central to northern sections of the Commonwealth when wind chills drop to -15°F (NOAA NWS, 2020).

The NWS issues the nation's Freeze Watch, Warning, and Frost Advisory (NOAA NWS, 2020):

- Hard Freeze Warning: NWS issues a hard freeze warning when temperatures are expected to drop below 28°F for an extended period of time, killing most types of commercial crops and residential plants.
- Freeze Warning: When temperatures are forecasted to go below 32°F for a long period of time, NWS issues a freeze warning. This temperature threshold kills some types of commercial crops and residential plants.

- Freeze Watch: NWS issues a freeze watch when there is a potential for significant, widespread freezing temperatures within the next 24 to 36 hours. A freeze watch is issued in the autumn until the end of the growing season and in the spring at the start of the growing season.
- Frost Advisory: A frost advisory means areas of frost are expected or occurring, posing a threat to sensitive vegetation.

Figure 4.3.3-7 NWS Wind Chill Index (NOAA NWS, n.d.b)



Wind (mph)	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
5		36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
10		34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
15		32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
20		30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
25		29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
30		28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
35		28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
40		27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
45		26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
50		26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55		25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97
60		25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98

Cold temperatures can be extremely dangerous to humans and animals exposed to the elements. Without heat and shelter, cold temperatures can cause hypothermia, frost bite, and death. Wind chill temperatures are often used in place of raw temperature values due to wind drawing heat from the body under cold temperatures. These values represent what temperatures actually feel like to humans and animals under cold, windy conditions. Similar to high temperatures, the effect of cold temperatures will vary by individual (CDC, 2013).

The potential impacts of extreme temperature on community lifelines are as follows:

Table 4.3.3-1 Most Likely Lifelines Affected by Extreme Temperature

LIFELINES	NOTES
	Government operations and facilities, including police and fire, will be needed for response and recovery. Landlords and utility companies will need to respond to infrastructure issues for residents.
	Medical care will be needed in extreme events, and the facilities themselves will need effective heating and cooling infrastructure.
	Extreme temperatures will lead to a larger strain on the power grid due to an increased usage of heating and cooling utilities in response.

4.3.3.3. Past Occurrence

Many sources provided historical information regarding previous occurrences and losses associated with extreme temperature events throughout Chester County. Note that loss and impact information for many events varies depending on the source. Therefore, the accuracy of monetary figures discussed is based only on the available information identified during research for this HMP.

Based on data from the National Centers for Environmental Information (NCEI), Table 4.3.3-2 presents the number of extreme cold (minimum) and heat (maximum) temperature records for the weather stations located in Chester County between January 2013 and December 2024. In this period, Chester County experienced 48 extreme temperature events (NOAA-NCEI, 2024a). However, details for all events were not readily available.

Table 4.3.3-2 Previous Temperature Extremes Impacting Chester County, 2013 to 2024 (NOAA NCEI, 2024a)

DATE	EVENT	TEMPERATURE (HEAT INDEX AND WIND CHILL)	DEATHS	INJURIES	PROPERTY DAMAGE RECORDED	CROP DAMAGE RECORDED
7/6/2013	Excessive Heat	Mid 90s° F (heat index 96-101)	0	0	$0.00	$0.00
7/6/2013	Heat	Mid 90s° F (heat index 96-101)	0	0	$0.00	$0.00
7/15/2013	Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
7/15/2013	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
7/18/2013	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
9/11/2013	Heat	Low 90s° F (heat index 100 - 105)	0	0	$0.00	$0.00
9/11/2013	Heat	Low 90s° F (heat index 100 - 105)	0	0	$0.00	$0.00
1/4/2014	Extreme Cold/Wind Chill	-5° F(with wind chill)	0	0	$0.00	$0.00
1/4/2014	Extreme Cold/Wind Chill	-5° F(with wind chill)	0	0	$0.00	$0.00
1/7/2014	Cold/Wind Chill	-21°F (with wind chill)	0	0	$0.00	$0.00
1/7/2014	Cold/Wind Chill	-21°F (with wind chill)	0	0	$0.00	$0.00
1/22/2014	Cold/Wind Chill	-1°F (with wind chill)	0	0	$0.00	$0.00
1/22/2014	Cold/Wind Chill	-1°F (with wind chill)	0	0	$0.00	$0.00
6/17/2014	Heat	93°F (heat index mid 90s)	0	0	$0.00	$0.00
7/2/2014	Heat	94°F (heat index 100 - 105)	0	0	$0.00	$0.00
7/2/2014	Heat	94°F (heat index 100 - 105)	0	0	$0.00	$0.00
1/7/2015	Cold/Wind Chill	-6°F (with wind chill)	0	0	$0.00	$0.00
1/7/2015	Cold/Wind Chill	-6°F (with wind chill)	0	0	$0.00	$0.00
2/13/2015	Cold/Wind Chill	-25°F (with wind chill)	0	0	$0.00	$0.00
2/13/2015	Cold/Wind Chill	-25°F (with wind chill)	0	0	$0.00	$0.00
2/15/2015	Cold/Wind Chill	-15°F (with wind chill)	0	0	$0.00	$0.00
2/15/2015	Cold/Wind Chill	-15°F (with wind chill)	0	0	$0.00	$0.00
2/15/2015	Cold/Wind Chill	-20°F (with wind chill)	0	0	$0.00	$0.00
2/15/2015	Cold/Wind Chill	-20°F (with wind chill)	0	0	$0.00	$0.00
2/19/2015	Cold/Wind Chill	-20°F (with wind chill)	0	0	$0.00	$0.00
2/19/2015	Cold/Wind Chill	-20°F (with wind chill)	0	0	$0.00	$0.00
2/24/2015	Cold/Wind Chill	-12°F (with wind chill)	0	0	$0.00	$0.00
2/24/2015	Cold/Wind Chill	-12°F (with wind chill)	0	0	$0.00	$0.00
6/23/2015	Heat	93°F (heat index mid 100s)	0	0	$0.00	$0.00

Table 4.3.3-2 Previous Temperature Extremes Impacting Chester County, 2013 to 2024 (NOAA NCEI, 2024a)

DATE	EVENT	TEMPERATURE (HEAT INDEX AND WIND CHILL)	DEATHS	INJURIES	PROPERTY DAMAGE RECORDED	CROP DAMAGE RECORDED
7/19/2015	Excessive Heat	93°F (heat index mid 100s)	0	0	$0.00	$0.00
7/19/2015	Heat	93°F (heat index mid 100s)	0	0	$0.00	$0.00
2/14/2016	Cold/Wind Chill	-13°F (with wind chill)	0	0	$0.00	$0.00
7/1/2018	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
7/3/2018	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
8/11/2021	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
8/11/2021	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
8/9/2022	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
12/23/2022	Cold/Wind Chill	-10°F (with wind chill)	0	0	$0.00	$0.00
12/23/2022	Cold/Wind Chill	-15°F (with wind chill)	0	0	$0.00	$0.00
6/22/2024	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
6/22/2024	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
7/5/2024	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
7/5/2024	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
7/9/2024	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
7/9/2024	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
7/10/2024	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
8/2/2024	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00
8/2/2024	Excessive Heat	Upper 90s° F (heat index 105 - 109)	0	0	$0.00	$0.00

Between 1954 and 2024, Pennsylvania was not included in major disaster (DR) or emergency (EM) declarations from extreme temperatures as declared by FEMA and state emergency management agencies (FEMA, 2024b). Agriculture-related disaster declarations are quite common. One-half to two-thirds of the counties in the United States have been designated as disaster areas in each of the past several years. The U.S. Department of Agriculture (USDA) Secretary of Agriculture is authorized to designate counties as disaster areas to make emergency loans to producers suffering losses in those counties and in counties that are contiguous to a designated county. Between 2012 and 2018, Pennsylvania has been included in 26 USDA declarations related to extreme temperatures. Chester County has not been included in these declarations

4.3.3.4. Future Occurrence

Extreme temperature events occur each year throughout Chester County. It is estimated that the county will continue to experience temperature extremes annually that may come with secondary hazards such as potential snow, hail, ice or windstorms, thunderstorms, drought, human health impacts, utility failures, and transportation accidents.

For this HMP update, the most up-to-date data was collected to calculate the probability of future occurrence of extreme temperature events for Chester County. Information from NOAA-NCEI storm events database and MRCC were used to identify the number of extreme temperature events that occurred between 1950 and 2024. Using these sources ensures the most accurate probability estimates possible.

Both globally and at the local scale, climate change has the potential to alter the prevalence and severity of extremes such as temperature extremes. While predicting changes of extreme temperature events under a changing climate is difficult, understanding vulnerabilities to potential changes is a critical part of estimating future climate change impacts on human health, society, and the environment (EPA, 2024b). Figure 4.3.3-8 shows these statistics as well as the annual average number of events and the estimate percent chance of an incident occurring in a given year. Based on these statistics, there is an estimated 27% chance of an extreme temperature event occurring in any given year in Chester County.

Based on available historical data and potential future conditions, the future occurrence of extreme temperatures can be considered likely as defined by the Risk Factor Methodology Probability criteria (see **Section 4.4**).

Figure 4.3.3-8 Chester County Extreme Heat Hazard Assessment Report (CMRA, 2025)



Future Climate Indicators

Indicator	Modeled History (1976 - 2005)	Early Century (2015 - 2044)		Mid Century (2035 - 2064)		Late Century (2070 - 2099)	
		Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions
	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max
Temperature thresholds:							
Annual days with maximum temperature > 90°F	3 days 3 - 7	13 days 5 - 29	15 days 6 - 28	20 days 7 - 43	27 days 10 - 49	28 days 9 - 60	58 days 19 - 93
Annual days with maximum temperature > 95°F	0 days 0 - 1	3 days 0 - 11	3 days 1 - 10	5 days 1 - 22	9 days 1 - 24	9 days 1 - 33	28 days 4 - 67
Annual days with maximum temperature > 100°F	0 days 0 - 0	0 days 0 - 2	0 days 0 - 4	1 days 0 - 7	2 days 0 - 13	2 days 0 - 7	11 days 0 - 45
Annual days with maximum temperature > 105°F	0 days 0 - 0	0 days 0 - 0	0 days 0 - 1	0 days 0 - 1	0 days 0 - 5	0 days 0 - 3	4 days 0 - 28
Annual temperature:							
Annual single highest maximum temperature °F	92 °F 91 - 93	96 °F 93 - 99	96 °F 94 - 101	98 °F 94 - 103	99 °F 95 - 106	99 °F 95 - 106	104 °F 95 - 114
Annual highest maximum temperature averaged over a 5-day period °F	88 °F 87 - 88	91 °F 88 - 95	91 °F 89 - 95	93 °F 89 - 98	94 °F 90 - 101	94 °F 90 - 101	99 °F 91 - 110
Cooling degree days (CDD)	459 degree-days 405 - 502	718 degree-days 550 - 969	758 degree-days 564 - 1,024	875 degree-days 618 - 1,241	1,018 degree-days 729 - 1,389	1,041 degree-days 667 - 1,559	1,629 degree-days 1,003 - 2,394

N/A = Data Not Available for the selected area

4.3.3.5. Vulnerability Assessment

Extreme temperatures generally occur for a short period of time but can cause a range of impacts, particularly to vulnerable populations that may not have access to adequate cooling or heating. This natural hazard can also cause impacts to agriculture (crops and animals), infrastructure (i.e., burst pipes associated with freezing, power failure), and the economy.

For the purposes of this HMP, the entire population of Chester County is considered exposed to extreme temperature events. The **Community Profile (Section 2)** of this HMP provides population statistics regarding each participating municipality and a summary of the more vulnerable populations (over the age of 65 and individuals living below the U.S. Census poverty threshold). According to the CDC, populations most at risk to extreme cold and heat events include the following (CDC, 2024c):

- The elderly, who are less able to withstand temperature extremes due to their age, health conditions, and limited mobility to access shelters.
- Infants and children up to 4 years of age.
- Individuals with chronic medical conditions (e.g., heart disease, high blood pressure).
- Low- income persons that cannot afford proper heating and cooling.
- The general public who may overexert during work or exercise during extreme heat events or experience hypothermia during extreme cold events.

DARA's specific vulnerability to extreme heat or cold are through their impacts to worker safety, increased stress on equipment and building systems, and potential outages or service challenges during prolonged events.

Table 4.3.3-3 below shows the populations aged five or younger in each municipality, along with the population percentage. The municipalities with the largest populations of those aged five and younger are West Whiteland Township, Tredyffrin Township, Phoenixville Borough, and West Goshen Township. Other municipalities with over 10% of their population aged five or younger are Elverson Borough, East Vincent Borough, Atglen Borough, West Fallowfield Borough, and Oxford Borough.

Table 4.3.3-3 Population Aged 5 or Younger by Municipality (U.S. Census, 2023)

MUNICIPALITY	POPULATION 5 OR UNDER	PERCENT OF POPULATION
Atglen Borough	146	11.1%
Avondale Borough	73	5.7%
Birmingham Township	165	4.0%
Caln Township	727	5.0%
Charlestown Township	171	2.8%
Coatesville City	937	7.0%
Downingtown Borough	532	6.5%
East Bradford Township	419	4.0%

Table 4.3.3-3 Population Aged 5 or Younger by Municipality (U.S. Census, 2023)

MUNICIPALITY	POPULATION 5 OR UNDER	PERCENT OF POPULATION
East Brandywine Township	467	4.7%
East Caln Township	292	5.3%
East Coventry Township	451	6.3%
East Fallowfield Township	366	4.7%
East Goshen Township	705	3.8%
East Marlborough Township	335	4.4%
East Nantmeal Township	78	4.7%
East Nottingham Township	417	4.6%
East Pikeland Township	446	5.3%
Easttown Township	367	3.3%
East Vincent Township	859	11.4%
East Whiteland Township	630	4.4%
Elk Township	68	3.9%
Elverson Borough	168	12.1%
Franklin Township	153	3.5%
Highland Township	62	5.1%
Honey Brook Borough	178	8.5%
Honey Brook Township	360	4.3%
Kennett Township	367	4.2%
Kennett Square Borough	446	7.3%
London Britain Township	205	6.4%
Londonderry Township	159	6.3%
London Grove Township	720	8.1%
Lower Oxford Township	199	3.6%
Malvern Borough	115	3.4%
Modena Borough	19	5.5%
New Garden Township	470	4.1%
Newlin Township	41	3.4%
New London Township	214	3.7%
North Coventry Township	230	2.7%
Oxford Borough	604	10.5%
Parkesburg Borough	382	9.8%
Penn Township	86	1.5%
Pennsbury Township	178	4.6%
Phoenixville Borough	1,166	6.1%
Pocopson Township	165	3.7%
Sadsbury Township	409	9.6%
Schuylkill Township	515	5.8%
South Coatesville Borough	115	6.2%
South Coventry Township	103	3.7%
Spring City Borough	185	5.2%
Thornbury Township	262	8.2%

Table 4.3.3-3 Population Aged 5 or Younger by Municipality (U.S. Census, 2023)

MUNICIPALITY	POPULATION 5 OR UNDER	PERCENT OF POPULATION
Tredyffrin Township	1,485	4.7%
Upper Oxford Township	236	9.3%
Upper Uwchlan Township	748	5.9%
Uwchlan Township	1,211	6.3%
Valley Township	268	3.4%
Wallace Township	148	4.0%
Warwick Township	41	1.6%
West Bradford Township	685	4.7%
West Brandywine Township	335	4.4%
West Caln Township	564	6.3%
West Chester Borough	453	2.4%
West Fallowfield Township	266	10.9%
West Goshen Township	1,110	4.8%
West Grove Borough	205	7.3%
West Marlborough Township	30	3.4%
West Nantmeal Township	104	4.7%
West Nottingham Township	252	9.0%
West Pikeland Township	174	4.3%
West Sadsbury Township	217	8.4%
Westtown Township	866	7.7%
West Vincent Township	457	6.8%
West Whiteland Township	1,538	7.7%
Willistown Township	732	6.5%

Table 4.3.3-4 below shows the populations aged 65 or older in each municipality, along with the population percentage. The municipalities with the largest populations are East Goshen Township, Tredyffrin Township, and West Goshen Township. Both East Goshen Township and Elverson Borough have at least one-third of their population aged 65 or older.

Table 4.3.3-4 Population Aged 65 or Older by Municipality (U.S. Census, 2023)

MUNICIPALITY	POPULATION 65 OR OLDER	PERCENT OF POPULATION
Atglen Borough	94	7.1%
Avondale Borough	128	10.0%
Birmingham Township	853	20.9%
Caln Township	2,615	18.0%
Charlestown Township	870	14.1%
Coatesville City	1,493	11.2%
Downingtown Borough	1,182	14.5%
East Bradford Township	1,835	17.3%

Table 4.3.3-4 Population Aged 65 or Older by Municipality (U.S. Census, 2023)

MUNICIPALITY	POPULATION 65 OR OLDER	PERCENT OF POPULATION
East Brandywine Township	1,309	13.2%
East Caln Township	952	17.3%
East Coventry Township	1,255	17.6%
East Fallowfield Township	993	12.8%
East Goshen Township	6,429	35.0%
East Marlborough Township	1,872	24.7%
East Nantmeal Township	525	31.8%
East Nottingham Township	1211	13.4%
East Pikeland Township	1,675	19.9%
Easttown Township	1,992	18.1%
East Vincent Township	1,160	15.4%
East Whiteland Township	1,739	12.0%
Elk Township	271	15.7%
Elverson Borough	460	33.0%
Franklin Township	746	16.8%
Highland Township	220	18.0%
Honey Brook Borough	233	11.2%
Honey Brook Township	2,428	29.2%
Kennett Township	2,316	26.4%
Kennett Square Borough	909	14.9%
London Britain Township	543	17.0%
Londonderry Township	539	21.3%
London Grove Township	1,053	11.9%
Lower Oxford Township	517	9.3%
Malvern Borough	746	21.8%
Modena Borough	39	11.2%
New Garden Township	1,719	15.0%
Newlin Township	330	27.0%
New London Township	612	10.5%
North Coventry Township	1,589	18.9%
Oxford Borough	1,027	17.8%
Parkesburg Borough	481	12.4%
Penn Township	1,739	30.8%
Pennsbury Township	915	23.6%
Phoenixville Borough	2,438	12.8%
Pocopson Township	937	21.0%
Sadsbury Township	549	12.9%
Schuylkill Township	1,183	13.4%
South Coatesville Borough	212	11.5%
South Coventry Township	442	15.8%
Spring City Borough	458	12.9%
Thornbury Township	411	12.9%

Table 4.3.3-4 Population Aged 65 or Older by Municipality (U.S. Census, 2023)

MUNICIPALITY	POPULATION 65 OR OLDER	PERCENT OF POPULATION
Tredyffrin Township	5,707	17.9%
Upper Oxford Township	430	16.9%
Upper Uwchlan Township	1,376	10.8%
Uwchlan Township	3,298	17.1%
Valley Township	1,129	14.2%
Wallace Township	730	19.5%
Warwick Township	677	26.1%
West Bradford Township	2,022	13.9%
West Brandywine Township	2,249	29.9%
West Caln Township	1,916	21.4%
West Chester Borough	1,840	9.6%
West Fallowfield Township	362	14.9%
West Goshen Township	4,638	19.9%
West Grove Borough	278	10.0%
West Marlborough Township	242	27.2%
West Nantmeal Township	473	21.5%
West Nottingham Township	433	15.4%
West Pikeland Township	544	13.5%
West Sadsbury Township	453	17.6%
Westtown Township	2,143	19.1%
West Vincent Township	936	13.9%
West Whiteland Township	2,574	12.9%
Willistown Township	2,948	26.1%

Table 4.3.3-5 below shows the disabled populations in each municipality, along with the population percentage. The municipalities with the largest populations of persons with disabilities are East Goshen Township, Tredyffrin Township, and Coatesville City

Table 4.3.3-5 Disabled Population by Municipality (U.S. Census, 2023)

MUNICIPALITY	DISABLED POPULATION	PERCENT OF POPULATION
Atglen Borough	156	11.8%
Avondale Borough	116	9.0%
Birmingham Township	201	4.9%
Caln Township	1,838	12.6%
Charlestown Township	407	6.6%
Coatesville City	2,283	17.1%
Downingtown Borough	852	10.4%
East Bradford Township	750	7.1%
East Brandywine Township	582	5.9%

Table 4.3.3-5 Disabled Population by Municipality (U.S. Census, 2023)

MUNICIPALITY	DISABLED POPULATION	PERCENT OF POPULATION
East Caln Township	345	6.3%
East Coventry Township	750	10.5%
East Fallowfield Township	1,172	15.1%
East Goshen Township	2,495	13.6%
East Marlborough Township	591	7.8%
East Nantmeal Township	179	10.8%
East Nottingham Township	823	9.1%
East Pikeland Township	870	10.3%
Easttown Township	709	6.4%
East Vincent Township	792	10.5%
East Whiteland Township	1,204	8.3%
Elk Township	131	7.6%
Elverson Borough	253	18.2%
Franklin Township	253	5.7%
Highland Township	150	12.2%
Honey Brook Borough	215	10.3%
Honey Brook Township	1,267	15.2%
Kennett Township	789	9.0%
Kennett Square Borough	701	11.5%
London Britain Township	198	6.2%
Londonderry Township	252	10.0%
London Grove Township	1,253	14.1%
Lower Oxford Township	506	9.1%
Malvern Borough	305	8.9%
Modena Borough	66	19.0%
New Garden Township	1,044	9.1%
Newlin Township	82	6.7%
New London Township	372	6.4%
North Coventry Township	976	11.6%
Oxford Borough	904	15.7%
Parkesburg Borough	494	12.7%
Penn Township	531	9.4%
Pennsbury Township	359	9.3%
Phoenixville Borough	1,803	9.5%
Pocopson Township	213	4.8%
Sadsbury Township	265	6.2%
Schuylkill Township	869	9.9%
South Coatesville Borough	282	15.3%
South Coventry Township	252	9.0%
Spring City Borough	656	18.5%
Thornbury Township	183	5.8%
Tredyffrin Township	2,383	7.5%

Table 4.3.3-5 Disabled Population by Municipality (U.S. Census, 2023)

MUNICIPALITY	DISABLED POPULATION	PERCENT OF POPULATION
Upper Oxford Township	223	8.8%
Upper Uwchlan Township	596	4.7%
Uwchlan Township	1,351	7.0%
Valley Township	1,169	14.7%
Wallace Township	153	4.1%
Warwick Township	233	9.0%
West Bradford Township	1,204	8.3%
West Brandywine Township	895	11.9%
West Caln Township	1,176	13.2%
West Chester Borough	1,955	10.2%
West Fallowfield Township	168	6.9%
West Goshen Township	1,687	7.2%
West Grove Borough	300	10.7%
West Marlborough Township	65	7.3%
West Nantmeal Township	65	3.0%
West Nottingham Township	333	11.9%
West Pikeland Township	200	5.0%
West Sadsbury Township	214	8.3%
Westtown Township	1,014	9.1%
West Vincent Township	454	6.7%
West Whiteland Township	1,069	5.4%
Willistown Township	766	6.8%

All the building stock in the county is exposed to extreme temperatures. Refer to **Section 2**, which summarizes the building inventory in Chester County. Extreme heat generally does not impact buildings. Losses may be associated with the overheating of heating, ventilation, and air conditioning (HVAC) systems. Extreme cold temperature events can damage buildings through freezing/bursting pipes and freeze/thaw cycles. Additionally, manufactured homes and antiquated or poorly constructed facilities may have inadequate capabilities to withstand extreme temperatures.

All critical facilities in the county are exposed to the extreme temperature hazard. Impacts to critical facilities are the same as described for general building stock. Additionally, it is essential that critical facilities remain operational during natural hazard events. Extreme heat events can sometimes cause short periods of utility failures, commonly referred to as "brown-outs," due to increased usage from air conditioners and other appliances. Similarly, heavy snowfall and ice storms associated with extreme cold temperature events can cause power interruption as well. Backup power is recommended for critical facilities and infrastructure. Critical facilities can serve as cooling and warming shelters for communities when utility interruptions occur during extreme heat or cold events.

The agricultural industry is most at risk in terms of economic impact and damage due to extreme temperature events. Extreme heat events can result in drought and dry conditions and directly impact livestock and crop production. Based on the 2022 Census of Agriculture, 1,558 farms were operating in Chester County, with a total of 143,442 acres of farmland. The average farm size was between 92 acres. Chester County's farms had a total market value of products sold of over $736,075,000. (USDA, 2022).

4.3.3.6. Equity in Vulnerable Communities

Low-income households and renter households may be at greater risk during extreme weather risks. Energy bills may be disproportionately expensive regarding income in these households and in the event of heating and cooling system malfunctions, renters may be unable to make key decisions. This means City of Coatesville and West Chester Borough may be more vulnerable. Elderly populations (those 65+ and older) will need extra consideration as they are more susceptible to negative health effects related to extreme temperatures. According to FEMA's CRCI indicator data, areas with high percentage of renters are more susceptible, which includes West Chester Borough, West Whiteland Township, City of Coatesville, Oxford Borough, Phoenixville Borough, Downingtown Borough, East Goshen Township, Kennett Square Borough, Uwchlan Township, Spring City Borough, and North Coventry Township. East Goshen Township, Kennett Township, West Brandywine Township, and Willistown Township may be particularly vulnerable due to the presence of census tracts where over one-third of the population is aged 65 or older. Meteorologists can accurately forecast extreme heat event development and the severity of the associated conditions with several days of lead time. These forecasts provide an opportunity for public health and other officials to notify vulnerable populations, implement short-term emergency response actions and focus on surveillance and relief efforts on those at greatest risk. Adhering to extreme temperature warnings can significantly reduce the risk of temperature-related deaths.

4.3.4. Flood, Flash Flood, Ice Jam



4.3.4.1. Location and Extent

Floods are one of the most common natural hazards in the United States and are the most prevalent type of natural disaster occurring in Pennsylvania. Over 94% of the Commonwealth's municipalities have been designated as flood-prone areas, and respondents to the Hazard Identification survey ranked floods in the top five hazards threatening Chester County. Both seasonal and flash floods have been causes of millions of dollars in annual property damage, loss of lives, and disruption of economic activities (Pennsylvania Emergency Management Agency, 2023).

Flooding is the temporary condition of partial or complete inundation on normally dry land. It is the most frequent and costly of all natural hazards in Pennsylvania. Like most of Pennsylvania, Chester County experiences three kinds of flooding.

Riverine flooding happens when the water level in a waterway rises and flows onto neighboring lowlands called floodplains. It is the most common type of flooding in Pennsylvania. Riverine flooding can be caused by prolonged rainfall or snow melt. Snow melt combined with heavy rain can also cause frozen rivers to swell and break the ice layer on top of a river. If this occurs, large chunks can float downstream, piling up in narrow passages and near other obstructions such as bridges and dams. These are called ice jams.

Flash flooding happens when intense rainfall overwhelms drainage systems, causing flooding outside of floodplains and waterways. Flash flooding may come from heavy, intense rainfall or from a small amount of rain in locations where water cannot infiltrate the ground. This includes when soil is frozen or saturated from a previous wet period or if the rain concentrates in an area with impervious surfaces like large parking lots, paved roadways, or other densely developed areas. In addition, if an ice jam were to break, it could cause a flash flood.

Stormwater flooding is caused by local drainage issues and high groundwater levels. Heavy precipitation may produce flooding in areas other than delineated floodplains or along recognizable channels. According to PEMA, since 1993, 96% of flooding reported to the NWS in Pennsylvania occurred outside of the 1-percent annual chance floodplain. If local conditions cannot accommodate intense precipitation through a combination of infiltration and surface runoff, water may accumulate and cause flooding problems. During winter and spring, frozen ground and snow accumulations may contribute to inadequate drainage and localized ponding. Stormwater flooding issues generally occur in areas with flat gradients and increase with urbanization. Urbanization speeds the accumulation of floodwater because of impervious areas.

Increased water runoff due to urban development and drainage systems causes urban drainage flooding. Drainage systems are designed to remove surface water from developed areas as quickly as possible to prevent localized flooding on streets and other urban areas. They make use of a closed conveyance system that channels water away from an urban area to surrounding

streams. This bypasses the natural processes of water filtration through the ground, containment, and evaporation of excess water. Since drainage systems reduce the amount of time the surface water takes to reach surrounding streams, flooding in those streams can occur more quickly and reach greater depths than those prior to development in that area (FEMA, 2007).

Flooding can also be caused by sudden snowmelt, landslides, or dam failures. In Pennsylvania, flooding usually occurs in the summer; however, it has occurred during the winter months as well. Chester County's greatest riverine flooding threat is along the Schuylkill River and Brandywine Creek. Other major waterways within the county include the White Clay, French, Octoraro, Red Clay, and Elk Creeks. All jurisdictions can experience flash flooding under the right conditions, and stormwater and shallow flooding are often seen more in urbanized areas that have higher proportions of impervious surfaces or have stormwater systems that do not meet current capacity needs.

Additionally, as described in the Dam Failure Hazard Profile in **Appendix G,** Chester County has 17 high-hazard dams located within the county. If any one of these dams were to fail, there could be loss of life and property damage resulting from flooding within the dam inundation areas.

All municipalities in Chester County can experience flooding, though the type and magnitude will vary. Community development of the floodplain has resulted in frequent flooding. For inland areas like Chester County, excess water from snowmelt or rainfall accumulates and overflows onto stream banks and adjacent floodplains. According to Chester County Water Resources Authority (CCWRA), Chester County's historic annual average for total rainfall is 47.11 inches (CCWRA, 2025).

Table 4.3.4-1 lists total land areas within the 1-percent and 0.2-percent annual chance flood zones calculated via a spatial analysis referencing FEMA's 2017 Digital Flood Insurance Rate Map (DFIRM). The 1-percent annual chance flood area is known as the Special Flood Hazard Area (SFHA). Avondale and Modena Boroughs have the largest proportion of land in the 1-percent and 0.2-percent annual chance flood areas. Two communities, Honey Brook Borough and West Grove Borough, have no land in the FEMA flood zones.

Table 4.3.4-1 Land Areas Within Flood Hazard Areas By Municipality

JURISDICTION	NFIP-PARTICIPATING COMMUNITY	TOTAL AREA (ACRES)	1% ANNUAL CHANCE FLOOD HAZARD AREA		0.2% ANNUAL CHANCE FLOOD HAZARD AREA	
			AREA (ACRES)	% OF TOTAL	AREA (ACRES)	% OF TOTAL
Atglen Borough	Yes	564.6	85.7	15%	90.0	16%
Avondale Borough	Yes	317.2	105.2	33%	117.6	37%
Birmingham	Yes	4,115.2	642.0	16%	657.9	16%

Table 4.3.4-1 Land Areas Within Flood Hazard Areas By Municipality

JURISDICTION	NFIP-PARTICIPATING COMMUNITY	TOTAL AREA (ACRES)	1% ANNUAL CHANCE FLOOD HAZARD AREA		0.2% ANNUAL CHANCE FLOOD HAZARD AREA	
			AREA (ACRES)	% OF TOTAL	AREA (ACRES)	% OF TOTAL
Township						
Caln Township	Yes	5,705.5	479.4	8%	598.4	10%
Charlestown Township	Yes	8,015.4	316.3	4%	324.1	4%
Coatesville City	Yes	1,168.7	107.5	9%	139.2	12%
Downingtown Borough	Yes	1,423.3	269.9	19%	306.6	22%
East Bradford Township	Yes	9,699.2	1,309.4	14%	1,334.2	14%
East Brandywine Township	Yes	7,203.0	413.6	6%	443.4	6%
East Caln Township	Yes	2,356.3	132.8	6%	140.1	6%
East Coventry Township	Yes	6,983.1	967.4	14%	1,121.4	16%
East Fallowfield Township	Yes	9,993.4	553.5	6%	623.8	6%
East Goshen Township	Yes	6,504.3	727.2	11%	776.6	12%
East Marlborough Township	Yes	9,948.2	562.8	6%	580.5	6%
East Nantmeal Township	Yes	10,484.9	845.0	8%	845.1	8%
East Nottingham Township	Yes	12,892.1	648.0	5%	648.0	5%
East Pikeland Township	Yes	5,692.2	499.0	9%	666.3	12%
East Vincent Township	Yes	8,736.2	930.2	11%	961.1	11%
East Whiteland Township	Yes	7,041.5	326.6	5%	326.7	5%
Easttown Township	Yes	5,291.4	224.5	4%	283.2	5%
Elk Township	Yes	6,480.2	418.5	6%	418.5	6%
Elverson Borough	Yes	643.4	15.9	2%	15.9	2%

Table 4.3.4-1 Land Areas Within Flood Hazard Areas By Municipality

JURISDICTION	NFIP-PARTICIPATING COMMUNITY	TOTAL AREA (ACRES)	1% ANNUAL CHANCE FLOOD HAZARD AREA		0.2% ANNUAL CHANCE FLOOD HAZARD AREA	
			AREA (ACRES)	% OF TOTAL	AREA (ACRES)	% OF TOTAL
Franklin Township	Yes	8,410.6	606.4	7%	607.5	7%
Highland Township	Yes	10,998.6	328.9	3%	340.6	3%
Honey Brook Borough	Yes	307.2	0.0	0%	0.0	0%
Honey Brook Township	Yes	16,111.7	1,501.1	9%	1,528.3	9%
Kennett Square Borough	Yes	685.9	46.4	7%	57.6	8%
Kennett Township	Yes	9,908.2	750.1	8%	862.4	9%
London Britain Township	Yes	6,263.2	550.9	9%	550.9	9%
London Grove Township	Yes	11,041.0	797.7	7%	873.1	8%
Londonderry Township	Yes	7,269.7	415.8	6%	420.4	6%
Lower Oxford Township	Yes	11,835.0	910.0	8%	910.0	8%
Malvern Borough	Yes	810.6	22.0	3%	22.0	3%
Modena Borough	Yes	225.9	58.6	26%	63.5	28%
New Garden Township	Yes	10,424.0	480.7	5%	489.1	5%
New London Township	Yes	7,513.9	530.6	7%	530.6	7%
Newlin Township	Yes	7,757.7	977.5	13%	1,025.9	13%
North Coventry Township	Yes	8,646.3	689.9	8%	740.4	9%
Oxford Borough	Yes	1,257.5	34.8	3%	34.8	3%
Parkesburg Borough	Yes	815.4	33.6	4%	43.0	5%
Penn Township	Yes	6,176.2	236.1	4%	237.1	4%
Pennsbury Township	Yes	6,435.6	492.5	8%	523.2	8%

Table 4.3.4-1 Land Areas Within Flood Hazard Areas By Municipality

JURISDICTION	NFIP-PARTICIPATING COMMUNITY	TOTAL AREA (ACRES)	1% ANNUAL CHANCE FLOOD HAZARD AREA		0.2% ANNUAL CHANCE FLOOD HAZARD AREA	
			AREA (ACRES)	% OF TOTAL	AREA (ACRES)	% OF TOTAL
Phoenixville Borough	Yes	2,379.8	328.2	14%	419.2	18%
Pocopson Township	Yes	5,327.8	771.9	14%	797.2	15%
Sadsbury Township	Yes	3,965.5	346.2	9%	348.8	9%
Schuylkill Township	Yes	5,703.4	648.5	11%	704.8	12%
South Coatesville Borough	Yes	1,129.1	75.6	7%	103.6	9%
South Coventry Township	Yes	4,862.0	311.6	6%	315.9	6%
Spring City Borough	Yes	525.3	101.5	19%	130.1	25%
Thornbury Township	Yes	2,473.8	285.7	12%	296.1	12%
Tredyffrin Township	Yes	12,704.6	413.8	3%	451.1	4%
Upper Oxford Township	Yes	10,710.0	567.7	5%	567.7	5%
Upper Uwchlan Township	Yes	7,502.1	1,050.1	14%	1,063.8	14%
Uwchlan Township	Yes	6,691.1	76.5	1%	85.5	1%
Valley Township	Yes	3,819.1	144.5	4%	172.1	5%
Wallace Township	Yes	7,761.3	501.0	6%	551.7	7%
Warwick Township	Yes	12,093.5	983.5	8%	999.2	8%
West Bradford Township	Yes	11,900.7	491.0	4%	1,126.3	9%
West Brandywine Township	Yes	8,483.7	482.7	6%	491.3	6%
West Caln Township	Yes	14,029.1	793.2	6%	856.6	6%
West Chester Borough	Yes	1,181.7	48.0	4%	56.4	5%

Table 4.3.4-1 Land Areas Within Flood Hazard Areas By Municipality

JURISDICTION	NFIP-PARTICIPATING COMMUNITY	TOTAL AREA (ACRES)	1% ANNUAL CHANCE FLOOD HAZARD AREA		0.2% ANNUAL CHANCE FLOOD HAZARD AREA	
			AREA (ACRES)	% OF TOTAL	AREA (ACRES)	% OF TOTAL
West Fallowfield Township	Yes	11,681.8	417.4	4%	417.4	4%
West Goshen Township	Yes	7,680.5	584.4	8%	620.7	8%
West Grove Borough	Yes	416.6	0.0	0%	0.0	0%
West Marlborough Township	Yes	10,930.2	904.3	8%	927.0	8%
West Nantmeal Township	Yes	8,666.6	705.2	8%	733.2	8%
West Nottingham Township	Yes	8,948.3	726.9	8%	726.9	8%
West Pikeland Township	Yes	6,373.9	573.5	9%	596.0	9%
West Sadsbury Township	Yes	6,817.2	551.7	8%	558.8	8%
West Vincent Township	Yes	11,418.0	478.7	4%	482.6	4%
West Whiteland Township	Yes	8,271.2	806.7	10%	880.4	11%
Westtown Township	Yes	5,592.2	321.8	6%	485.8	9%
Willistown Township	Yes	11,692.8	900.4	8%	956.2	8%

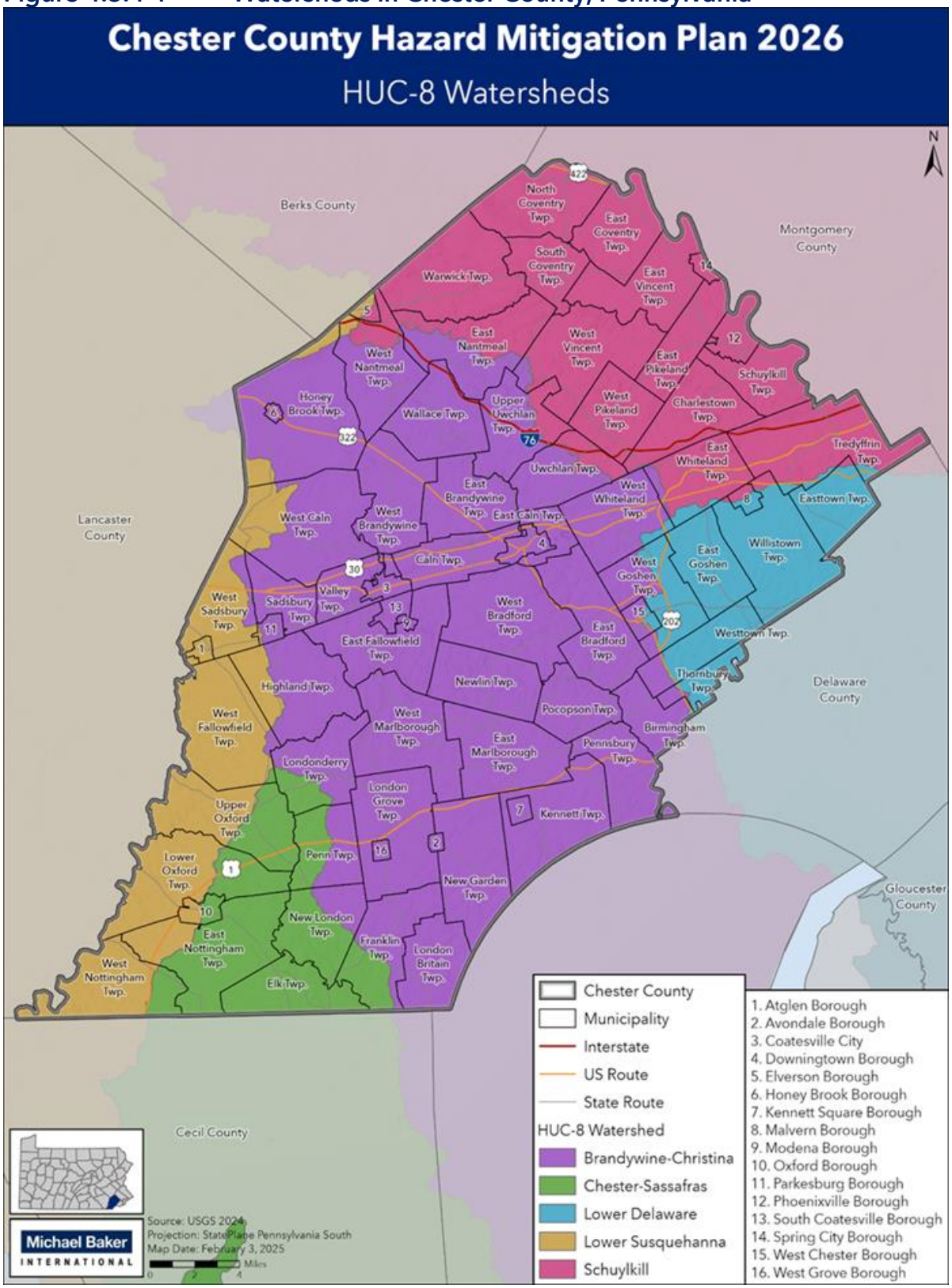
Chester County has a stormwater management plan in accordance with the 1978 Pennsylvania Stormwater Management Act (Act 167). Act 167 plans provide for improved management of stormwater impacts associated with land development. These plans address ways to reduce stormwater runoff and flooding outside the SFHA. Chester County's most recent integrated water resources plan, Watersheds 2045 (adopted in 2024), is also the county's Act 167 plan. It promotes watershed-based planning and management. The plan also serves as the county's stormwater management plan in accordance with Act 167. The main seven goals of the plan are as follows:

- Engage and educate individuals, communities, businesses, and governments to promote scientifically based watershed stewardship.
- Expand water-based recreational opportunities and access to local water features.

- Conserve and protect the county's natural resources for clean water.
- Improve surface water and groundwater quality.
- Reduce stormwater runoff and mitigate the impacts of flooding.
- Promote the integration of water resources, natural resources protection, and land use planning.
- Ensure Safe, Sustainable Water Supply and Wastewater Disposal Systems.

Figure 4.3.4-1 shows PADEP-designated watersheds in Chester County.

Figure 4.3.4-1 Watersheds in Chester County, Pennsylvania

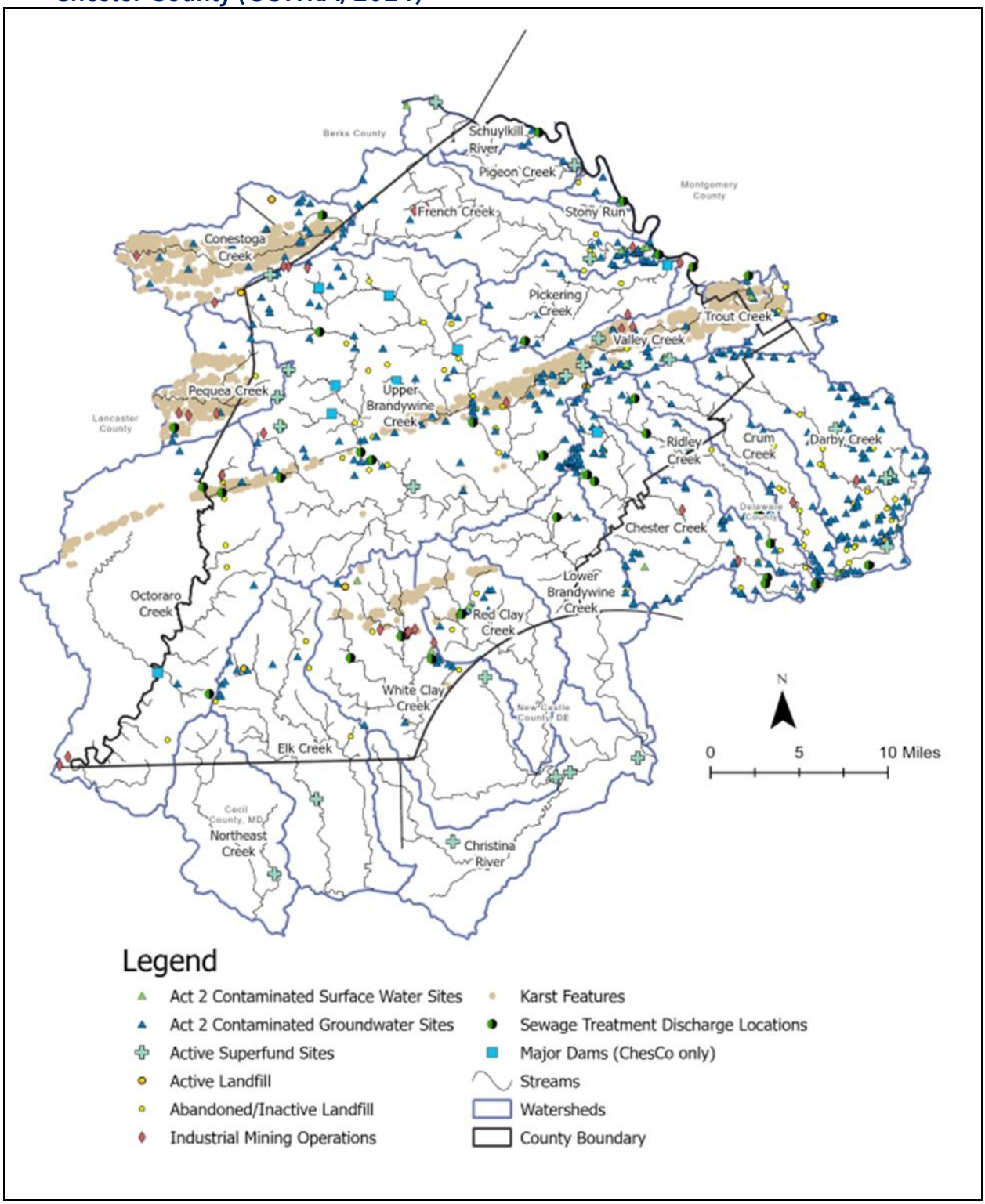


The 2017 FEMA Flood Insurance Study (FIS) for Chester County also documents the major flooding problems in the county. According to the report, flooding is not a widespread problem for the county; this may be attributable to the physical features of the watersheds and stream channels. In addition, residents have limited development in low-lying stream banks and floodplains. Any development in the floodplain is at risk, so limiting or prohibiting it will reduce risk.

In January 2024, the county released the Watersheds 2045 plan, as noted above. The plan identifies significant features related to flooding and water quality and resources, listed below and shown in Figure 4.3.4-2.

- Pennsylvania Act 2 contaminated sites: Found under the PA Land Recycling Program. These areas include contaminated commercial and industrial sites.
- Active Superfund sites: Sites listed on the National Priorities List for contaminated site remediation under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, informally known as the Superfund program.
- Active and inactive landfills: Sites may become environmental hazards if they are improperly contained or managed.
- Industrial mining operations: Sites within the study area that are for non-coal surface mining, such as rock quarries.
- Karst features and documented sinkholes: Locations that are more prone to subsidence and sinkholes.
- Sewage treatment discharge locations.
- Major dams that serve flood control and/or public water supply functions within Chester County Watersheds.

Figure 4.3.4-2 Known Hazards and Potential Water Resource Concerns in Chester County (CCWRA, 2024)



The report also identifies the following flooding hotspots in each watershed, shown in Figure 4.3.4-3 and listed in Table 4.3.4-2.

Figure 4.3.4-3 Reported Flooding Hotspots in Chester County (CCWRA, 2024)

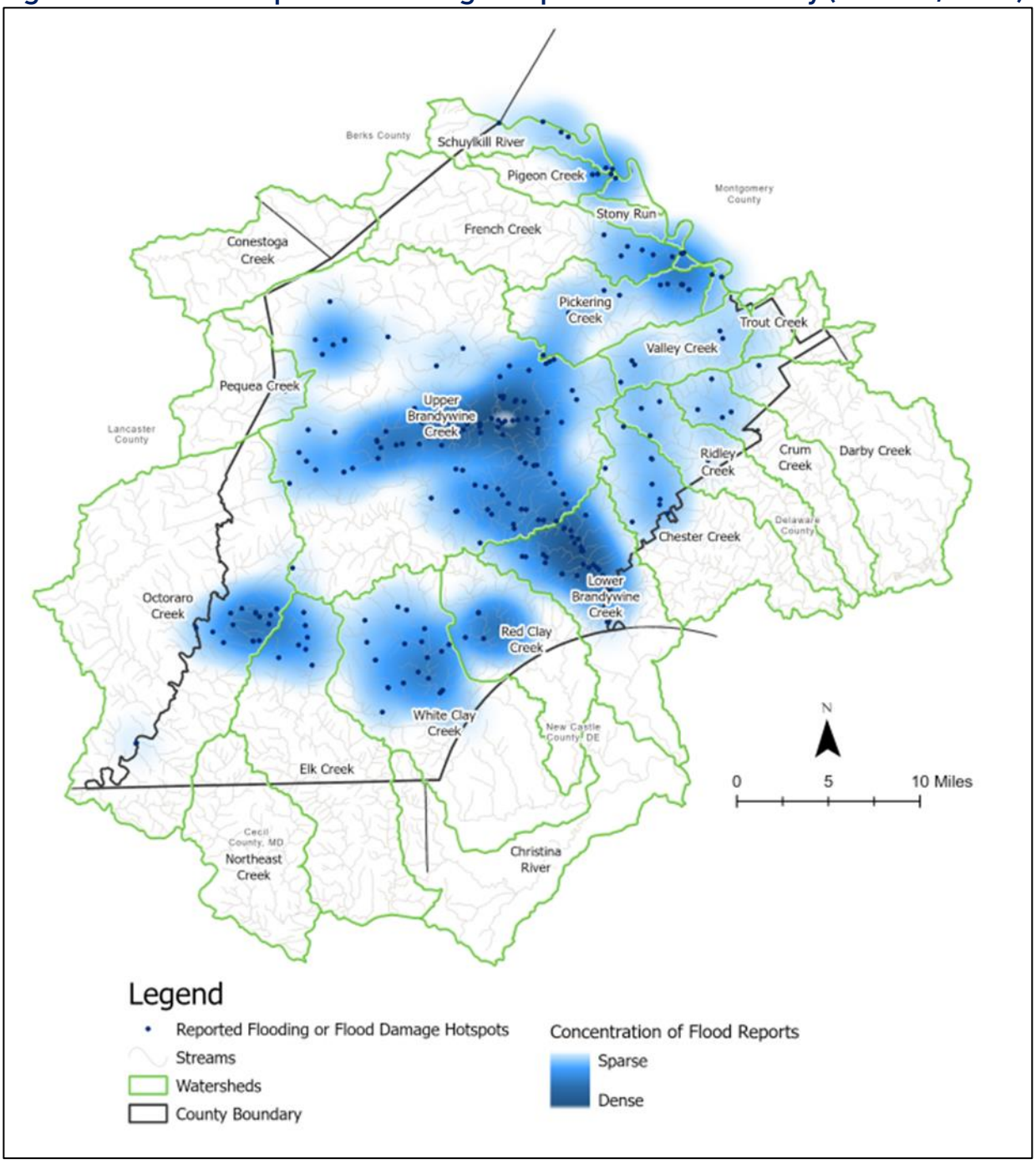


Table 4.3.4-2 Reported Flooding Hotspots in Chester County (CCWRA, 2024)

WATERSHED	FLOODING HOTSPOTS
Chester Creek	Several locations in West Chester Borough, and along the Chester Creek in East Goshen, Westtown, and Thornbury Townships.
Christina River	Along streams in White Horse Pike.
Darby Creek	Outside of Berwyn in Easttown Township.
Elk Creek	Along the East Branch Big Elk Creek and Forest Manor Road in Upper Oxford, and along the West Branch at Penns Grove Road
French Creek	Along the lower French Creek at Phoenixville, Rapps Dam Road, and Hares Hill Road.
Lower Brandywine Creek	Around Chadds Ford, and at multiple locations along Creek Road and Route 52.
Octoraro Creek	Multiple locations along Rattlesnake Run east of Glenville Road, and along Catamount Road.
Pequea Creek	Along Indian Spring Run at Cambridge Road.
Pickering Creek	Along Pickering Creek at Horseshoe Trail Road, Route 29 and Creek Road, and around Pickering Creek Reservoir.
Pigeon Creek	Along Pigeon Creek at Saylors Mill Road, Zeiber Road, and Route 724.
Red Clay Creek	In Kennett Square around Kennett Community Park and along the West Branch at Route 1
Ridley Creek	Along the East Branch at Line Road, at Greenhill Road and Hershey Mill Road, and at Garrett Mill Road above Route 3.
Schuylkill River Tributaries	North Coventry along Riverside Road and at East Schuylkill Road and Vaughn Road; Wells Road above Route 724; in Phoenixville at Bridge Street; along Pawlings Road.
Trout Creek	Along Trout Creek at Walker Road.
Upper Brandywine Creek	Numerous locations: along the Route 30 corridor between Parkesburg and Downingtown, along Route 322 below Downingtown, at Harvey's Bridge Road, along Broad Run, above Crump Road in Lionville, and at Beaver Dam and Birdell Road.
Valley Creek	Along Church Road below Conestoga Road; along the creek at Old Morehall Road; along Little Valley Creek at Mill Road.
White Clay Creek	In Avondale Borough and along the Route 41, Route 841, and Baltimore Pike corridors.

As part of the county's ongoing implementation of the Act 167 Stormwater Management Plan, the Chester County Water Resources Authority has developed the Chester County Floodspotter web app (www.chesco.org/Floodspotter). This web app is for the public or municipal staff to post locations and information about stormwater issues, i.e. stormwater hotspots. The app allows the users to add a location on a web map, upload a photo and complete a form with information about when the flooding occurs, how often it occurs, and associated impacts.

Anywhere it can rain, it can flood. The National Flood Insurance Program (NFIP), for which the Flood Insurance Rate Map (FIRM) is published, maps the risk associated with the 1-percent-

annual-chance flood. This 1-percent-annual chance flood event is used to delineate the SFHA and to identify Base Flood Elevations (BFE), terms identified in Figure 4.3.4-4. FEMA delineates floodplains on its maps by the recurrence interval of a given flood. Flood recurrence intervals are explained in more detail in **Section 4.3.4.4**. However, in assessing the spatial extent of flooding it is important to know that a floodplain associated with a 1-percent annual chance of occurring in a given year is smaller than the floodplain associated with a flood that has a 0.2-percent annual chance of occurring.

The SFHA serves as the primary regulatory boundary used by FEMA, the Commonwealth, and the county when determining flood risk. Chester County's FIRMs are available on the FEMA Flood Map Service Center (https://msc.fema.gov/portal). At the time of publication, the March 2017 DFIRMs were considered the best available and were used for the risk analysis. Figure 4.3.4-5 illustrates NFIP flood zones in Chester County. Maps of each municipality's flood zones are shown in **Appendix D**.

Figure 4.3.4-4 Diagram identifying Special Flood Hazard Area, 1 percent-annual-chance floodplain (SFHA), floodway and flood fringe (PA DEP, 2023).

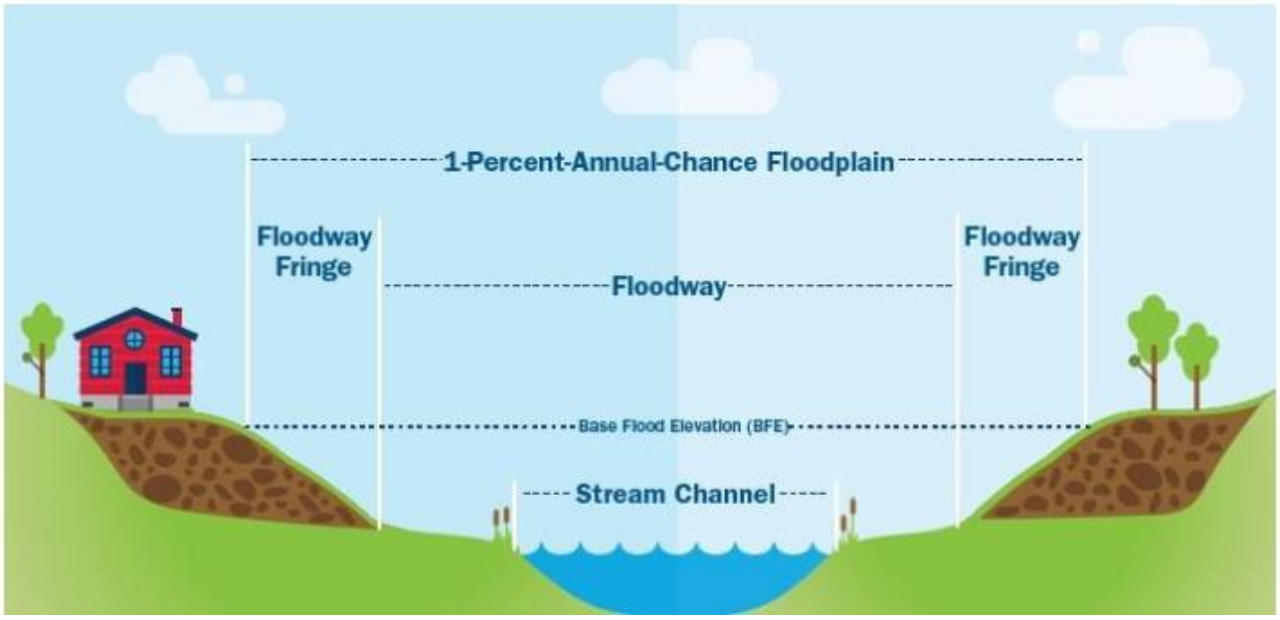
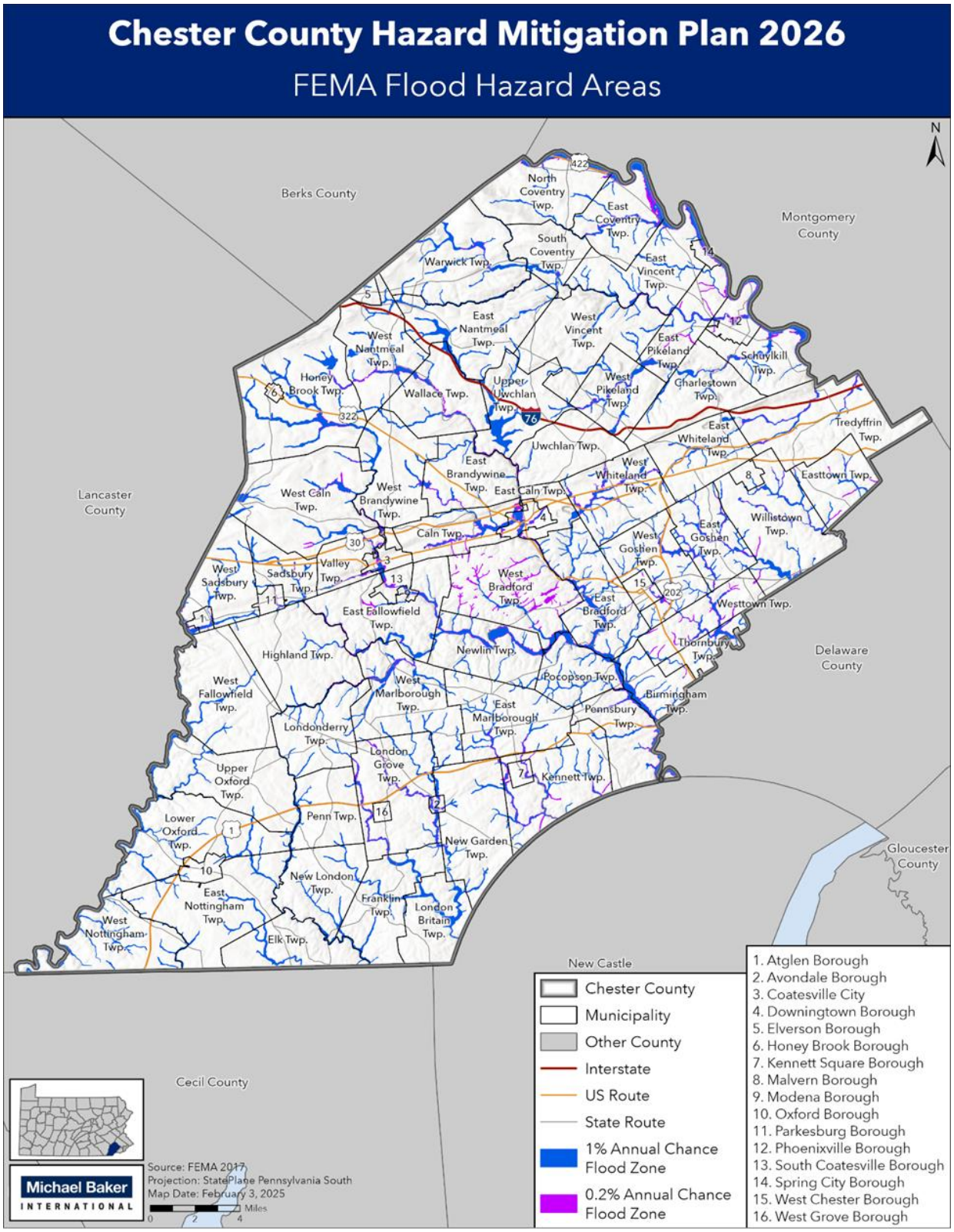


Figure 4.3.4-5 FEMA Flood Hazard Areas in Chester County



4.3.4.2. Range of Magnitude

Both localized and widespread floods are considered hazards when people and property are affected. Injuries and deaths can occur when people are swept away by flood currents or when bacteria and disease spread through floodwaters (Doocy et al., 2013). Most property damage results from inundation by sediment-filled water. Generally, flash floods cause greater loss of life while riverine floods cause greater loss of property (USGS, 2025d).

Several factors determine severity of floods, including intensity and duration, topography, ground cover, and rate of snowmelt. Water runoff is greater in areas with steep slopes and little or no vegetative ground cover. Many areas in Chester County have moderate and steep slopes that promote quick surface water runoff. Most storms in the region track from west to east; however, some originate in the Great Lakes or the Atlantic Ocean. Rainfall in Pennsylvania is about average for the eastern United States. The American Meteorological Society classifies rainfall intensity into three categories (2012):

- Light rain – when precipitation rate is .01 to .10 inches/hour
- Moderate rain – when precipitation rate is .11 to .30 inches/hour
- Heavy rain – when precipitation rate is > .30 inches/hour

While significant flood events are typically associated with heavy rain, rainfall events of lesser intensity may also cause flooding given sufficient duration and on-the-ground conditions. Flood effects can be volume- or force-related, although both play a factor in all flooding events. Flood events that occur along larger streams with wide floodplains tend to result in large-scale inundations, causing widespread damage through soaking and silt deposits in homes, businesses, and industrial plants. The impacts of these events are typically a function of how much water was involved instead of the force of that moving water. On the other hand, flash floods resulting from bursts of heavy rainfall happen suddenly and powerfully as they sweep vehicles away, uproot trees, damage buildings and structures, and more (The Weather Channel, 2015).

Flash floods are often unpredictable and can cause major panic and loss of life due to low visibility, particularly if they occur at night (Špitalar et al., 2014). These events are common in hilly regions where runoff paths are steep, allowing water to reach higher velocity as it flows over the ground. Frozen or very dry surfaces where water cannot infiltrate can increase normal runoff velocities as well, particularly in small drainage areas (Chen et al., 2017). In addition to slopes and frozen ground, ice and debris jams in channels and culverts can lead to quick-rising floods if they significantly obstruct the flow of water (NOAA NWS, n.d.c).

Ice jams and snowmelt trigger flash floods. A deep snowpack increases runoff produced by melting snow. Heavy spring rains falling on melting snowpack can produce flash flooding. Melting snowpack may also contribute to floods produced by ice jams (NOAA NSSL, n.d.). As ice or debris moves downstream, it may get caught on any sort of obstruction to the water flow. When this occurs, water can be held back, causing upstream flooding. When the jam finally

breaks, flash flooding can occur downstream. Ice jams are common during the winter and spring along rivers, streams, and creeks (NOAA NWS, n.d.c).

Several factors determine the severity of floods, including rainfall intensity and duration, topography, ground cover, and rate of snowmelt (Doocy et al., 2013). When urbanization removes native vegetation and agricultural land and replaces them with impervious surfaces, there is a drastic reduction in stormwater infiltration rates. This forces rainfall to run off onto nearby surfaces (Polk, 2024). If mismanaged, this runoff can accumulate quickly and create hazardous conditions. Stormwater runoff may contain and transport harmful pollutants such as fertilizers or pesticides from agricultural/residential applications, bacteria from livestock and pet waste, oil from vehicles, and other pollutants. These contaminants may infiltrate drinking water supply or swimming areas. When excess nitrogen and phosphorus are flushed into the surface water from fertilizers, algal blooms can occur which degrade living conditions for fish and other organisms (Yencha, 2022).

Historically, the most severe Chester County flooding incident occurred in September 2021 as remnants of Hurricane Ida reached the region. Heavy rainfall with recorded amounts as high as five to ten inches caused significant flash flooding in southeastern Pennsylvania, resulting in widespread property damage and several fatalities, one of which occurred in Downingtown Borough. A major disaster declaration was issued on September 10, 2021, for this event. In Chester County, there was widespread flash flooding causing many road closures and some vehicles to be stranded. Numerous waterways in the county flooded, including the Schuylkill River, the West Branch of the Brandywine Creek, the East Branch of the Brandywine Creek, White Clay Creek, Red Clay Creek, French Creek, and Valley Creek. There were many reports of water entering buildings and homes. $40 million in property damage and $1 million in crop damage were reported in Chester County for this incident (NOAA NCEI, 2025). Historic stream flows were recorded on stream gauges in Chester County during this event (CCWRA, 2024).

Floods are naturally occurring events that benefit riparian systems. Such benefits include groundwater recharge and the introduction of nutrient rich sediment improving soil fertility (USDA, 2024). However, the destruction of riparian buffers through development, changes to land use and land cover throughout a watershed, and the introduction of chemical or biological contaminants which often accompany human presence cause environmental harm when floods occur. Hazardous material facilities are potential sources of contamination during flood events. Other negative environmental impacts of flooding include water-borne diseases due to polluted drinking water, heavy siltation, damage or loss of crops, and drowning of both humans and animals (FEMA, 2024c).

Dams, levees, and reservoirs act as flood protection measures. Please refer to the Dam Failure hazard profile in **Appendix G** for more information on dams.

Table 4.3.4-3 Most Likely Lifelines Impacted by Floods, Flash Foods, and Ice Jams

LIFELINES	NOTES
	Government operations and facilities, including police, fire, and search and rescue are needed for response and recovery.
	Significant risk to buildings is posed and can create issues for food and water access.
	Transportation routes will be affected due to direct damage from flooding and potential compounding hazards like landslides.
	Floods may affect hazardous materials storage due to damage to facilities.

4.3.4.3. Past Occurrence

Chester County has a long history of flooding events. While flooding is often localized to streets and small neighborhoods, the county has historically experienced periodic storm events that affect multiple communities over a large area. Past building practices often resulted in homes being constructed in the FEMA-designated floodplains, exacerbating flooding problems within certain communities.

The county has invested in an extensive flood gage network. A gauge at Chadds Ford (CDFP1), located in Delaware County, monitors conditions on the Brandywine Creek and a gauge at Pottstown (PTNP1) monitors conditions on the Schuylkill River. A gauge below Downingtown (DWNP1) monitors conditions on the East Brandywine Creek. There are several gages upstream along the Brandywine's mainstem, East Branch, and West Branch. The NWS uses flood categories as forecast points that describe the severity of flood impacts in the river/stream reach. Table 4.3.4-4 summarizes the flood categories in feet at each of these gauges. Table 4.3.4-5 summarizes the top historic crests at these locations. Note that all three gauges experienced historic crests in September 2021 from the remnants of Hurricane Ida.

Table 4.3.4-4 Flood Categories at the Brandywine Creek at Chadds Ford (CDFP1), Schuylkill River at Pottstown (PTNP1), and East Brandywine Creek Below Downingtown (DWNP1) Gauges (CCWRA, 2025) (NOAA NWS, 2025)

FLOOD CATEGORY	FLOOD CATEGORY DEFINITION	BRANDYWINE AT CHADDS FORD (IN FEET)	SCHUYLKILL RIVER AT POTTSTOWN (IN FEET)	EAST BRANDYWINE CREEK BELOW DOWNINGTOWN (IN FEET)
Major Flood Stage	Life-threatening and extensive inundation of structures and roads; significant evacuations are expected at this stage.	13	22	11
Moderate Flood Stage	Inundation of buildings usually begins at this stage; roads are likely to be closed and some areas cut off (evacuations may be necessary).	11	18	9
Flood Stage	Gauge height above which a rise in water surface level begins to create a hazard to lives, property or commerce; issuance of flood warning is linked to flood stage.	9	12.5	7
Action Stage	Level where the NWS needs to take same type of mitigation action in preparation for possible significant hydrologic activity.	8	11	6

Table 4.3.4-5 Historic Crests at the Brandywine Creek at Chadds Ford (CDFP1), Schuylkill River at Pottstown (PTNP1), and East Brandywine Creek Below Downingtown (DWNP1) Gauges

BRANDYWINE AT CHADDS FORD		SCHUYLKILL AT POTTSTOWN		EAST BRANCH BRANDYWINE CREEK BELOW DOWNINGTOWN	
FEET	DATE	FEET	DATE	FEET	DATE
21.04	09/02/2021	29.97	06/23/1972	19.11	09/02/2021
17.15	09/17/1999	21.00	02/28/1902	14.79	09/16/1999
16.56	06/22/1972	20.84	06/29/2006	14.38	06/28/2006
16.05	05/01/2014	20.15	05/23/1942	13.73	08/28/2011
15.23	08/28/2011	19.20	08/24/1933	13.59	08/04/2022
15.00	03/05/1920	18.27	09/09/2011	13.56	09/15/2003
14.80	08/09/1942	18.21	01/25/1979	13.50	05/01/2014
14.70	08/04/1915	17.98	08/19/1955	13.22	06/20/2003
14.64	08/19/1955	17.88	01/27/1976	13.00	10/01/2010
14.35	01/25/1979	16.79	09/02/2021	12.83	09/28/2004

According to the National Oceanic and Atmospheric Administration's National Centers for Environmental Education (NOAA NCEI) storm event database, Chester County experienced 199 flash flood and 69 flood events between January 1, 1996, and August 21, 2025 (the date range of data availability). These 268 events resulted in two fatalities and over $56.3 million in property damage and $1 million in crop damage. Due to the large number of flood events that have occurred in Chester County, Table 4.3.4-6 contains only the last 10 years of flood incidents. Event details are captured by location, so there may be multiple lines in the table for the same flood event. Historically, there have only been three known ice jam events.

Table 4.3.4-6 Past Flood and Flash Flood Events In Chester County 2015 to 2025 (NOAA NCEI, 2025)

DATE	LOCATION	EVENT TYPE	DETAILS	REPORTED PROPERTY DAMAGE*	REPORTED CROP DAMAGE*
3/10/2015	Brandamore	Flood	The combination of rain and snowmelt caused minor flooding along the West Branch Brandywine Creek from the late evening of the 10th through the early morning of the 11th. The West Branch Brandywine Creek at Honey Brook was above its 7.0-foot flood stage from 1125 p.m. EDT on the 10th through 3:20 a.m. EDT on the 11th, and it crested at 7.23 feet at 115 a.m. EDT on the 11th. Event precipitation totals included 0.73 inches in West Grove, 0.68 inches in Nottingham, and 0.66 inches in Chadds Ford and Unionville.	$0	$0
6/26/2015	Phoenixville	Flash Flood	Thunderstorms with torrential downpours caused flash flooding in and around Phoenixville. A mesonet site within Phoenixville had an event total of 3.50 inches of rain.	$0	$0
2/16/2016	Harmony Hill	Flood	Heavy rain and snowmelt caused the East Branch of the Brandywine Creek below Downingtown to exceed flood stage for several hours Tuesday evening, February 16th, resulting in minor flooding. The creek crested at 8.01 feet at 5:00 p.m. EST. Flood stage at Downingtown is 7.0 feet.	$0	$0
2/16/2016	Brandamore	Flood	Heavy rain and snowmelt caused the West Branch of the Brandywine Creek to exceed flood stage at Honey Brook for a couple of hours Tuesday evening, February 16th, resulting in minor flooding. The creek crested at 7.41 feet at 4:45 p.m. EST. Flood stage at Honey Brook is 7.0 feet.	$0	$0
2/24/2016	Wawaset	Flood	Brandywine flooding near route 842 in West Chester.	$0	$0
3/31/2017	Downingtown	Flood	The East Branch rose above flood stage at Downingtown.	$0	$0
7/14/2017	Hayesville	Flood	Several roads were closed in lower Oxford township.	$0	$0
7/22/2017	Phoenixville	Flood	Flooding reported on Bridge Street.	$0	$0
7/23/2017	Chatwood	Flash Flood	A vehicle was stuck at Gay and Montgomery due to flooding.	$0	$0
7/23/2017	Rosedale	Flash Flood	A vehicle was stuck in high water near the intersection of Bayard and Rosedale.	$0	$0
7/23/2017	Mendenhall	Flash Flood	Burrows Run Road was flooded.	$0	$0
5/17/2018	Thorndale	Flash	Flash flooding occurred along the East Branch of the Brandywine Creek in	$0	$0

Table 4.3.4-6 Past Flood and Flash Flood Events In Chester County 2015 to 2025 (NOAA NCEI, 2025)

DATE	LOCATION	EVENT TYPE	DETAILS	REPORTED PROPERTY DAMAGE*	REPORTED CROP DAMAGE*
		Flood	West Bradford Township and East Bradford Township. There was moderate flooding around the river gauge below Downingtown. The creek level at that location reached 9.07 feet at 7:15 a.m. EST.		
6/10/2018	Chester Springs	Flash Flood	Flooding occurred along Clover Mill Road and Pikeland Road in East Pikeland Township and West Pikeland Township.	$0	$0
6/10/2018	Phoenixville	Flash Flood	French Creek exceeded its flood stage of 8 feet at Phoenixville.	$0	$0
6/10/2018	Chesterbrook	Flash Flood	Water rescues took place along Richards Road at Gulph Road and at Glenhardie Road in Tredyffrin Township. A home was flooded to the first floor near Yellow Spring Road and Well Springs Lane in Tredyffrin Township. Also, there was roadway flooding in Valley Forge.	$0	$0
6/10/2018	Chesterbrook	Flood	Flooding on U.S. Highway 202 between Valley Forge Road and State Highway 29.	$0	$0
6/11/2018	Chester Springs	Flash Flood	Flooding on Clover Mill Road and Pikeland Road between Kimberton Road and Wildlife Drive. All Lanes Closed.	$0	$0
6/11/2018	Coventryville	Flood	Heavy rain and flooding downed a tree into power lines on State Highway 23 between Old Ridge Road and Pottstown Pike. All lanes closed.	$0	$0
6/11/2018	Chesterbrook	Flood	Flooding caused debris to collect on the roadway on Yellow Springs Road between Wilson Road and Glen Alexander Drive. Lane restrictions in place.	$0	$0
7/3/2018	Berwyn	Flash Flood	There was widespread roadway flooding in Berwyn and Devon.	$0	$0
7/22/2018	Upland	Flash Flood	Multiple vehicles were trapped in rapidly rising flood waters in West Marlborough Township. Several water rescues took place.	$0	$0
7/22/2018	Homeville	Flash Flood	One person was rescued from a vehicle trapped in high water in Upper Oxford Township.	$0	$0
7/22/2018	Coatesville	Flash Flood	Numerous roads were closed in western Chester County due to flooding. Many vehicles became trapped in the rising flood waters. There were 27 water rescues.	$0	$0
7/22/2018	Coatesville	Flash Flood	Two vehicles were trapped in flood waters in Caln Township. A water rescue took place at Foundry Street and North 11th Avenue, and another	$0	$0

Table 4.3.4-6 Past Flood and Flash Flood Events In Chester County 2015 to 2025 (NOAA NCEI, 2025)

DATE	LOCATION	EVENT TYPE	DETAILS	REPORTED PROPERTY DAMAGE*	REPORTED CROP DAMAGE*
			water rescue occurred on the Lincoln Highway at North Caln Road.		
7/22/2018	Harmony Hill	Flash Flood	Moderate flooding occurred along the east branch of the Brandywine Creek below Downingtown.	$0	$0
8/13/2018	Landenberg	Flash Flood	Widespread roadway flooding in New Garden Township. Many roads were impassable including Penn Green Road and Broad Run Road.	$0	$0
8/13/2018	Rock Run	Flash Flood	Flash flooding resulted in the need for a water rescue at the intersection of Manor Road and Butterworth Road in Coatesville.	$0	$0
8/13/2018	Hayti	Flash Flood	Minor flooding occurred along the West Branch of the Brandywine Creek at Coatesville.	$0	$0
8/13/2018	Modena	Flash Flood	Moderate flooding occurred along the West Branch of the Brandywine Creek at Modena.	$0	$0
8/13/2018	Planebrook	Flash Flood	Flash flooding resulted in the need for a water rescue on Church Road in East Whiteland Township where it intersected the Chester Valley Trail.	$0	$0
8/13/2018	Green Tree	Flash Flood	Flash flooding resulted in the need for several water rescues in Willistown Township.	$0	$0
8/13/2018	Strickersville	Flash Flood	Minor flooding occurred along the White Clay Creek near Strickersville.	$0	$0
8/13/2018	Berwyn	Flash Flood	At least three water rescues took place in Tredyffrin Township due to flash flooding.	$0	$0
8/13/2018	Phoenixville	Flash Flood	Minor flooding occurred along French Creek in Phoenixville.	$0	$0
8/13/2018	Marshallton	Flash Flood	Major flooding occurred along the East Branch of the Brandywine Creek below Downingtown.	$0	$0
8/13/2018	Valley Forge	Flash Flood	Minor flooding occurred along Valley Creek at Valley Forge.	$0	$0
8/13/2018	Five Pts	Flash Flood	Minor flooding occurred along the Red Clay Creek at Kennett Square.	$0	$0
8/13/2018	Suplee	Flash Flood	Moderate flooding occurred along the West Branch of the Brandywine Creek below Honey Brook.	$0	$0
8/21/2018	Phoenixville	Flash	Minor flooding occurred along French Creek in Phoenixville.	$0	$0

Table 4.3.4-6 Past Flood and Flash Flood Events In Chester County 2015 to 2025 (NOAA NCEI, 2025)

DATE	LOCATION	EVENT TYPE	DETAILS	REPORTED PROPERTY DAMAGE*	REPORTED CROP DAMAGE*
		Flood			
8/31/2018	Hayesville	Flash Flood	Flash flooding made Scroggy Road and Cream Road in Lower Oxford Township impassable.	$0	$0
11/2/2018	Brandamore	Flash Flood	Moderate flooding occurred along the West Branch of the Brandywine Creek below Honey Brook.	$0	$0
6/13/2019	Westtown	Flash Flood	Fast moving water covered Dilworthtown Road near Westtown Road in Thornbury Township.	$0	$0
6/20/2019	Chester Springs	Flash Flood	Clover Mill Road was closed near Pike Springs Road in West Pikeland Township due to flash flooding.	$0	$0
6/20/2019	Howellville	Flash Flood	Moderate flooding occurred along the Valley Creek in the Chesterbrook area. The flooding resulted in the closure of PA Route 252 downstream in the Valley Forge area.	$0	$0
6/20/2019	West Chester	Flash Flood	Moderate flooding occurred along the East Branch of the Brandywine Creek below Downingtown.	$0	$0
7/11/2019	Honey Brook	Flash Flood	Multiple water rescues took place along Twin County Road in Honey Brook Township.	$0	$0
7/11/2019	Conestoga	Flash Flood	A water rescue took place at the intersection of Chestnut Tree Road and Pond View Drive in West Nantmeal Township.	$0	$0
7/11/2019	Kenilworth	Flash Flood	A water rescue took place at the intersection of Miller Road and East Cedarville Road in North Coventry Township.	$0	$0
7/11/2019	Downingtown	Flash Flood	A water rescue took place along Lancaster Avenue in East Caln Township.	$0	$0
7/11/2019	Oppermans Corners	Flash Flood	A water rescue took place along Upper Pine Creek Road near Davis Road in West Pikeland Township. Flash flooding occurred along Pickering Creek in West Pikeland Township with flood waters reaching Conestoga Road and Kimberton Road.	$0	$0
7/11/2019	Harmony Hill	Flash Flood	Moderate flooding occurred along the East Branch of the Brandywine Creek below Downingtown.	$0	$0
7/11/2019	Phoenixville	Flash Flood	Minor flooding occurred along the French Creek in the Phoenixville area.	$0	$0

Table 4.3.4-6 Past Flood and Flash Flood Events In Chester County 2015 to 2025 (NOAA NCEI, 2025)

DATE	LOCATION	EVENT TYPE	DETAILS	REPORTED PROPERTY DAMAGE*	REPORTED CROP DAMAGE*
7/18/2019	Chatwood	Flash Flood	Widespread roadway flooding occurred in West Goshen Township and in West Chester. There were water rescues on Gay Street and on Montgomery Avenue.	$0	$0
7/18/2019	West Chester Airport	Flash Flood	The East Branch of Chester Creek overflowed its banks in East Goshen Township. Flash flooding occurred on East Strasburg Road in the vicinity of Reservoir Road.	$0	$0
8/14/2019	Glenloch	Flash Flood	Parts of Lancaster Avenue in East Whiteland Township were closed due to flash flooding. Several vehicles became trapped in the flood waters.	$0	$0
8/14/2019	Berwyn	Flash Flood	US Route 30 was closed near Lakeside Avenue in Easttown Township due to flash flooding.	$0	$0
11/1/2019	Brandamore	Flash Flood	Minor flooding occurred along the West Branch of the Brandywine Creek in Honey Brook Township.	$0	$0
11/1/2019	Harmony Hill	Flash Flood	Minor flooding occurred along the East Branch of the Brandywine Creek in West Bradford Township and East Bradford Township.	$0	$0
7/6/2020	Chesterbrook	Flash Flood	A water rescue took place on Richards Road in Tredyffrin Township.	$0	$0
7/6/2020	Cedar Hollow Station	Flash Flood	Flood water washed rocks onto Valley Road in Paoli near the intersection with Lancaster Avenue.	$0	$0
7/6/2020	Planebrook	Flash Flood	Planebrook Road at US Route 202 was closed due to flooding in East Whiteland Township.	$0	$0
8/4/2020	Lewisville	Flash Flood	PA Route 841 was closed near Lewisville Road in Elk Township due to flooding.	$0	$0
8/4/2020	Cochranville	Flash Flood	PA Route 926 was closed near PA Route 10 in Upper Oxford Township due to flooding.	$0	$0
8/4/2020	Valley Forge	Flash Flood	Moderate flooding occurred along Valley Creek in the Valley Forge area.	$0	$0
8/4/2020	Oakbourne	Flash Flood	Birmingham Road was closed near Riflery Drive in East Bradford Township due to flooding.	$0	$0
8/4/2020	Reeceville	Flash Flood	Swinehart Road was closed near Beaver Creek Road in West Brandywine Township due to flooding.	$0	$0

Table 4.3.4-6 Past Flood and Flash Flood Events In Chester County 2015 to 2025 (NOAA NCEI, 2025)

DATE	LOCATION	EVENT TYPE	DETAILS	REPORTED PROPERTY DAMAGE*	REPORTED CROP DAMAGE*
8/4/2020	Kaolin	Flash Flood	Minor flooding occurred along the Red Clay Creek in the Kennett Square area.	$0	$0
8/4/2020	Modena	Flash Flood	Minor flooding occurred along the West Branch of the Brandywine Creek in the Modena area.	$0	$0
8/4/2020	Harmony Hill	Flash Flood	Major flooding occurred on the East Branch of the Brandywine Creek, downstream from Downingtown.	$0	$0
8/4/2020	Exton	Flash Flood	Several roads in Exton were closed due to flooding, including sections of Business US Route 30 and PA Route 100.	$0	$0
8/4/2020	Strickersville	Flash Flood	Major flooding occurred along the White Clay Creek in the Strickersville area.	$0	$0
8/4/2020	Downingtown	Flash Flood	US Route 30 was closed near the Lancaster Avenue interchange in East Caln Township due to flooding.	$0	$0
8/4/2020	Cromby	Flash Flood	Minor flooding occurred along French Creek in Phoenixville.	$0	$0
8/4/2020	Lionville	Flash Flood	North Ship Road was closed at Newcomen Road in Uwchlan Township due to flooding.	$0	$0
8/4/2020	Bucktown	Flash Flood	PA Route 23 was closed at PA Route 100 in South Coventry Township due to flooding.	$0	$0
8/4/2020	Cedarville	Flash Flood	Several water rescues took place in North Coventry Township.	$0	$0
8/7/2020	Parkesburg	Flash Flood	A water rescue took place on Maple Street at South Culvert Street in Parkesburg.	$0	$0
8/7/2020	Kaolin	Flash Flood	Kaolin Road was closed at Caldwell Lane in Kennett Township due to flooding. A water rescue took place on West Hillendale Road at Chandler Mill Road in Kennett Township.	$0	$0
8/7/2020	Kennett Square	Flash Flood	A vehicle was trapped in flood waters on West South Street at Harvey Circle in Kennett Square.	$0	$0
8/7/2020	London Grove	Flash Flood	A water rescue took place on McCue Road at Woodview Road in London Grove Township.	$0	$0
8/7/2020	Toughkenamon	Flash	Bancroft Road was under water at Crestview Drive in New Garden	$0	$0

Table 4.3.4-6 Past Flood and Flash Flood Events In Chester County 2015 to 2025 (NOAA NCEI, 2025)

DATE	LOCATION	EVENT TYPE	DETAILS	REPORTED PROPERTY DAMAGE*	REPORTED CROP DAMAGE*
		Flood	Township. Broad Run Road was closed at Newark Road in New Garden Township due to flooding.		
8/7/2020	Five Pts	Flash Flood	Minor flooding occurred along the Red Clay Creek downstream from Kennett Square.	$0	$0
8/7/2020	Strickersville	Flash Flood	Moderate flooding occurred along the White Clay Creek near Strickersville.	$0	$0
8/12/2020	Downingtown Memorial Airport	Flash Flood	A water rescue took place on Lincoln Avenue at Bailey Road in Caln Township. Another water rescue took place on Park Drive at G.O. Carlson Boulevard in Caln Township.	$0	$0
8/12/2020	Lincoln University	Flash Flood	Several roads in Lower Oxford Township were impassable due to flooding.	$0	$0
6/8/2021	Coatesville	Flash Flood	Widespread roadway flooding occurred in Valley Township, Coatesville and South Coatesville. There were numerous water rescues. Minor flooding occurred along the West Branch of the Brandywine Creek in and around Coatesville and South Coatesville.	$0	$0
6/8/2021	Reeceville	Flash Flood	Widespread roadway flooding occurred in East Brandywine Township and Caln Township. There were numerous water rescues.	$0	$0
6/8/2021	Parkesburg	Flash Flood	Widespread roadway flooding occurred in Parkesburg and Sadsburyville. There were numerous water rescues.	$0	$0
6/8/2021	Downingtown	Flash Flood	A water rescue took place at the intersection of Jefferson Avenue and Green Street in Downingtown.	$0	$0
6/8/2021	Modena	Flash Flood	Moderate flooding occurred along the West Branch of the Brandywine Creek in Modena and East Fallowfield Township.	$0	$0
6/8/2021	Harmony Hill	Flash Flood	Major flooding occurred along the East Branch of the Brandywine Creek below Downingtown in West Bradford Township and East Bradford Township.	$0	$0
8/18/2021	Phoenixville	Flash Flood	Two vehicles were stranded in flood waters at the intersection of Madison Avenue and Tyler Avenue in Phoenixville.	$0	$0
8/18/2021	Lyndell	Flash Flood	A water rescue took place on the Pennsylvania Turnpike near Little Conestoga Road in Upper Uwchlan Township.	$0	$0

Table 4.3.4-6 Past Flood and Flash Flood Events In Chester County 2015 to 2025 (NOAA NCEI, 2025)

DATE	LOCATION	EVENT TYPE	DETAILS	REPORTED PROPERTY DAMAGE*	REPORTED CROP DAMAGE*
8/18/2021	Frazier	Flash Flood	Widespread roadway flooding occurred in East Whiteland Township, including Conestoga Road, North Bacton Hill Road and Planebrook Road.	$0	$0
8/18/2021	Glenloch	Flash Flood	A water rescue took place on US Route 202 near the US Route 30 Bypass in West Whiteland Township. Valley Road was under water at Valley Creek. Several vehicles were trapped in flood waters on the Lincoln Highway near the Pottstown Pike in West Whiteland Township. Rocks and debris were washed onto Cockerham Lane by flood waters.	$0	$0
8/18/2021	Chatwood	Flash Flood	Three water rescues took place in West Chester. One was at the intersection of East Gay Street and Montgomery Avenue, another was at the intersection of South Bolmar Street and Union Street, and a final one was at the intersection of Union Street and South Franklin Street.	$0	$0
8/18/2021	Sugartown	Flash Flood	A water rescue took place at the intersection of Grubb Road and Davis Road in Willistown Township.	$0	$0
8/18/2021	Paoli	Flash Flood	Three water rescues took place in Paoli, one at the intersection of East Lancaster Avenue and Leopard Road, another at the intersection of Maple Avenue and Agnew Lane, and a final one at the intersection of Paoli Pike and Rustic Lane.	$0	$0
8/18/2021	Cedar Hollow Station	Flash Flood	A water rescue took place at the intersection of US Route 202 and North Valley Road in Tredyffrin Township. Another water rescue took place at the intersection of Old Eagle School Road and Wallace Drive. A third water rescue took place at the intersection of Duportail Road and Mill Road in Tredyffrin Township.	$0	$0
8/18/2021	Harmony Hill	Flash Flood	Minor flooding occurred along the East Branch of the Brandywine Creek between West Bradford Township and East Bradford Township.	$0	$0
8/19/2021	Chesterbrook	Flash Flood	Moderate flooding occurred along Valley Creek near Valley Forge.	$0	$0
9/1/2021	Nottingham	Flash Flood	Widespread flash flooding occurred in Chester County with many road closures and vehicles stranded due to the remnants of Hurricane Ida. There was a flood related fatality in Downingtown. Numerous waterways in the county flooded, including the Schuylkill River, the West Branch of the	$40,000,000	$1,000,000

Table 4.3.4-6 Past Flood and Flash Flood Events In Chester County 2015 to 2025 (NOAA NCEI, 2025)

DATE	LOCATION	EVENT TYPE	DETAILS	REPORTED PROPERTY DAMAGE*	REPORTED CROP DAMAGE*
			Brandywine Creek, the East Branch of the Brandywine Creek, White Clay Creek, Red Clay Creek, French Creek and Valley Creek. There were many reports of water entering buildings and homes.		
9/23/2021	Rock Run	Flash Flood	A water rescue from a stranded vehicle took place near the intersection of Manor Road and Butterworth Road in Coatesville. Several roads in the Coatesville area were closed due to flooding, including Wagontown Road and Caln Road.	$0	$0
9/23/2021	Modena	Flash Flood	The occupants of a vehicle were rescued from flood waters in Caln Township.	$0	$0
9/23/2021	Harmony Hill	Flash Flood	Minor flooding occurred along the East Branch of the Brandywine Creek along the border between West Bradford Township and East Bradford Township.	$0	$0
9/23/2021	Phoenixville	Flash Flood	Minor flooding occurred along French Creek at Phoenixville.	$0	$0
7/2/2022	Glen Roy	Flash Flood	A water rescue took place in West Nottingham Township.	$0	$0
9/6/2022	West Chester	Flash Flood	East Barnard Street in West Chester was closed between South Matlack Street and South Franklin Street due to flooding. South Adams Street in West Chester was closed between East Market Street and East Miner Street due to flooding.	$0	$0
6/27/2023	Chatwood	Flash Flood	East Gay Street was closed due to flooding at Montgomery Avenue along the West Chester and West Goshen Township line.	$0	$0
6/27/2023	Exton	Flash Flood	Widespread roadway flooding around the Exton Square Mall in Exton with some water rescues taking place.	$0	$0
6/27/2023	Glenloch	Flash Flood	Flooding led to a water rescue on the US Route 30 eastbound ramp onto US Route 202 northbound in West Whiteland Township.	$0	$0
6/27/2023	Harmony Hill	Flash Flood	Moderate flooding occurred along the East Branch of the Brandywine Creek in West Bradford Township and East Bradford Township.	$0	$0
7/7/2023	Whitford	Flash Flood	Widespread roadway flooding occurred in West Whiteland Township with many roads becoming impassable. Numerous vehicles were trapped in	$0	$0

Table 4.3.4-6 Past Flood and Flash Flood Events In Chester County 2015 to 2025 (NOAA NCEI, 2025)

DATE	LOCATION	EVENT TYPE	DETAILS	REPORTED PROPERTY DAMAGE*	REPORTED CROP DAMAGE*
			flood waters, with some motorists needing assistance on Spackmans Lane and on Whitford Road.		
7/8/2023	Green Tree	Flash Flood	Paoli Pike in Malvern was closed between South Warren Avenue and Devon Road due to flooding.	$0	$0
7/8/2023	Cedar Hollow Station	Flash Flood	Cedar Hollow Road was closed around Jacqueline Drive in Paoli due to flooding.	$0	$0
7/8/2023	Guthriesville	Flash Flood	Sections of US Route 202 in West Whiteland Township south of US Route 30 became impassable due to flooding.	$0	$0
7/8/2023	Planebrook	Flash Flood	Church Road in East Whiteland Township was closed at Sweetwater Way due to flooding.	$0	$0
7/9/2023	Honey Brook	Flash Flood	A vehicle became trapped in flood waters on PA Route 10 at Poplar Road in Honey Brook Township, necessitating a water rescue.	$0	$0
7/9/2023	Lionville	Flash Flood	Flood waters from Pine Creek reached some buildings in Uwchlan Township.	$0	$0
7/9/2023	Marshallton	Flash Flood	Moderate flooding occurred along the East Branch of the Brandywine Creek between West Bradford Township and East Bradford Township.	$0	$0
7/25/2023	Phoenixville	Flash Flood	Minor flooding occurred along French Creek in Phoenixville.	$0	$0
7/25/2023	Anselma	Flash Flood	Widespread roadway flooding occurred in West Pikeland Township with several roads becoming impassable. Pickering Creek overflowed its banks resulting in roadway flooding around Jacques Circle.	$0	$0
7/25/2023	Lionville	Flash Flood	A vehicle became trapped in flood waters at the intersection of Uwchlan Avenue and Sheree Boulevard in Uwchlan Township, necessitating a water rescue.	$0	$0
7/25/2023	Cornog	Flash Flood	Widespread roadway flooding and road closures in Upper Uwchlan Township, including PA Route 100 near the Pennsylvania Turnpike.	$0	$0
7/25/2023	Downingtown	Flash Flood	Creek Road was closed due to flooding in East Brandywine Township and in Caln Township, between Dowlin Forge Road and Norwood Road.	$0	$0
7/25/2023	Downingtown	Flash Flood	Widespread roadway flooding and road closures occurred in West Whiteland Township, with multiple water rescues.	$0	$0

Table 4.3.4-6 Past Flood and Flash Flood Events In Chester County 2015 to 2025 (NOAA NCEI, 2025)

DATE	LOCATION	EVENT TYPE	DETAILS	REPORTED PROPERTY DAMAGE*	REPORTED CROP DAMAGE*
7/25/2023	Morstein	Flash Flood	Widespread roadway flooding and road closures occurred in East Whiteland Township, with at least one water rescue.	$0	$0
7/25/2023	Harmony Hill	Flash Flood	Moderate to major flooding occurred along the East Branch of the Brandywine Creek in West Bradford Township and East Bradford Township. The flooding resulted in the closure of a section of US Route 322.	$0	$0
12/18/2023	Strickersville	Flood	Across southeast Pennsylvania and northern Delaware, flooding occurred on the Brandywine River, the Schuylkill River, the Christina River, Red Clay Creek, and White Clay Creek. Four major roads were closed in Chester County during the course of the flooding. PA-82 in Coatesville and West Marlborough Township was closed for a period starting at 945 AM Dec 18. PA 282 east bound in East Brandywine township and PA 842 in East Bradford Township were closed for a period beginning around Noon on December 18.	$0	$0
12/27/2023	Chatwood	Flood	Montgomery Avenue flooded near Chester County Hospital.	$0	$0
12/28/2023	Chadds Ford Jct	Flood	Across southeast Pennsylvania and northern Delaware, flooding occurred on the Brandywine River, the Schuylkill River, the Christina River, Red Clay Creek, and White Clay Creek. The Coochs Bridge gauge crested at 12.03 ft. The Langhorne gauge crested at 9.50 ft. The Downingtown gauge crested at 10.34 ft. The Newark gauge crested at 13.25 ft. The Chadds Ford gauge crested at 10.25 ft. The Wooddale gauge crested at 6.95 ft. The Graterford gauge crested at 16.30 ft. The Chester gauge crested at 8.19 ft. The Philadelphia gauge crested at 11.27 ft. The Norristown gauge crested at 14.94 ft. The Langhorne gauge crested at 13.87 ft. All these crests are above flood stage.	$0	$0
12/28/2023	Valley Forge	Flood	Pawlings Road at the Schuylkill River was flooded.	$0	$0
1/9/2024	Glen Roy	Flood	Across southeast Pennsylvania and northern Delaware, flooding occurred on the Brandywine River, the Schuylkill River, the Christina River, Red Clay Creek, and White Clay Creek. The Coochs Bridge gauge crested at 12.52 ft. The Langhorne gauge crested at 13.91 ft. The Downingtown gauge	$0	$0

Table 4.3.4-6 Past Flood and Flash Flood Events In Chester County 2015 to 2025 (NOAA NCEI, 2025)

DATE	LOCATION	EVENT TYPE	DETAILS	REPORTED PROPERTY DAMAGE*	REPORTED CROP DAMAGE*
			crested at 11.41 ft. The Newark gauge crested at 15.14 ft. The Chadds Ford gauge crested at 12.84 ft. The Wooddale gauge crested at 9.03 ft. The Graterford gauge crested at 16.30 ft. The Chester gauge crested at 12.55 ft. The Philadelphia gauge crested at 12.13 ft. The Pottstown gauge crested at 13.65 ft. The Norristown gauge crested at 16.29 ft. The Wilmington gauge crested at 17.39 ft. All these crests are above flood stage.		
8/8/2024	Landenberg	Flash Flood	Roads around Landenberg were flooded to the point of being impassable.	$0	$0
8/8/2024	Toughkenamon	Flash Flood	A road in Toughkenamon was flooded with water approximately 1 foot deep. Picture shared through social media.	$0	$0
8/8/2024	Rosedale	Flash Flood	Broadcast media shows multiple roads in Kennett Square were closed due to flash flooding. Time estimated from radar.	$0	$0
8/8/2024	Modena	Flash Flood	Multiple water rescues occurred due to vehicles becoming stuck in high water in multiple locations around Coatesville. Time estimated based on radar.	$50,000	$0
5/16/2025	Modena	Flash Flood	Water Rescues occurred on Union Street.	$10,000	$0
5/16/2025	Downingtown Memorial Airport	Flash Flood	Water Rescues reported in Caln and Thorndale Townships.	$20,000	$0
5/16/2025	West Chester	Flash Flood	Several water rescues in West Chester.	$15,000	$0
5/16/2025	Harmony Hill	Flash Flood	Dowlin Forge Road flooded.	$0	$0

**Reported damages may be underestimated and do not necessarily reflect total loss.*

DARA has also reported previously that their facility has experienced significant flood impacts in recent decades, including two floods of record: Hurricane Floyd (1999) to an approximate elevation of 233 and Hurricane Ida (2021) to an approximate elevation of 236.

Between 1954 and 2025, the Commonwealth of Pennsylvania had 52 FEMA-declared, flood-related disaster and emergency declarations classified as one or a combination of the following disaster types where the primary impact was flooding: flood, hurricane, severe storm, and tropical storm. Of these, Chester County received 13 disaster declarations and four emergency declarations. The most recent disaster declaration was for the remnants of Hurricane Ida in September 2021.

Figure 4.3.4-6 illustrates the locations of NWS flash flood reports in Chester County, while Figure 4.3.4-7 depicts the locations of ice jams.

Figure 4.3.4-6 Flash Flood Reports in Chester County

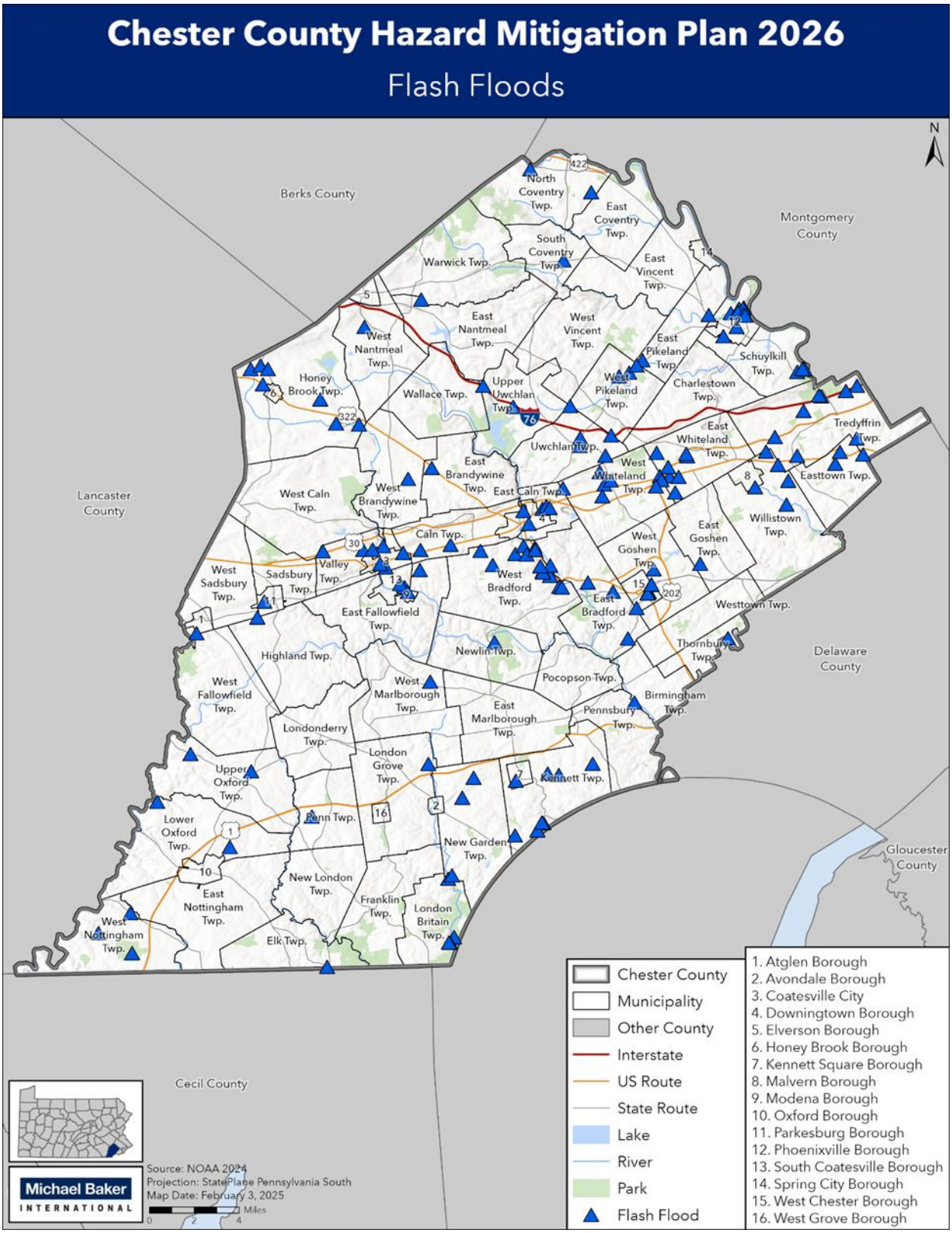
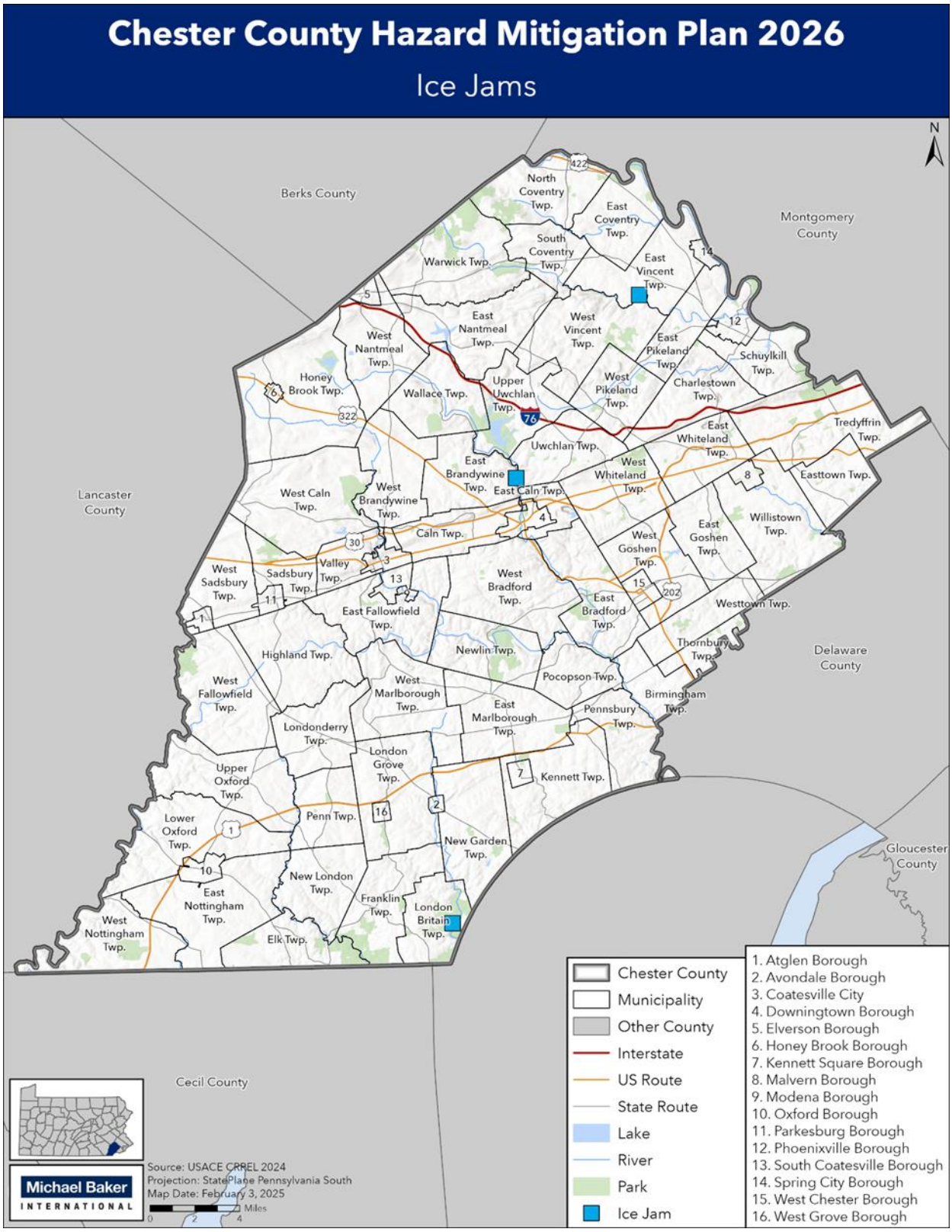


Figure 4.3.4-7 Ice Jams in Chester County



In addition to the past flood events, the NFIP identifies properties that experience frequent flooding and can be used to determine areas of higher risk. These properties are identified through the NFIP when they receive more than one payment for flood damages. The NFIP defines a Repetitive Loss (RL) property as "any insurable building for which two or more claims of more than $1,000 were paid by the NFIP within any rolling ten-year period, since 1978." The RL data provided in Table 4.3.4-7 represents the NFIP's definition of RL.

Under FEMA's Hazard Mitigation Assistance (HMA), in regard to mitigation grant funding, RL is defined as a structure that:

- Is covered by a contract for flood insurance made available under the NFIP; and
- Has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25% of the market value of the structure at the time of each such flood event; and
- At the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage (ICC). (Note: Homes are eligible for ICC coverage after the first loss, however the cost for ICC is part of all policies.).

A Severe Repetitive Loss property is a structure that:

- Is covered under a contract for flood insurance made available under the NFIP; and
- Has incurred flood related damage (i) For which four or more separate claims payments have been made under flood insurance coverage with the amount of each such claim exceeding $5,000, and with the cumulative amount of such claims payments exceeding $20,000; or (ii) For which at least two separate claims payments have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured structure.

RL and SRL loss and payment data were provided by PEMA in December 2025. Chester County has 219 total RL properties and 37 SRL properties that recorded 749 losses. The total building payments are $15.6 million while contents payments are $5.9 million. Table 4.3.4-7 displays repetitive loss and severe repetitive loss properties by jurisdiction in Chester County as of December 2025. Municipalities with no RL or SRL properties are not included. Using the 2025 data, Downingtown Borough has the most repetitive loss properties (57) and the most total number of losses (194). East Bradford Township has the most severe repetitive loss properties (nine). This is the most up-to-date information available at the jurisdiction level and unfortunately does not include structure type. Structure type data is shown in Tables 4.3.4-8 and 4.3.4-9. This data is from the 2023 Pennsylvania State Hazard Mitigation Plan, provided by FEMA. This data shows there are 139 RL properties and 30 SRL properties in the county, the majority of which are single family residential properties. The county will work with FEMA to obtain more recent data that may help guide mitigation work in the future. A mitigation action has been added for this update to obtain property type information for RL and SRL properties.

Table 4.3.4-7 Total RL and SRL Properties in Chester County

MUNICIPALITY	RL PROPERTIES	SRL PROPERTIES	LOSSES	BUILDING PAYMENTS	CONTENTS PAYMENTS	TOTAL PAYMENTS
AVONDALE, BOROUGH OF (421473)	12	2	34	$3,155,886.31	$118,899.84	$3,274,786.15
BIRMINGHAM, TOWNSHIP OF (421474)	2	-	4	$588,244.85	$28,200.00	$616,444.85
CALN, TOWNSHIP OF (422247)	4	-	11	$131,453.08	$21,676.28	$153,129.36
CHARLESTOWN, TOWNSHIP OF (421475)	1	-	3	$15,553.19	$2,094.54	$17,647.73
COATESVILLE, CITY OF (420274)	5	-	11	$87,896.06	$13,329.71	$101,225.77
DOWNINGTOWN, BOROUGH OF (420275)	57	7	194	$2,730,734.70	$207,507.61	$2,938,242.31
EAST BRADFORD TOWNSHIP OF (420276)	19	9	99	$1,205,123.87	$476,358.83	$1,681,482.70
EAST CALN, TOWNSHIP OF (421477)	4	-	8	$358,101.11	$412,353.37	$770,454.48
EAST COVENTRY, TOWNSHIP OF (421478)	3	1	13	$396,377.75	$151,141.75	$547,519.50
EAST GOSHEN, TOWNSHIP OF (420277)	1	-	2	$75,801.84	$0.00	$75,801.84
EAST PIKELAND, TOWNSHIP OF (421483)	3	-	6	$26,674.63	$291.43	$26,966.06
EAST VINCENT, TOWNSHIP OF (420278)	5	1	11	$266,919.14	$19,363.42	$286,282.56
EAST WHITELAND, TOWNSHIP OF (420279)	3	-	10	$101,708.10	$0.00	$101,708.10
KENNETT SQUARE, BOROUGH OF (420280)	2	-	5	$192,143.88	$7,281.96	$199,425.84
KENNETT, TOWNSHIP OF (422586)	4	1	15	$242,966.37	$31,000.00	$273,966.37
MODENA, BOROUGH OF (420282)	2	-	5	$41,809.04	$230,524.97	$272,334.01
NEWLIN, TOWNSHIP OF (421486)	1	-	2	$8,018.51	$1,545.00	$9,563.51
NORTH COVENTRY, TOWNSHIP OF (420283)	18	-	39	$371,200.87	$32,176.51	$403,377.38
PENNSBURY, TOWNSHIP OF (420285)	1	1	4	$158,576.28	$16,611.97	$175,188.25

MUNICIPALITY	RL PROPERTIES	SRL PROPERTIES	LOSSES	BUILDING PAYMENTS	CONTENTS PAYMENTS	TOTAL PAYMENTS
PHOENIXVILLE, BOROUGH OF (420287)	2	-	5	$342,185.00	$200,000.00	$542,185.00
POCOPSON, TOWNSHIP OF (420286)	25	4	87	$1,876,208.36	$412,144.62	$2,288,352.98
SCHUYLKILL, TOWNSHIP OF (421489)	2	-	6	$256,468.04	$6,368.05	$262,836.09
THORNBURY, TOWNSHIP OF (420290)	1	-	2	$10,440.81	$0.00	$10,440.81
TREDYFFRIN, TOWNSHIP OF (420291)	15	3	44	$1,438,874.06	$303,565.23	$1,742,439.29
UPPER UWCHLAN, TWP OF (421491)	2	1	7	$112,589.49	$40,725.89	$153,315.38
UWCHLAN, TOWNSHIP OF (421492)	1	-	2	$41,123.05	$10,600.00	$51,723.05
VALLEY, TOWNSHIP OF (421206)	2	1	9	$93,135.97	$247,407.73	$340,543.70
WEST BRADFORD, TOWNSHIP OF (421495)	1	-	3	$36,194.69	$0.00	$36,194.69
WEST CHESTER, BOROUGH OF (420292)	10	4	62	$546,039.44	$2,811,144.92	$3,357,184.36
WEST GOSHEN, TOWNSHIP OF (420293)	2	-	8	$81,929.53	$5,882.75	$87,812.28
WEST WHITELAND, TOWNSHIP OF (420295)	9	2	34	$586,041.86	$82,167.65	$668,209.51
WESTTOWN, TOWNSHIP OF (420294)	1	-	2	$1,235.97	$9,395.95	$10,631.92
WILLISTOWN, TOWNSHIP OF (422282)	1	-	2	$11,960.93	$0.00	$11,960.93
TOTAL	221	37	749	$15,589,616.78	$5,899,759.98	$21,489,376.76

Table 4.3.4-8 Repetitive Loss Properties by Municipality

MUNICIPALITY	SINGLE FAMILY	2-4 FAMILY	OTHER RESIDENTIAL	BUSINESS	OTHER NON-RESIDENTIAL	TOTAL
AVONDALE, BOROUGH OF	3	0	4	0	0	7
CALN, TOWNSHIP OF	0	1	0	1	0	2
CHADDS FORD, TOWNSHIP OF	0	0	0	0	1	1
CHARLESTOWN, TOWNSHIP OF	1	0	0	0	0	1
CHESTER, TOWNSHIP OF	1	0	0	0	0	1
COATESVILLE, CITY OF	1	0	0	0	1	2
DOWNINGTOWN, BOROUGH OF	32	3	0	1	1	37
EAST BRADFORD TOWNSHIP OF	6	0	0	0	1	7
EAST CALN, TOWNSHIP OF	1	0	0	2	0	3
EAST COVENTRY, TOWNSHIP OF	0	0	0	0	2	2
EAST PIKELAND, TOWNSHIP OF	1	0	0	0	0	1
EAST VINCENT, TOWNSHIP OF	4	0	0	0	0	4
ELK, TOWNSHIP OF	1	0	0	0	0	1
KENNETT SQUARE, BOROUGH OF	1	0	0	1	0	2
KENNETT, TOWNSHIP OF	2	1	0	0	0	3
NEWLIN, TOWNSHIP OF	1	0	0	0	0	1
NORTH COVENTRY, TOWNSHIP OF	18	0	0	0	0	18
PHOENIXVILLE, BOROUGH OF	0	1	0	0	0	1
POCOPSON, TOWNSHIP OF	10	0	0	2	7	19
POTTSTOWN, BOROUGH OF	1	0	0	0	0	1
THORNBURY, TOWNSHIP OF	1	0	0	0	0	1
TREDYFFRIN, TOWNSHIP OF	6	0	1	0	0	7
UNKNOWN	1	0	0	0	0	1
UPPER UWCHLAN, TWP OF	1	0	0	0	0	1
VALLEY, TOWNSHIP OF	0	0	0	0	1	1
WEST BRADFORD, TOWNSHIP OF	1	0	0	0	0	1
WEST CHESTER, BOROUGH OF	3	0	0	1	1	5
WEST GOSHEN, TOWNSHIP OF	1	0	1	0	0	2

MUNICIPALITY	SINGLE FAMILY	2-4 FAMILY	OTHER RESIDENTIAL	BUSINESS	OTHER NON-RESIDENTIAL	TOTAL
WEST WHITELAND, TOWNSHIP OF	4	0	0	0	1	5
WESTTOWN, TOWNSHIP OF	1	0	0	0	0	1
TOTAL	103	6	6	8	16	139

Table 4.3.4-9 Severe Repetitive Loss Properties by Municipality (FEMA, 2023)

MUNICIPALITY	SINGLE FAMILY	2-4 FAMILY	OTHER RESIDENTIAL	BUSINESS	OTHER NON-RESIDENTIAL	TOTAL
DOWNINGTOWN, BOROUGH OF	3	0	0	0	0	3
EAST BRADFORD TOWNSHIP OF	5	0	0	0	1	6
EAST COVENTRY, TOWNSHIP OF	0	0	0	0	1	1
EAST VINCENT, TOWNSHIP OF	1	0	0	0	0	1
KENNETT, TOWNSHIP OF	0	1	0	0	0	1
PENNSBURY, TOWNSHIP OF	0	1	0	0	0	1
POCOPSON, TOWNSHIP OF	2	0	0	0	2	4
TREDYFFRIN, TOWNSHIP OF	1	0	0	0	0	1
UPPER UWCHLAN, TWP OF	1	0	0	0	0	1
VALLEY, TOWNSHIP OF	0	0	1	0	0	1
WEST CHESTER, BOROUGH OF	2	1	0	0	2	5
WEST WHITELAND, TOWNSHIP OF	3	0	0	1	0	4
WILLISTOWN, TOWNSHIP OF	1	0	0	0	0	1
TOTAL	19	3	1	1	6	30

Floods are the most common and costly natural catastrophe in the United States. In terms of economic disruption, property damage, and loss of life, floods are "nature's number-one disaster" (FEMA, 2019). For that reason, flood insurance is a critical way for citizens to protect their property against flood loss. Home and business owners can purchase flood insurance through private insurers or through the National Flood Insurance Program.

Congress established the NFIP in 1968 to help control the growing cost of federal disaster relief (FEMA, 2019). The NFIP, administrated through FEMA, offers federally backed flood insurance at discounted rates when communities adopt and enforce effective floodplain management ordinances to reduce future flood losses based on flood maps. The NFIP is based on voluntary participation of communities but is required for communities to receive federal disaster relief funding.

Table 4.3.4-10 lists the Chester County municipalities participating in the NFIP. DARA is ineligible to participate.

The minimum floodplain management requirements to be a community in good standing in the NFIP include:

- Review and permit all development in the Special Flood Hazard Area (SFHA);
- Elevate new and substantially improved residential structures above the Base Flood Elevation;
- Elevate or dry floodproof new and substantially improved non-residential structures;
- Limit development in floodways;
- Locate or construct all public utilities and facilities to minimize or eliminate flood damage; and
- Anchor foundation or structure to resist floatation, collapse, or lateral movement.

Table 4.3.4-10 Chester County Municipal Participation in the National Flood Insurance Program

MUNICIPALITY	PARTICIPATION STATUS	CID	CURRENT EFFECTIVE MAP DATE
Atglen Borough	Participating	420273C	9/29/2017
Avondale Borough	Participating	421473C	9/29/2017
Birmingham Township	Participating	421474C	9/29/2017
Caln Township	Participating	422247C	9/29/2017
Charlestown Township	Participating	421475C	9/29/2017
Coatesville City	Participating	420274C	9/29/2017
Downingtown Borough	Participating	420275C	9/29/2017
East Bradford Township	Participating	420276C	9/29/2017
East Brandywine Township	Participating	421476C	9/29/2017
East Caln Township	Participating	421477C	9/29/2017

MUNICIPALITY	PARTICIPATION STATUS	CID	CURRENT EFFECTIVE MAP DATE
East Coventry Township	Participating	421478C	9/29/2017
East Fallowfield Township	Participating	421479C	9/29/2017
East Goshen Township	Participating	420277C	9/29/2017
East Marlborough Township	Participating	421480C	9/29/2017
East Nantmeal Township	Participating	421481C	9/29/2017
East Nottingham Township	Participating	421482C	9/29/2017
East Pikeland Township	Participating	421483C	9/29/2017
Easttown Township	Participating	420278C	9/29/2017
East Vincent Township	Participating	420279C	9/29/2017
East Whiteland Township	Participating	422600C	9/29/2017
Elk Township	Participating	422286C	9/29/2017
Elverson Borough	Participating	422287C	9/29/2017
Franklin Township	Participating	422288C	9/29/2017
Highland Township	Participating	422289C	9/29/2017
Honey Brook Borough	Participating	422692C	(No SFHA)
Honey Brook Township	Participating	422290C	9/29/2017
Kennett Township	Participating	422586C	9/29/2017
Kennett Square Borough	Participating	420280C	9/29/2017
London Britain Township	Participating	422273C	9/29/2017
Londonderry Township	Participating	421484C	9/29/2017
London Grove Township	Participating	420273C	9/29/2017
Lower Oxford Township	Participating	421485C	9/29/2017
Malvern Borough	Participating	420281C	9/29/2017
Modena Borough	Participating	420282C	9/29/2017
New Garden Township	Participating	422275C	9/29/2017
Newlin Township	Participating	421486C	9/29/2017
New London Township	Participating	422276C	9/29/2017
North Coventry Township	Participating	420283C	9/29/2017
Oxford Borough	Participating	420284C	9/29/2017
Parkesburg Borough	Participating	422277C	9/29/2017
Penn Township	Participating	421487C	9/29/2017
Pennsbury Township	Participating	420285C	9/29/2017
Phoenixville Borough	Participating	420287C	9/29/2017
Pocopson Township	Participating	420286C	9/29/2017
Sadsbury Township	Participating	421488C	9/29/2017
Schuylkill Township	Participating	421489C	9/29/2017
South Coatesville Borough	Participating	420288C	9/29/2017
South Coventry Township	Participating	421490C	9/29/2017
Spring City Borough	Participating	420289C	9/29/2017
Thornbury Township	Participating	420290C	9/29/2017

MUNICIPALITY	PARTICIPATION STATUS	CID	CURRENT EFFECTIVE MAP DATE
Tredyffrin Township	Participating	420291C	9/29/2017
Upper Oxford Township	Participating	422278C	9/29/2017
Upper Uwchlan Township	Participating	421491C	9/29/2017
Uwchlan Township	Participating	421492C	9/29/2017
Valley Township	Participating	421206C	9/29/2017
Wallace Township	Participating	421493C	9/29/2017
Warwick Township	Participating	421494C	9/29/2017
West Bradford Township	Participating	421495C	9/29/2017
West Brandywine Township	Participating	421496C	9/29/2017
West Caln Township	Participating	421497C	9/29/2017
West Chester Borough	Participating	420292C	9/29/2017
West Fallowfield Township	Participating	422602C	9/29/2017
West Goshen Township	Participating	420293C	9/29/2017
West Grove Borough	Participating	422279C	9/29/2017
West Marlborough Township	Participating	421498C	9/29/2017
West Nantmeal Township	Participating	422280C	9/29/2017
West Nottingham Township	Participating	421151C	9/29/2017
West Pikeland Township	Participating	422281C	9/29/2017
West Sadsbury Township	Participating	421499C	9/29/2017
West Vincent Township	Participating	420295C	9/29/2017
West Whiteland Township	Participating	420294C	9/29/2017
Westtown Township	Participating	422282C	9/29/2017
Willistown Township	Participating	420273C	9/29/2017

4.3.4.4. Future Occurrence

In this plan, the term "SFHA" is used rather than floodplain to clarify that the area under considerations is identified on the FIRM as having at least a 1-percent chance of flooding in any given year. Historically, the area with a 1-percent chance of flooding in any given year has been called the "100-year floodplain" or the "base flood" and the area with a 0.2-percent chance of flooding in any given year has been called the "500-year floodplain." As these terms can be misleading by suggesting that there will be a flood only every 100 or 500 years respectively, they are not used in this plan. The 1- and 0.2- percent annual chance floods are delineated on the Chester County FIRM. Areas subject to 2- and 10-percent annual chance events are not shown on FIRMs, but water surface elevations associated with these events are included in the flood source profiles in the FIS Report. The most recent FIS for each county in Pennsylvania is available from the FEMA Map Service Center (https://msc.fema.gov/portal/home).

Table 4.3.4-11 shows a range of flood recurrence intervals and associated probabilities of occurrence.

Table 4.3.4-11 Recurrence Intervals and Associated Probabilities of Occurrence (USGS, 2024)

RECURRENCE INTERVAL	CHANCE OF OCCURRENCE IN ANY GIVEN YEAR (%)
10 year	10
50 year	2
100 year	1
500 year	0.2

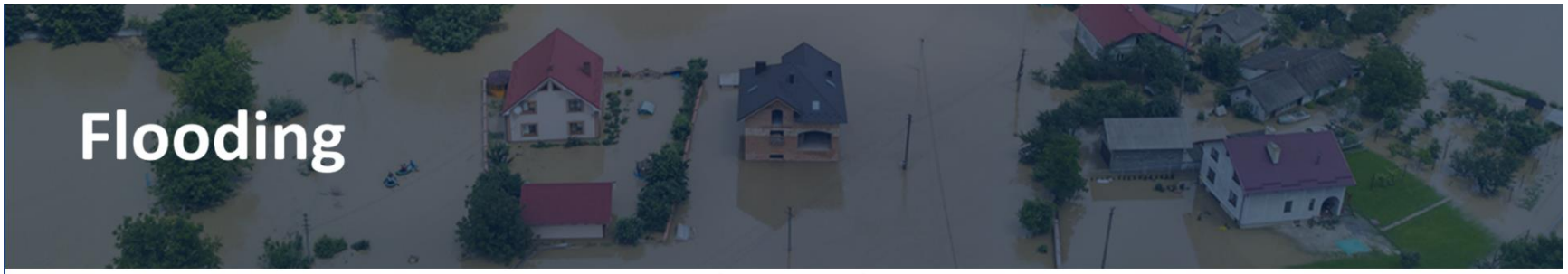
In Chester County, flooding occurs commonly and can take place during any season of the year. Based on Table 4.3.4-6, events in the last ten years have been clustered in June, July, and August. The possibility of flooding is greatly reduced during the winter months. Although most severe floods are attributable to rainfall alone, the spring floods can be compounded by snowmelt and moving ice. The major floods in the late summer and fall are often associated with tropical storms moving up the Atlantic coastline. Within the flood-susceptible areas in Chester County, it is expected that the character of flooding will remain essentially unchanged from what has been experienced for many years. However, some increase in the severity and frequency of flooding may result due to planned or recent development within the floodplains of the various streams, as well as increased intensity and frequency of rain events. Therefore, the future occurrence of floods in Chester County can be characterized as highly likely as defined by the Risk Factor Methodology probability criteria (see Table 4.4.1-1).

It is important to note that FEMA's flood maps do not project future flooding based on changing climate patterns. They are based on historical data, so they are not a future projection of flood risk. However, changing weather patterns have made many types of disasters more frequent and extreme. As the probability of frequent and intense rainfall increases, Pennsylvania is seeing more severe flooding across the State. In general, hazardous precipitation events are increasing in this region. This can also lead to higher instances of flash flooding and river overflow. According to the Fifth National Climate Assessment, the Northeast region has had the largest increase in the number of extreme precipitation days (defined as the top 1% of heaviest precipitation events) with an increase of around 60% between 1958 to 2021. Along with this, the Northeast region has also experienced the greatest increase in five-year maximum daily precipitation (+18%) and in the annual maximum daily precipitation (+14%) compared to the rest of the nation (Marvel et. al, 2023).

The Climate Mapping for Resilience and Adaptation (CMRA) Tool provides a county-level assessment report for flooding, shown in Figure 4.3.4-8 below. According to CMRA, the average annual precipitation is expected to increase while the number of days per year with precipitation may decrease. The annual days that exceed the 99th percentile precipitation is projected to increase as well. These projections (more precipitation on fewer days and more precipitation overall annually) combine to show that future precipitation may be more intense. Lastly, the number of days with a maximum temperature below 32 degrees Fahrenheit is projected to

decrease, meaning precipitation in the winter months will be less likely to turn into snow. This could push more flooding into the winter months.

Figure 4.3.4-8 Chester County Flooding Hazard Assessment Report (CMRA, 2025)



Future Climate Indicators

Indicator	Modeled History (1976 - 2005)	Early Century (2015 - 2044)		Mid Century (2035 - 2064)		Late Century (2070 - 2099)	
		Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions
	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max
Precipitation:							
Annual average total precipitation	**45"** 44 - 47	**48"** 44 - 53	**48"** 43 - 53	**48"** 45 - 56	**49"** 46 - 55	**49"** 45 - 56	**51"** 45 - 58
Days per year with precipitation (wet days)	**185 days** 180 - 190	**184 days** 173 - 196	**184 days** 170 - 195	**184 days** 169 - 197	**183 days** 166 - 196	**184 days** 170 - 196	**182 days** 154 - 201
Maximum period of consecutive wet days	**11 days** 10 - 13	**12 days** 10 - 13	**12 days** 10 - 13	**12 days** 10 - 13	**12 days** 10 - 14	**12 days** 10 - 14	**12 days** 9 - 15
Annual days with:							
Annual days with total precipitation > 1inch	**6 days** 6 - 7	**7 days** 6 - 9	**7 days** 6 - 9	**7 days** 6 - 9	**8 days** 6 - 9	**8 days** 6 - 10	**9 days** 7 - 11
Annual days with total precipitation > 2 inches	**1 days** 0 - 1	**1 days** 1 - 1	**1 days** 0 - 1	**1 days** 0 - 1	**1 days** 1 - 1	**1 days** 1 - 1	**1 days** 1 - 2
Annual days with total precipitation > 3 inches	**0 days** 0 - 0	**0 days** 0 - 0	**0 days** 0 - 0	**0 days** 0 - 0	**0 days** 0 - 0	**0 days** 0 - 0	**0 days** 0 - 0
Annual days that exceed 99th percentile precipitation	**6 days** 5 - 7	**7 days** 6 - 8	**8 days** 7 - 9	**8 days** 7 - 9	**8 days** 7 - 10	**9 days** 7 - 10	**10 days** 9 - 11
Days with maximum temperature below 32 °F	**17 days** 15 - 19	**11 days** 4 - 16	**11 days** 5 - 16	**9 days** 2 - 13	**7 days** 3 - 12	**7 days** 1 - 11	**3 days** 0 - 8

N/A = Data Not Available for the selected area

4.3.4.5. Vulnerability Assessment

Chester County is vulnerable to flooding that causes loss of lives, property damage, and road closures. For purposes of assessing vulnerability, the county focused on community assets that are in the 1-percent annual chance floodplain. While greater and smaller floods are possible, information about the extent and depths for this floodplain is available for all municipalities countywide, thus providing a consistent basis for analysis. Flood vulnerability maps for each local municipality showing the 1-percent annual chance flood hazard area, critical facilities impacted, and transportation routes are included in **Appendix D - Local Municipality Flood Vulnerability Maps**.

Flood risk is compounded in Chester County by a lack of proactive measures; only 4.3% of respondents from the Chester County Hazard Mitigation Plan Public Survey reported having flood insurance. This sharply contrasts with the 89.3% of respondents that have homeowners' insurance, which closely aligns with the 88.6% who indicated they own their home. This disparity highlights a critical vulnerability for both homeowners and renters who may face substantial out-of-pocket costs in the event of a flood, whether or not they live in a designated floodplain. Survey comments emphasized the need for greater public education on insurance coverage, particularly around the limitations of standard policies and the nuances of flood insurance. One respondent noted confusion about what is covered, especially regarding basement protection, and called for clearer guidance on how to safeguard both people and property.

Flooding is a primary hazard for DARA due to the WWTP's flood history and its location relative to mapped flood elevations. Flooding can damage equipment, interrupt service, and drive repeated recovery costs. DARA's flood resilience planning focuses on protecting critical infrastructure and reducing service disruptions from repetitive flood damage by elevating/relocating critical components and floodproofing select facilities to an elevation higher than the flood level experienced during Hurricane Ida.

Table 4.3.4-12 displays the number of addressable structures, critical facilities, and populations intersecting the SFHA along with the total number of addressable structures, critical facilities, and population in each municipality. This was calculated by overlaying the addressable structures and critical facilities with the SFHA as shown on the FIRM. Similarly, the estimated population in the SFHA was calculated by overlaying the centroids of Census blocks with the SFHA; while this is an estimate, using the block centroid helps to minimize overestimation of flood-prone populations.

Overall, one percent of the structures, two percent of the critical facilities, and 37% of the population of Chester County are most at risk of flooding from the 1-percent annual chance flood. The following municipalities have the highest number of structures in the SFHA: North Coventry Township (239), West Whiteland Township (150), and Downingtown Borough (136). Modena Borough and Avondale Borough have the highest percentage of structures in the SFHA (17% and 12% respectively). Downingtown Borough, East Marlborough Township, East Whiteland Township, and East Goshen Township have the highest number of critical facilities in

the SFHA (705, 605, 556, and 507 respectively). Modena Borough, Avondale Borough, and Atglen Borough have the highest percentages of critical facilities in the SFHA (38%, 36%, and 22% respectively). Based on this analysis, 23 of 73 Chester County communities have more than 50% of their populations living in the SFHA.

Table 4.3.4-13 shows the number of structures in the SFHA by generalized land use type. Most vulnerable structures (1,752) are residential properties. Floods also have a significant impact on agricultural crops; especially in communities with extensive farmlands. Not only are crops lost in the immediate flood event, but often the remaining crops are of lesser quality, resulting in further losses. Additionally, there is the cost of replacing livestock feed lost to flooding. Many industries and residents may have prepared emergency plans and some have established floodproofing procedures in the aftermath of previous significant flooding events.

In 2023, there were 1,144 NFIP policies in force across Chester County. A total of 1,944 NFIP claims have been made since 1978 for flood damages and structures. In total, NFIP flood payments for flood damages in the county have exceeded $36.8 million (PEMA, 2023).

Table 4.3.4-12 Community Flood Vulnerability in Chester County, 2025

MUNICIPALITY	TOTAL STRUCTURES	TOTAL STRUCTURES IN SFHA	PERCENT STRUCTURES IN SFHA	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN SFHA	PERCENT CRITICAL FACILITIES IN SFHA	TOTAL ESTIMATED 2020 POPULATION	POPULATION IN SFHA	PERCENT POPULATION IN SFHA
Atglen Borough	577	7	1%	8	5	63%	1,313	287	22%
Avondale Borough	405	49	12%	5	3	60%	1,274	454	36%
Birmingham Township	1,624	35	2%	11	8	73%	4,082	23	1%
Caln Township	4,701	68	1%	57	15	26%	14,432	225	2%
Charlestown Township	2,266	8	0%	29	13	45%	6,001	0	0%
Coatesville City	2,732	21	1%	27	6	22%	13,350	0	0%
Downingtown Borough	2,291	136	6%	41	7	17%	7,892	705	9%
East Bradford Township	3,658	85	2%	43	25	58%	10,339	326	3%
East Brandywine Township	3,683	28	1%	49	18	37%	9,738	94	1%
East Caln Township	1,269	5	0%	28	6	21%	5,384	8	0%
East Coventry Township	3,563	73	2%	34	20	59%	7,068	95	1%
East Fallowfield Township	3,944	34	1%	26	8	31%	7,626	71	1%
East Goshen Township	5,665	56	1%	32	17	53%	18,410	507	3%
East	3,571	30	1%	25	7	28%	7,306	605	8%

Table 4.3.4-12 Community Flood Vulnerability in Chester County, 2025

MUNICIPALITY	TOTAL STRUCTURES	TOTAL STRUCTURES IN SFHA	PERCENT STRUCTURES IN SFHA	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN SFHA	PERCENT CRITICAL FACILITIES IN SFHA	TOTAL ESTIMATED 2020 POPULATION	POPULATION IN SFHA	PERCENT POPULATION IN SFHA
Marlborough Township									
East Nantmeal Township	1,508	25	2%	16	11	69%	1,832	47	3%
East Nottingham Township	4,885	28	1%	36	15	42%	8,982	168	2%
East Pikeland Township	3,552	23	1%	23	11	48%	8,260	209	3%
East Vincent Township	3,727	86	2%	28	13	46%	7,433	75	1%
East Whiteland Township	4,029	28	1%	81	28	35%	13,917	556	4%
Easttown Township	4,401	29	1%	35	7	20%	10,984	152	1%
Elk Township	1,367	14	1%	12	9	75%	1,698	36	2%
Elverson Borough	584	0	0%	4	0	0%	1,330	0	0%
Franklin Township	2,456	33	1%	17	9	53%	4,433	118	3%
Highland Township	1,307	11	1%	15	5	33%	1,259	0	0%
Honey Brook Borough	732	0	0%	5	0	0%	1,892	0	0%
Honey Brook Township	4,909	54	1%	31	15	48%	8,274	33	0%
Kennett Square	1,751	20	1%	14	4	29%	5,936	96	2%

Table 4.3.4-12 Community Flood Vulnerability in Chester County, 2025

MUNICIPALITY	TOTAL STRUCTURES	TOTAL STRUCTURES IN SFHA	PERCENT STRUCTURES IN SFHA	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN SFHA	PERCENT CRITICAL FACILITIES IN SFHA	TOTAL ESTIMATED 2020 POPULATION	POPULATION IN SFHA	PERCENT POPULATION IN SFHA
Borough									
Kennett Township	3,867	28	1%	44	19	43%	8,289	196	2%
London Britain Township	1,782	19	1%	13	8	62%	3,179	26	1%
London Grove Township	4,078	25	1%	38	17	45%	8,797	126	1%
Londonderry Township	1,692	12	1%	9	6	67%	2,476	5	0%
Lower Oxford Township	2,579	22	1%	36	21	58%	5,436	48	1%
Malvern Borough	1,066	0	0%	10	2	20%	3,419	0	0%
Modena Borough	201	35	17%	5	1	20%	541	203	38%
New Garden Township	5,451	49	1%	44	10	23%	11,363	146	1%
New London Township	2,921	8	0%	15	10	67%	5,810	17	0%
Newlin Township	1,193	60	5%	18	12	67%	1,358	101	7%
North Coventry Township	4,288	239	6%	37	11	30%	8,441	410	5%
Oxford Borough	1,704	3	0%	17	1	6%	5,736	0	0%
Parkesburg Borough	1,371	9	1%	15	3	20%	3,862	0	0%

Table 4.3.4-12 Community Flood Vulnerability in Chester County, 2025

MUNICIPALITY	TOTAL STRUCTURES	TOTAL STRUCTURES IN SFHA	PERCENT STRUCTURES IN SFHA	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN SFHA	PERCENT CRITICAL FACILITIES IN SFHA	TOTAL ESTIMATED 2020 POPULATION	POPULATION IN SFHA	PERCENT POPULATION IN SFHA
Penn Township	2,901	6	0%	25	9	36%	5,644	195	3%
Pennsbury Township	1,712	18	1%	25	10	40%	3,876	11	0%
Phoenixville Borough	4,731	66	1%	32	8	25%	18,602	29	0%
Pocopson Township	1,757	61	3%	27	15	56%	4,455	50	1%
Sadsbury Township	1,987	37	2%	18	10	56%	4,125	137	3%
Schuylkill Township	4,096	46	1%	36	10	28%	8,780	0	0%
South Coatesville Borough	506	21	4%	6	1	17%	1,601	0	0%
South Coventry Township	1,653	10	1%	18	7	39%	2,796	14	1%
Spring City Borough	1,199	17	1%	6	1	17%	3,494	12	0%
Thornbury Township	1,060	11	1%	10	4	40%	3,177	24	1%
Tredyffrin Township	9,617	39	0%	139	27	19%	31,927	136	0%
Upper Oxford Township	2,109	31	1%	18	10	56%	2,560	77	3%
Upper Uwchlan	3,909	35	1%	27	9	33%	12,275	4	0%

Table 4.3.4-12 Community Flood Vulnerability in Chester County, 2025

MUNICIPALITY	TOTAL STRUCTURES	TOTAL STRUCTURES IN SFHA	PERCENT STRUCTURES IN SFHA	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN SFHA	PERCENT CRITICAL FACILITIES IN SFHA	TOTAL ESTIMATED 2020 POPULATION	POPULATION IN SFHA	PERCENT POPULATION IN SFHA
Township									
Uwchlan Township	5,805	11	0%	42	4	10%	19,161	4	0%
Valley Township	2,926	35	1%	33	9	27%	7,985	147	2%
Wallace Township	2,065	5	0%	19	11	58%	3,711	8	0%
Warwick Township	2,192	37	2%	13	10	77%	2,590	47	2%
West Bradford Township	5,801	26	0%	33	11	33%	14,316	16	0%
West Brandywine Township	4,141	23	1%	30	17	57%	7,331	13	0%
West Caln Township	6,070	51	1%	20	7	35%	8,910	30	0%
West Chester Borough	3,147	47	1%	26	0	0%	18,671	183	1%
West Fallowfield Township	2,226	10	0%	21	9	43%	2,459	12	0%
West Goshen Township	8,075	99	1%	78	16	21%	23,040	330	1%
West Grove Borough	964	0	0%	6	0	0%	2,770	0	0%
West Marlborough Township	983	32	3%	21	14	67%	819	53	6%

Table 4.3.4-12 Community Flood Vulnerability in Chester County, 2025

MUNICIPALITY	TOTAL STRUCTURES	TOTAL STRUCTURES IN SFHA	PERCENT STRUCTURES IN SFHA	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN SFHA	PERCENT CRITICAL FACILITIES IN SFHA	TOTAL ESTIMATED 2020 POPULATION	POPULATION IN SFHA	PERCENT POPULATION IN SFHA
West Nantmeal Township	1,832	20	1%	21	12	57%	2,251	256	11%
West Nottingham Township	2,014	36	2%	12	5	42%	2,748	0	0%
West Pikeland Township	2,050	47	2%	22	14	64%	4,024	76	2%
West Sadsbury Township	1,915	30	2%	16	5	31%	2,436	12	0%
West Vincent Township	3,127	38	1%	25	12	48%	6,668	220	3%
West Whiteland Township	5,656	150	3%	86	33	38%	19,632	324	2%
Westtown Township	3,838	13	0%	28	10	36%	11,154	129	1%
Willistown Township	5,275	95	2%	55	20	36%	11,273	178	2%
Total	214,689	2,698	1%	2,027	746	37%	534,413	8,895	2%

Table 4.3.4-13 Vulnerability by Structure Type

MUNICIPALITY	TOTAL STRUCTURES	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
Atglen Borough	577	0	0	4	0	0	3	0	0	7
Avondale Borough	405	4	8	4	0	3	30	0	0	49
Birmingham Township	1,624	0	6	1	4	0	24	0	0	35
Caln Township	4,701	0	11	5	0	0	50	2	0	68
Charlestown Township	2,266	0	0	2	0	0	6	0	0	8
Coatesville City	2,732	0	3	1	0	13	4	0	0	21
Downingtown Borough	2,291	4	16	24	1	1	90	0	0	136
East Bradford Township	3,658	2	13	5	4	0	60	0	1	85
East Brandywine Township	3,683	0	18	0	0	0	10	0	0	28
East Caln Township	1,269	0	0	2	0	2	1	0	0	5
East Coventry Township	3,563	1	23	1	8	0	40	0	0	73
East Fallowfield Township	3,944	0	0	0	2	0	32	0	0	34
East Goshen Township	5,665	0	6	3	4	0	43	0	0	56
East Marlborough Township	3,571	0	5	0	3	0	22	0	0	30
East Nantmeal Township	1,508	0	0	0	5	0	20	0	0	25
East Nottingham Township	4,885	0	0	0	4	0	24	0	0	28
East Pikeland Township	3,552	0	5	1	0	0	17	0	0	23
East Vincent Township	3,727	0	1	11	8	0	64	1	1	86
East Whiteland Township	4,029	0	6	9	2	0	10	0	1	28
Easttown Township	4,401	0	1	2	3	0	23	0	0	29
Elk Township	1,367	0	0	1	7	0	5	1	0	14

Table 4.3.4-13 Vulnerability by Structure Type

MUNICIPALITY	TOTAL STRUCTURES	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
Elverson Borough	584	0	0	0	0	0	0	0	0	0
Franklin Township	2,456	0	2	1	1	0	29	0	0	33
Highland Township	1,307	0	0	0	7	0	4	0	0	11
Honey Brook Borough	732	0	0	0	0	0	0	0	0	0
Honey Brook Township	4,909	0	1	4	8	0	41	0	0	54
Kennett Square Borough	1,751	0	7	7	0	0	6	0	0	20
Kennett Township	3,867	0	4	0	0	0	23	0	1	28
London Britain Township	1,782	0	0	5	0	0	14	0	0	19
London Grove Township	4,078	0	8	1	1	0	15	0	0	25
Londonderry Township	1,692	0	1	0	5	0	6	0	0	12
Lower Oxford Township	2,579	0	1	3	2	0	16	0	0	22
Malvern Borough	1,066	0	0	0	0	0	0	0	0	0
Modena Borough	201	2	6	0	0	9	18	0	0	35
New Garden Township	5,451	0	18	4	2	0	25	0	0	49
New London Township	2,921	0	0	0	0	0	8	0	0	8
Newlin Township	1,193	0	8	0	6	0	44	0	2	60
North Coventry Township	4,288	1	26	25	2	1	180	4	0	239
Oxford Borough	1,704	0	0	0	2	0	1	0	0	3
Parkesburg Borough	1,371	0	8	0	0	0	1	0	0	9
Penn Township	2,901	0	2	0	0	0	4	0	0	6
Pennsbury Township	1,712	0	3	2	0	0	13	0	0	18

Table 4.3.4-13 Vulnerability by Structure Type

MUNICIPALITY	TOTAL STRUCTURES	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
Phoenixville Borough	4,731	3	40	7	4	1	11	0	0	66
Pocopson Township	1,757	0	1	0	7	0	52	0	1	61
Sadsbury Township	1,987	0	7	5	6	0	18	1	0	37
Schuylkill Township	4,096	1	5	8	0	4	15	0	13	46
South Coatesville Borough	506	0	13	0	0	8	0	0	0	21
South Coventry Township	1,653	0	1	0	2	0	6	0	1	10
Spring City Borough	1,199	0	9	1	0	6	1	0	0	17
Thornbury Township	1,060	0	0	2	0	0	9	0	0	11
Tredyffrin Township	9,617	0	0	2	0	0	37	0	0	39
Upper Oxford Township	2,109	0	0	1	7	0	22	1	0	31
Upper Uwchlan Township	3,909	0	0	3	0	0	32	0	0	35
Uwchlan Township	5,805	0	0	0	0	0	11	0	0	11
Valley Township	2,926	2	4	1	2	5	20	1	0	35
Wallace Township	2,065	0	0	0	0	0	5	0	0	5
Warwick Township	2,192	0	6	0	2	0	29	0	0	37
West Bradford Township	5,801	0	1	3	4	0	18	0	0	26
West Brandywine Township	4,141	0	0	10	3	0	10	0	0	23
West Caln Township	6,070	0	1	3	21	0	23	1	2	51
West Chester Borough	3,147	0	15	3	0	6	23	0	0	47
West Fallowfield Township	2,226	0	0	0	5	0	5	0	0	10
West Goshen Township	8,075	0	12	14	0	3	70	0	0	99

Table 4.3.4-13 Vulnerability by Structure Type

MUNICIPALITY	TOTAL STRUCTURES	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
West Grove Borough	964	0	0	0	0	0	0	0	0	0
West Marlborough Township	983	0	2	0	7	0	23	0	0	32
West Nantmeal Township	1,832	0	4	0	2	0	14	0	0	20
West Nottingham Township	2,014	0	3	3	12	0	18	0	0	36
West Pikeland Township	2,050	0	5	8	4	0	30	0	0	47
West Sadsbury Township	1,915	0	3	0	9	0	18	0	0	30
West Vincent Township	3,127	0	0	5	5	0	28	0	0	38
West Whiteland Township	5,656	11	25	13	0	3	97	0	1	150
Westtown Township	3,838	0	0	3	0	0	10	0	0	13
Willistown Township	5,275	0	2	3	18	0	71	1	0	95
Total	214,689	31	376	226	211	65	1,752	13	24	2,698

The flood vulnerability of mobile homes in Chester County is shown in Table 4.3.4-14. Those living in mobile homes in the SFHA are often at the greatest risk of flooding, especially when structures are improperly anchored. In order to estimate the number of mobile home structures in the SFHA, addressable structures that fall within parcels with the land use "mobile home" were selected, then the structures were intersected with the SFHA. A total of 55 municipalities in Chester County have structures coded as mobile homes. Of those municipalities, 14 contain mobile homes in the SFHA. Overall, the number of mobile homes in the SFHA is low – only 2% of all structures of this type. North Coventry Township has the most mobile homes in the SFHA (9) followed by West Nottingham Township (8), while West Marlborough Township has by far the highest percentage of mobile homes in the SFHA at 50%.

Table 4.3.4-14 Mobile Home Flood Vulnerability in Chester County

MUNICIPALITY	TOTAL MOBILE HOMES	NUMBER OF MOBILE HOMES IN SFHA	PERCENT MOBILE HOMES IN SFHA
Atglen Borough	3	0	0%
Avondale Borough	6	1	17%
Birmingham Township	0	0	0%
Caln Township	8	0	0%
Charlestown Township	2	0	0%
Coatesville City	0	0	0%
Downingtown Borough	1	0	0%
East Bradford Township	2	0	0%
East Brandywine Township	2	0	0%
East Caln Township	4	0	0%
East Coventry Township	20	0	0%
East Fallowfield Township	33	3	9%
East Goshen Township	0	0	0%
East Marlborough Township	4	1	25%
East Nantmeal Township	9	0	0%
East Nottingham Township	143	2	1%
East Pikeland Township	12	0	0%
East Vincent Township	19	0	0%
East Whiteland Township	172	0	0%
Easttown Township	0	0	0%
Elk Township	71	0	0%
Elverson Borough	4	0	0%
Franklin Township	26	1	4%
Highland Township	15	0	0%
Honey Brook Borough	17	0	0%

Table 4.3.4-14 Mobile Home Flood Vulnerability in Chester County

MUNICIPALITY	TOTAL MOBILE HOMES	NUMBER OF MOBILE HOMES IN SFHA	PERCENT MOBILE HOMES IN SFHA
Honey Brook Township	166	3	2%
Kennett Square Borough	0	0	0%
Kennett Township	4	0	0%
London Britain Township	1	0	0%
London Grove Township	51	1	2%
Londonderry Township	30	0	0%
Lower Oxford Township	96	0	0%
Malvern Borough	1	0	0%
Modena Borough	8	0	0%
New Garden Township	85	2	2%
New London Township	33	0	0%
Newlin Township	19	2	11%
North Coventry Township	33	9	27%
Oxford Borough	24	0	0%
Parkesburg Borough	2	0	0%
Penn Township	47	0	0%
Pennsbury Township	0	0	0%
Phoenixville Borough	0	0	0%
Pocopson Township	0	0	0%
Sadsbury Township	22	2	9%
Schuylkill Township	2	0	0%
South Coatesville Borough	2	0	0%
South Coventry Township	16	0	0%
Spring City Borough	2	0	0%
Thornbury Township	0	0	0%
Tredyffrin Township	0	0	0%
Upper Oxford Township	53	3	6%
Upper Uwchlan Township	0	0	0%
Uwchlan Township	14	0	0%
Valley Township	81	0	0%
Wallace Township	17	0	0%
Warwick Township	22	0	0%
West Bradford Township	22	0	0%
West Brandywine Township	68	0	0%
West Caln Township	346	0	0%

Table 4.3.4-14 Mobile Home Flood Vulnerability in Chester County

MUNICIPALITY	TOTAL MOBILE HOMES	NUMBER OF MOBILE HOMES IN SFHA	PERCENT MOBILE HOMES IN SFHA
West Chester Borough	0	0	0%
West Fallowfield Township	29	0	0%
West Goshen Township	0	0	0%
West Grove Borough	6	0	0%
West Marlborough Township	6	3	50%
West Nantmeal Township	52	0	0%
West Nottingham Township	118	8	7%
West Pikeland Township	0	0	0%
West Sadsbury Township	95	0	0%
West Vincent Township	0	0	0%
West Whiteland Township	7	0	0%
Westtown Township	0	0	0%
Willistown Township	0	0	0%
TOTAL	1,981	41	2%

The storage of hazardous materials in the floodplain is another vulnerability concern, as their release during a flood could amplify environmental damage. The United States Environmental Protection Agency's (EPA) Toxics Release Inventory (TRI) tracks the management of certain toxic chemicals that may pose a threat to human health and the environment. Facilities releasing and/or managing these chemicals through recycling, energy recovery, and treatment must report annual amounts used to the EPA. There are no TRI facilities within the SFHA in Chester County.

4.3.4.6. Equity in Vulnerable Communities

In terms of equity, residents living within mobile homes or other manufactured homes will experience risks associated with floods, flash floods, and ice jams at a disproportionate rate, especially if they are unanchored or improperly installed. These structures also tend to be sited on less desirable, more flood-prone land to begin with. While Table 4.3.4-12 highlights mobile homes in the SFHA, any community with high number of mobile homes may be more vulnerable. For example, West Nottingham Township has over 40% of housing units that are mobile homes, more than 20% more than West Caln Township which has the next highest concentration. People currently experiencing homelessness are highly susceptible to flooding as they lack secure shelter. Equitable policies must ensure access to emergency shelters, temporary housing, and long-term housing solutions for people displaced by flooding. In terms of evacuation, households without vehicles or with people who have disabilities will need assistance. According to the American Community Survey, the highest proportions of zero-car households in Chester County are in Modena Borough, West Sadsbury Township, Honey Brook

Township, and West Fallowfield Township – all municipalities where over 15% of households do not have access to a vehicle (ACS 2023 5-year estimates).

4.3.5. Hurricane, Tropical Storm, Nor'easter

4.3.5.1. Location and Extent



Tropical storms impacting Chester County develop in tropical or sub-tropical waters found in the Atlantic Ocean, Gulf of Mexico, or Caribbean Sea. Cyclones with maximum sustained winds of less than 39 miles per hour are called tropical depressions. A tropical storm is a cyclone with maximum sustained winds between 39 and 74 mph. These storms sometimes develop into hurricanes with wind speeds in excess of 74 mph. Although Chester County is located over 100 miles inland from the Atlantic Coast, tropical storms and hurricanes can track inland causing heavy rainfall and strong winds.

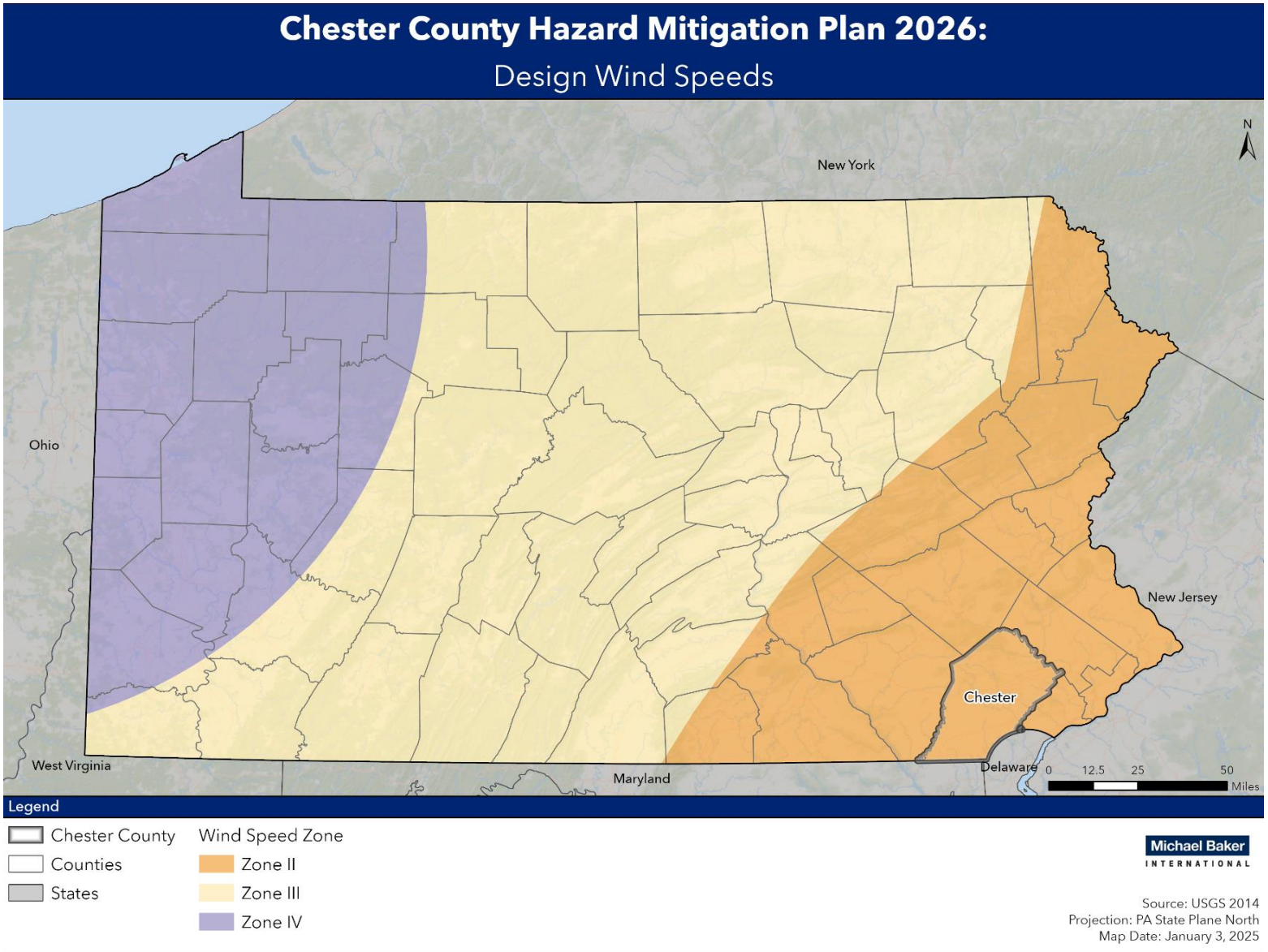
Nor'easters are extra-tropical storms which typically develop from low-pressure centers off the Atlantic Coast between Georgia and New Jersey during the winter months (NOAA NWS, 2024b). Extra-tropical is a term used to describe a hurricane or tropical storm that has lost its 'tropical' characteristics due to being fueled by cold air instead of warm; while the name has changed, the storm system may still have tropical storm or hurricane force winds (Morgan, 2014).

Hurricanes, tropical storms, and nor'easters are regional events that can impact areas as large as hundreds or thousands of miles across through the life of the storm. Therefore, all communities within Chester County are equally subject to the impacts of hurricanes, tropical storms, and nor'easters that track through or near the region. Areas in Chester County that are subject to flooding, wind, and winter storm damage are particularly vulnerable in these situations.

Figure 4.3.5-1 shows wind speed zones developed by the American Society of Civil Engineers. This information is based on 40 years of tornado history and over 100 years of hurricane history. It identifies wind speeds that could occur across the United States to be used as the basis for design and evaluation of the structural integrity of shelters and critical facilities.

Chester County falls in Zone II, which is classified as a 160-mph wind zone. This means wind speeds for shelters and critical facilities should be able to withstand a three second gust of up to 160 mph, regardless of whether the gust is the result of a tornado, hurricane, tropical storm, or windstorm event. In Chester County, all new residential and commercial structures are required to be constructed per the International Building Code, which requires structures to be designed to a 90-mph wind speed.

Figure 4.3.5-1 Wind Speed Zones in Chester County



4.3.5.2. Range of Magnitude

The impacts associated with hurricanes and tropical storms are primarily wind damage and flooding. It is not uncommon for tornadoes to develop during these events. Historical tropical storm and hurricane events have brought intense rainfall that can lead to damaging floods, and northeast winds, which, when combined with waterlogged soils can cause trees and utility poles to fall. Nor'easters can also bring damaging rain and wind but because they often occur during the winter months, they bring the additional threat of snow and ice associated with winter storms. Heavy snow can cause roof collapse in older homes, and ice presents a threat of slipping and tree branch collapse. More information on the range of magnitude of winter storms can be found in **Section 4.3.11**.

The impact tropical storm or hurricane events have on an area is typically measured in terms of wind speed. Expected damage from hurricane force winds is measured using the Saffir-Simpson Scale. The Saffir-Simpson Scale categorizes hurricane intensity linearly based upon maximum sustained winds, barometric pressure, and storm surge potential (characteristic of tropical storms and hurricanes), which are combined to estimate potential damage. Table 4.3.5-1 lists Saffir-Simpson Scale categories with associated wind speeds and expected damages. Categories 3, 4, and 5 are classified as "major" hurricanes. While major hurricanes comprise only 20% of all tropical cyclones making landfall, they account for over 70% of the damage in the United States.

Table 4.3.5-1 Saffir-Simpson Scale Categories with associated wind speeds and damages (NOAA, 2025)

STORM CATEGORY	WIND SPEED (MPH)	DESCRIPTION OF DAMAGES
1	74-95	Very dangerous winds will produce some damage: Well-constructed frame homes could have damage to roof, shingles, vinyl siding and gutters. Large branches of trees will snap, and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
2	96-110	Extremely dangerous winds will cause extensive damage: Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
3	111-129	Devastating damage will occur: Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
4	130-156	Catastrophic damage will occur: Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or

Table 4.3.5-1 Saffir-Simpson Scale Categories with associated wind speeds and damages (NOAA, 2025)

STORM CATEGORY	WIND SPEED (MPH)	DESCRIPTION OF DAMAGES
		uprooted, and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
5	>157	Catastrophic damage will occur: A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.

The likelihood of this damage occurring in Chester County is assessed in **Section 4.3.5.4, Future Occurrence.** It is important to recognize the potential for flooding events during hurricanes, tropical storms, and nor'easters; the risk assessment and associated impact for these events is included in **Section 4.3.4**. Environmental impacts associated with hurricanes and tropical storms are consistent with the impacts described for flooding in **Section 4.3.4.2** and tornadoes and windstorms in **Section 4.3.9.2**. Wind impacts in Chester County generally include downed trees and utility poles, which can result in widespread utility interruptions. Wind impacts are particularly an issue for mobile homes and other manufactured housing; these structures are often not well-anchored and are highly susceptible to wind damage in a hurricane, tropical storm, or nor'easter. The impact of severe winter weather which sometimes occurs during nor'easter events is discussed in **Section 4.3.11.2**.

The potential impacts of hurricanes, tropical storms, or a Nor'easter on community lifelines are as follows:

Table 4.3.5-2 Most Likely Lifelines Impacted by Hurricanes, Tropical Storms, or Nor'easter

LIFELINES	NOTES
	Government operations and facilities, including police, fire, and search and rescue are needed for response and recovery.
	Severe storms present a significant risk to buildings and infrastructure and can create issues for food and water access.
	Impacts on the power grid and issues with fuel availability either due to direct damage or increased usage.
	Transportation corridors may be affected due to direct damage from storm conditions, and potential impacts of other compounding hazards such as flooding and transportation incidents.
	Damage to facilities and other storage areas from storm or flooding damage may affect hazardous materials.

4.3.5.3. Past Occurrence

NOAA's Coastal Services Center maintains records of all coastal storms occurring in the United States since the 1850s. Table 4.3.5-3 lists all coastal storms having centers of circulation to pass through or within 30 nautical miles of Chester County since 1950. There were an additional nine unnamed storms in this category from 1863 – 1945.

Table 4.3.5-3 Previous Tropical Storms in or near Chester County (NOAA, 2025)

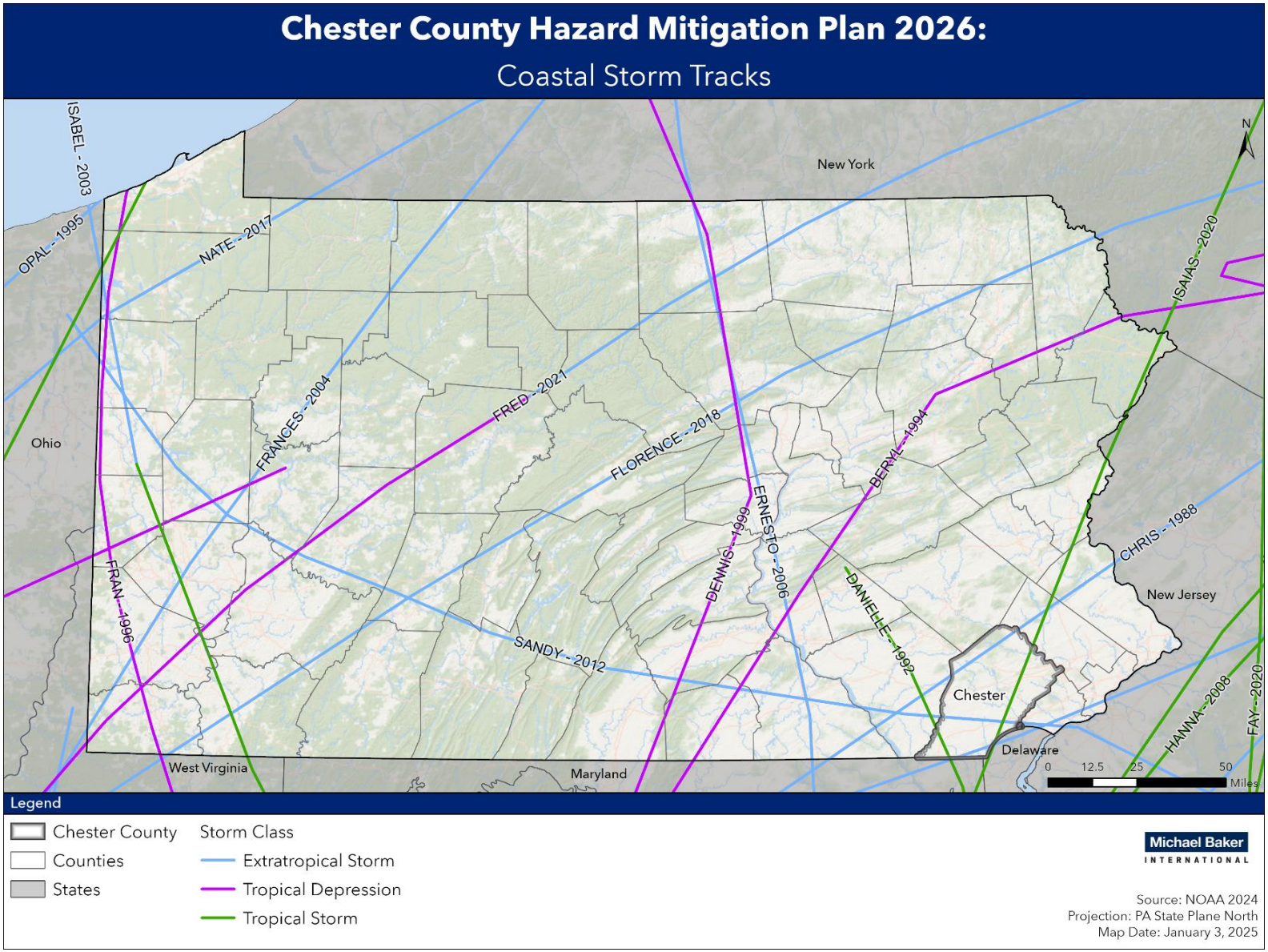
YEAR	EVENT
1952	Hurricane Able
1955	Hurricane Diane
1988	Hurricane Chris
1992	Tropical Storm Danielle
1996	Hurricane Bertha
2012	Hurricane Ernesto
2012	Hurricane Sandy
2020	Hurricane Isaias
2021	Hurricane Ida

Figure 4.3.5-2 shows the tracking of some of the notable storms in Pennsylvania, including those that passed through or near Chester County.

It is important to note that a number of hurricane and tropical storm events have impacted the county without tracking through or near it; these storm events include Tropical Storm Debby (2024), Hurricane Irene (2011), and Tropical Storm Lee (2011). Each of these storm events resulted in a Presidential Disaster Declaration. Tropical Storm Debby resulted in significant flooding in the county, with reports of up to two feet of water in certain areas and water rescues required for residents (Barkon, 2024). Hurricane Irene and Tropical Storm Lee brought significant rainfall to the county, causing rivers to rise, roads to close, and houses to flood. The storms occurred just two weeks apart in August 2011, which added to post disaster complications. The county saw 13.2 inches of rain in the month, nearly 3 times the average for August (NOAA NWS, 2015).

These examples indicate that Chester County is vulnerable to damage from flooding and heavy winds when hurricanes and tropical storms come near the region. The following map highlights storms that have tracked through Chester County while also showing the storms that have tracked through the remaining parts of Pennsylvania.

Figure 4.3.5-2 Historic Coastal Storms in Pennsylvania, 2024



The NOAA NCEI database does not track nor'easters as a separate weather event; they are tracked as high wind, heavy snow, and/or coastal flooding events, so a complete listing is not available. However, other sources provide record that some of the winter storms listed in **Section 4.3.13.3** were nor'easters. An example is a nor'easter in February 2014 that brought more than 14 inches off snow accumulation to parts of the county. The storm resulted in Pennsylvania Governor Tom Corbett extending a state of emergency that was in place due to ice storms the previous week (NBC10, 2014).

4.3.5.4. Future Occurrence

Although hurricanes and tropical storms can cause flood events consistent with 100- and 500-year levels, their probability of occurrence is measured relative to wind speed. The future occurrence of hurricanes, tropical storms, and nor'easters can be considered *likely*, as defined by the Risk Factor Methodology probability criteria (see Table 4.4-1). It is difficult to assign a probability to the future occurrence of nor'easters in Chester County; however, historical records and the county's location indicate the storms are possible in the county.

Hurricane activity in the North Atlantic has increased since the 1970s, with storms migrating northward and generating more destructive potential (Kossin et al. 2017 & Shortle et al. 2015). However, activity does vary year to year, due to factors such as natural variability in ocean circulation, volcanic eruptions, and Saharan dust. In addition, changing climatic conditions have led to more favorable conditions for large storms.

The relationship between climate change and hurricanes is complex due to the variety of potential factors that impact their development. For example, dust from the Sahara Desert that is lifted high in the atmosphere during a particularly hot and dry summer can inhibit the development of some hurricane formation, which would reduce the probability of hurricane events. Consensus does seem to be that future storms will produce more precipitation. This is because warming sea and air temperatures allow for more moisture in the air, providing more fuel for potential storms. The warming of the Atlantic, which is partially due to human activity like the production of greenhouse gases, has already been associated with an increase in extreme precipitation events in the northeast United States since 1996 (Huang et al., 2018). Global storm intensity is also expected to increase as a larger proportion of storms will reach Category 4 and 5 levels, but regional projections are more uncertain due to the complexity of factors. There is also a tentative connection with a general slowdown of atmospheric circulation due to warming in the Arctic, which may lead to these stronger storms lingering longer in each place. The larger rainfall totals, stronger winds, and potentially lingering storm paths will greatly increase the destructive potential of storms.

The effect of having more intense Category 4 and 5 storms may increase potential damage in the Atlantic 30% by 2100 (see NOAA GFDL's site for more details here https://www.gfdl.noaa.gov/global-warming-and-hurricanes/). In addition to those impacts, storm activity has been occurring before the official start of hurricane season (June 1st) more and more frequently, potentially signaling an extended season each year (Truchelut, et al. 2022).

4.3.5.5. Vulnerability Assessment

A vulnerability assessment for hurricanes and tropical storms focuses on the impacts of flooding and severe wind. A detailed assessment of Chester County's flood-related vulnerability is addressed in **Section 4.3.4**.

In addition, mobile/manufactured homes are vulnerable to hurricanes, tropical storms, and nor'easters. **Section 4.3.9** discusses vulnerability to wind damage and includes Table 4.3.9-6 which lists the number of mobile homes per community. The county is also vulnerable to severe winter weather impacts caused by nor'easters which are evaluated in **Section 4.3.11**.

4.3.5.6. Equity in Vulnerable Communities

Regarding equity, residents living within mobile homes or other manufactured homes will experience risks associated with severe storms at a disproportionate rate compared to other housing types due to their susceptibility to high winds and floods. West Nottingham Township is at a particularly high risk due to their concentration of mobile homes. Households with no vehicles, lack of internet access, and/or no access to smartphones may have extra hurdles if evacuation is needed in the face of this hazard. Municipalities with higher concentrations of these households include Honey Brook Township, West Fallowfield Township, Oxford Borough, Penn Township, Lower Oxford Township, City of Coatesville, and West Chester Borough. Populations of people experiencing homelessness will require extra help finding locations to shelter in place.

4.3.6. Invasive Species

4.3.6.1. Location and Extent



An invasive species is any living species that is not native to an ecosystem and causes damage. The presence of invasive species can impact the environment, economy, and even human health. Often, an invasive species spreads and reproduces quickly. Any organism that isn't native to an ecosystem can be an invasive species; they can come from a foreign country or even a different region in the United States (National Wildlife Federation, 2018). Pennsylvania hosts several invasive pathogens, insects, plants, invertebrates, fish, and mammals. Human action largely fuels the introduction of invasive species.

Pennsylvania Governor's Invasive Species Council (PGISC), also referenced as the Governor's Invasive Species Council of Pennsylvania (PISC), is the lead organization for invasive species threats in the Commonwealth. The PISC recognizes two types of invasive species: Aquatic and Terrestrial (PISC, 2017).

- Aquatic Invasive Species are nonnative species that have part or all of their life cycle in water. They threaten the diversity or abundance of native species, the ecological stability of the infested waters, human health and safety, or commercial, agriculture, aquaculture, or recreational activities dependent on such waters.
- Terrestrial Invasive Species are nonnative species that complete their lifecycle on land instead of in an aquatic environment. Their introduction does or is likely to cause economic or environmental harm or harm to human health.

The location and extent of these invasive threats depends on the preferred habitat of the species as well as the species' ease of movement and establishment.

West Bradford Township's Land Preservation and Sustainability Committee has identified the most common invasive plant species found in Chester County, which include autumn olive, Japanese barberry, common reed, Japanese stiltgrass, and Japanese knotweed. Invasive plant species can be found throughout the county, with particular species doing very well in waterways and wetlands. See Table 4.3.6-1 for a full list of common invasive plant species in Chester County and their ecological threats.

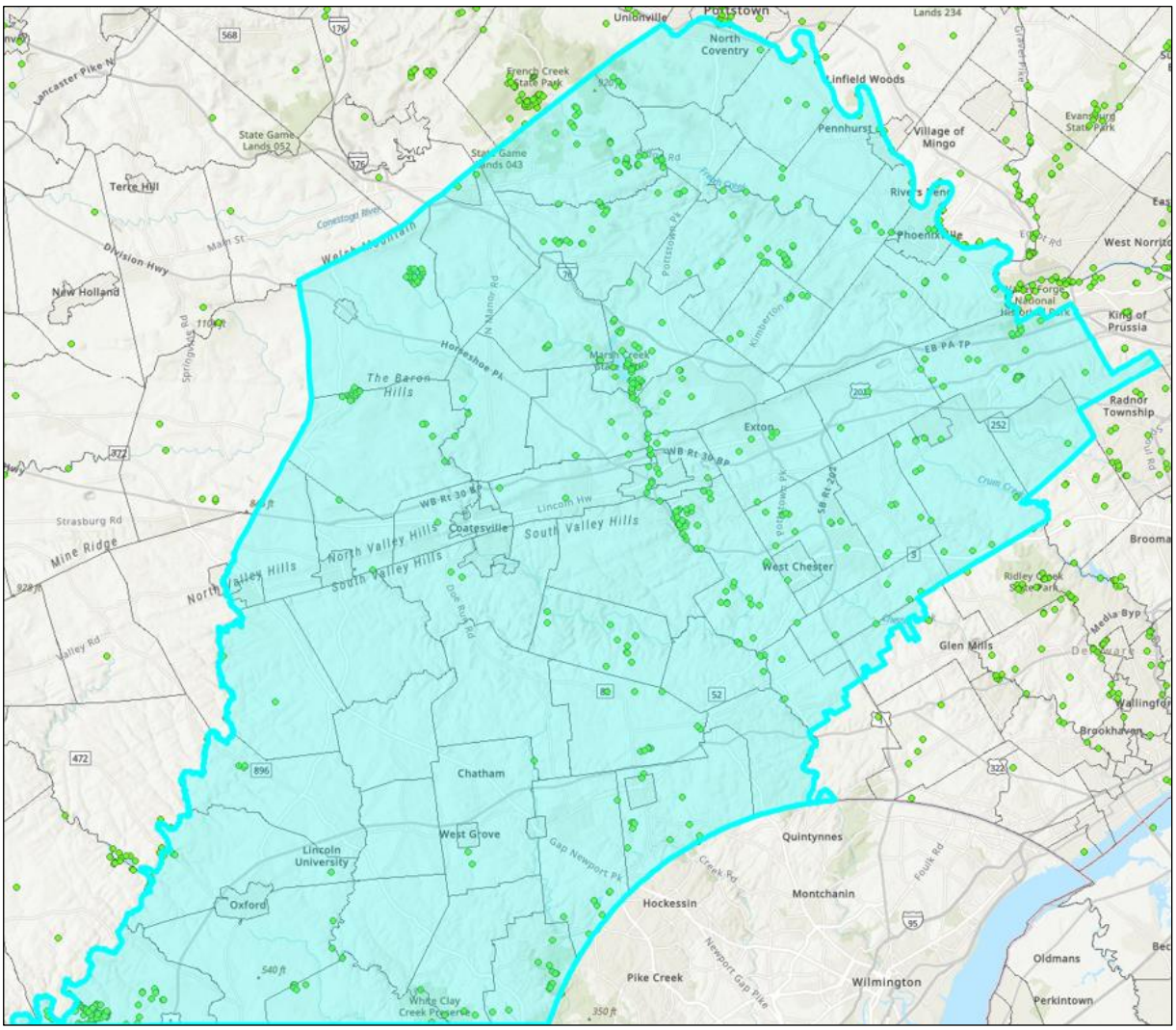
West Bradford Township has also identified three of the most common invasive insects impacting the county: the spotted lanternfly, which damages trees and agriculture; the stink bug, which is more of a nuisance to residents, but these insects can also damage crops such as corn and fruits; and the emerald ash borer, which causes damage to ash trees (West Bradford Township, 2025). Aquatic invasive species have also been identified in Chester County, including New Zealand mudsnails, Northern snakeheads, red-eared sliders, common carp, and basket clams.

Invasives are introduced into Pennsylvania through a few key pathways (PISC, 2017):

- Contamination of internationally traded products.
- Hull fouling.
- Ship ballast water release.
- Hitchhiking on boats or fishing gear.
- Discarded live fish bait.
- Intentional release.
- Escape from cultivation.
- Movement of soil, compost, wood, vehicles, or other materials and equipment.
- Unregulated sale of organisms.
- Smuggling activities.
- Hobby trading or specimen trading.

iMapInvasives, a project coordinated by the Pennsylvania Natural Heritage Program, shares invasive species data within Pennsylvania. Chester County's most prominent types of invasive species are aquatic and plant species, including the common carp, mile-a-minute vine, and Japanese stiltgrass. Invasive species are distributed around Chester County, but clusters and patterns occur, specifically along waterways and in open spaces. Figure 4.3.6-1 shows the density of invasive species observed in Chester County as collected by iMapInvasives, each green dot showing one observation. The map shows clusters along Brandywine Creek, including the East Branch, Marsh Creek State Park, municipalities in the northern portion of the county, and West Nottingham Township.

Figure 4.3.6-1 Invasive Species Reports in Chester County (iMapInvasives, 2025)



4.3.6.2. Range of Magnitude

Some invasive species can cause significant changes in the composition of their ecosystems. For example, the spotted lanternfly will inflict weeping wounds on trees, which not only distresses the tree, but the sap will attract other insects, especially ants and wasps. A study by Penn State found that it could cost the state's economy $325 million annually (Duke, 2020). Hydrilla grows aggressively in shallow water areas, forming thick mats that block sunlight and displace native species. They have also been shown to alter the physical and chemical characteristics of water bodies (USGS, 2020). The magnitude of an invasive species threat is generally amplified when the ecosystem or host species is already stressed, such as in times of drought or after a wildfire, as the already weakened state of the native ecosystem causes it to succumb to an infestation more easily (Flory, et. al, 2022). Some species can also increase vulnerability to other hazards. For example, Japanese knotweed can increase flood risk by overtaking waterways and wetlands and clogging streams, and common reed can increase fire risk by altering wetlands and crowding out native plant species.

Table 4.3.6-1 lists invasive plant species commonly found in Chester County and their ecological threat. Most of these plant species are highly competitive growers and may out-populate native plants. An emerging threat in the county is Beech Leaf Disease, caused by invasive nematodes. The disease will impact beech trees, which typically grow on steep slopes where other plants do not. There may be increased erosion concerns and the opportunity for additional invasive plants to grow in these areas (Penn State Extension, 2024).

Table 4.3.6-1 Invasive Plant Species Found in Chester County (West Bradford Township, 2025) (DCNR, 2025a)

INVASIVE SPECIES	ECOLOGICAL THREAT
Trees	
Bradford Pear	Naturalized callery pears compete with native early successional trees in old fields and hedgerows. It cross-pollinates with related species and forces out the natives in wild areas.
Norway Maple	A frequent invader of urban and suburban forests. Its extreme shade tolerance allows it to penetrate deep within an intact forest canopy. Norway Maples displace native plants of all types; plant sugar or red maples instead.
Tree-of-Heaven	Produces chemicals in its roots that prevent the establishment of other plant species nearby. Its fast growth limits habitat for other species. Its root system may be extensive and has been known to cause damage to sewer lines and building foundations. Also, the primary host for spotted lanternflies, another invasive species.
Shrubs	
Autumn Olive	These shrubs are highly competitive against native species, shading out shorter plants. Their nitrogen-fixing capabilities may adversely affect the nitrogen cycle of native communities that depend on infertile soils.
Burning Bush	Easily outcompetes native plants with its large, dense silhouette. Lacking pests and tolerant of deep shade, this shrub can force itself into moist forested sites, creating large thickets that displace native herbs and shrubs. This displacement has negative consequences for both aquatic and terrestrial ecosystems. Burning bush is also poisonous to dogs.
Japanese Barberry	Forms dense stands in natural habitats including forests, open woodlands, wetlands, and meadows. Once established, it displaces native plants and reduces wildlife habitat and forage, increasing pressure on natives by white-tailed deer. It has been found to alter pH and biological activity of soil. Barberry is also a human health hazard, due to its sharp spines and it acts as a nursery for deer ticks, which can transmit Lyme disease.
Multiflora Roses	Forms impenetrable thickets that exclude native plant species. Grows very prolifically in riparian areas, where its inedible leaf litter can change the composition of the aquatic macroinvertebrate community. Its occasional habitat of climbing can weight down trees, making them susceptible to breakage.
Vines	
Japanese Honeysuckle	Vines can girdle and kill small saplings and form dense mats in tree canopies, shading native vegetation below.

Table 4.3.6-1 Invasive Plant Species Found in Chester County (West Bradford Township, 2025) (DCNR, 2025a)

INVASIVE SPECIES	ECOLOGICAL THREAT
Oriental Bittersweet	Vines able to girdle and kill trees or break their branches off from the weight of the vines. When it grows into the canopy it can shade out natives.
Mile-a-Minute	This plant can grow up to six inches a day and can quickly smother native vegetation and climb into the tree canopy where it restricts light availability to plants below. It can be a pest plant on tree farms and for horticultural crops where the soil is not regularly tilled. Mile-a-Minute is on the Federal and PA Noxious Weed list.
Grasses	
Common Reed (Phragmites)	Can rapidly take over wetland communities, crowding out native plants, changing hydrology, altering wildlife habitat, and increasing fire potential.
Japanese Stiltgrass	When it invades a site, Japanese stiltgrass can quickly crowd out native plant species. Invasions can also change soil nutrient cycling processes, inhibit tree survival and growth, and reduce light availability. After it dies back in late fall, it forms a thick layer or smothering thatch that is slow to decompose. Because stiltgrass is relatively unpalatable, it may encourage heavier deer browsing on native plant species.
Herbs	
Japanese Knotweed	Knotweeds are capable of quickly forming dense stands where they can crowd out native vegetation. Thickets can clog small waterways and displace streamside vegetation, increasing bank erosion and lowering the quality of riparian habitat for fish and wildlife. Once established, these stands are very difficult to eradicate.
Purple Loosestrife	Invades wetlands, outcompeting native plants, including some federally endangered orchids, forming dense homogenous stands. These monocultures reduce habitat for waterfowl, clog waterways, disrupt nutrient cycling, and collect debris, eventually displacing the entire wetland.
Aquatic Plants	
Hydrilla	Forms dense floating mats that can restrict native vegetation, impact recreation and slow water flow. It is listed on the Federal Noxious Weed list.

Aquatic invasive species can pose threats to waterways and aquatic habitats. Bighead, Silver, and Grass Carp have the potential to radically alter aquatic ecosystems. They are capable of wiping out the base of the local food web, thus depriving native fish and mussel species of sustenance (PA FBC, 2021). The New Zealand mudsnail are competitors with native gastropods and other macroinvertebrates such as caddisfly larvae and mayfly nymphs due to their potential to attain high densities within invaded waters. Infestations may result in reductions in macroinvertebrate abundance and biodiversity (PA FBC, 2025). Northern snakehead have the potential to significantly impact fish communities due to their ecological role as a large, predatory generalist. They can significantly reduce biomass of prey fish species such as

sunfishes or minnows (PA FBC, 2023). All three species are projected to have the greatest impacts on fisheries.

With the wide range of types and impacts of invasive species, the impacts to community lifelines will also vary.

Table 4.3.6-2 Most Likely Lifelines Impacted by Invasive Species

LIFELINES	NOTES
	Some invasive plants species can cause harm to humans, such as causing injury through plant spikes or sap. Some plant species can also house deer ticks, which can increase the risk of Lyme disease.
	An increase in invasive species, such as the spotted lanternfly, may impact Chester County's agriculture, especially their wineries, as the species prefers the sugary sap of grape plants.
	Some invasive plant species, such as the common reed, may disrupt water systems by crowding out native plants in wetlands, and they can overwhelm water sources.

4.3.6.3. Past Occurrence

Invasive species have been entering Pennsylvania since the arrival of early European settlers, but not all occurrences have required government action. The first invasive species outbreak requiring state attention occurred in 1862 when legislation was enacted to provide for the destruction of and to prevent the spread of Canada Thistle, Johnson Grass, and Marijuana. Since then, there have been 26 acts and quarantines enacted to prevent the spread of invasive species. As illustrated in Table 4.3.6-3, the volume of acts and quarantines has increased since 2000 (PISC, 2013).

Table 4.3.6-3 Previous Occurrences of Invasive Species Events Requiring State Action or Quarantine.

YEAR	SPECIES	YEAR	SPECIES
1911	Chestnut Blight Disease	2003	Black Carp, Bighead Carp, Silver Carp
1917	Tuberculosis	2005	Eurasian Watermilfoil
1919	European Wart Disease of the Potato	2006	Chronic Wasting Disease
1923	Japanese Beetle	2006	Scrapie
1925	European Corn Borer	2006	Vesicular Stomatitis
1927	Canada Thistle , Wild Garlic, Orange Hawkweed, King-Devil, Sow Thistle, Field Bindweed	2007	Emerald Ash Borer

Table 4.3.6-3 Previous Occurrences of Invasive Species Events Requiring State Action or Quarantine.

YEAR	SPECIES	YEAR	SPECIES
1933	White Pine Blister	2007	Feral Pig
1933	Gypsy Moth	2008	Viral Hemorrhagic Septicemia Virus
1935	Mosquitoes	2009	Avian Influenza
1953	Black Stem Rust	2009	West Nile encephalitis, Chronic Wasting Disease, Spring Viremia of Carp, Viral Hemorrhagic Septicemia, Lymphocytic Choriomeningitis Virus, Equine Rhinopneumonitis
1983-84	Avian Influenza	2009	Emerald Ash Borer (expansion of previous quarantine)
1992	Pine Shoot Beetle	2014	Thousand Canker Disease
1996	Reptile and Amphibian Species	2014	Spotted Lanternfly
1999	Plum Pox Virus		

The reports above required statewide action, but invasive species are found in Chester County even without a quarantine. Utilizing reports from government and nongovernmental entities, iMapInvasives reports 29 species with at least five confirmed reports in Chester County:

Table 4.3.6-4 Invasive Species in Chester County (iMapInvasives, 2025)

SCIENTIFIC NAME	COMMON NAME	CONFIRMED PRESENT SPECIES COUNT
Cyprinus carpio	Common Carp	71
Persicaria perfoliata	Mile-a-minute vine	56
Microstegium vimineum	Japanese Stiltgrass	53
Trachemys scripta elegans	Red-eared Slider	46
Ficaria verna	Lesser Celandine	45
Berberis thunbergii	Japanese Barberry	40
Corbicula fluminea	Basket Clam	35
Celastrus orbiculatus	Roundleaf Bittersweet	29
Elaeagnus umbellata	Autumn Olive	19
Rosa multiflora	Multiflora Rose	16
Euonymus alatus	Burning Bush	15
Lonicera japonica	Japanese Honeysuckle	15
Hedera helix	English Ivy	13
Alliaria petiolata	Garlic Mustard	11
Carassius auratus	Goldfish	11
Ailanthus altissima	Tree-of-Heaven	9
Potamopyrgus antipodarum	New Zealand Mudsnail	9
Conium maculatum	Poison-hemlock	8
Lythrum salicaria	Purple Loosestrife	8
Channa argus	Northern Snakehead	7

Table 4.3.6-4 Invasive Species in Chester County (iMapInvasives, 2025)

SCIENTIFIC NAME	COMMON NAME	CONFIRMED PRESENT SPECIES COUNT
Phragmites australis ssp. australis	Common Reed	7
Rubus phoenicolasius	Wineberry	7
Miscanthus sinensis	Chinese Silver Grass	6
Paulownia tomentosa	Princess Tree	6
Reynoutria japonica	Japanese Knotweed	6
Arthraxon hispidus	Joint-head Arthraxon	5
Cirsium arvense	Canada Thistle	5
Hydrilla verticillata	Hydrilla	5
Reynoutria spp. (species unknown)	Knotweed (species unknown)	5

Like in the rest of the Commonwealth, Spotted Lanternflies are of particular concern in Chester County. Hatching around mid-May each year, the reports of lanternfly populations have been steadily growing since 2019. Further, warming climate conditions could cause lanternflies to hatch sooner, raising the potential of stressing young crops in their infant stages (U.S. Fish and Wildlife, 2023). Trees-of-heaven, another invasive species, are prime hosts to spotted lanternflies, offering ideal environments for mating and laying eggs. As lanternflies feed on the sap of the host tree, they excrete honeydew, which attracts wasps and ants. Trees-of-heaven are remarkably hearty, growing up to eighty feet tall even in poor soil conditions. They often take light and nutrients from native trees, enabling them to take over areas while hosting lanternflies (Crick et al., 2023).

In addition, stakeholders provided feedback that there are concerns about bamboo as an invasive species.

4.3.6.4. Future Occurrence

According to the PISC, the probability of future occurrence for invasive species threats is on the rise because of the growing volume of transported goods, increasing technology, efficiency and speed of transportation and expanding international trade agreements. Expanded global trade has created opportunities for many organisms to be transported to and establish themselves in new countries and regions. In 2024, Pennsylvania imported $127 billion in goods from abroad, which were dominated by pharmaceuticals and machinery but still included agricultural, forestry, and fisheries goods that commonly carry unknown pests. This was the eighth highest of any state in the country.

Furthermore, climate change can contribute to the introduction of new invasive species by modifying competition in a way that native species are more susceptible to expansion of existing invaders or the addition of new invaders (U.S. Fish and Wildlife, 2023). The reverse may also be true in some cases. As maximum and minimum seasonal temperatures change and growing seasons lengthen, pests are given more time to outcompete native species in areas with

previously inhospitable climates; these shifts are expected to impact the Northeastern Region, where Chester County is located, the most (NISAW, 2021). Heightened levels of CO_2, which invasive pests contribute to if they have significant negative impacts on tree populations, can also have a dramatic positive effect on invasive plants that are already outcompeting native species (Invasive Species Centre, 2025). For more information on recent changes in extreme temperatures, see **Section 4.3.3**. These varying changes may shift the dominance of ecosystems in favor of nonnative species over time, but how that will play out is difficult to predict due to how many different factors are involved for each type of species and the context in which they are present. Overall, the probability of invasive species impacting Chester County can be considered *likely* according to the Risk Factor Methodology (see Table 4.4.1-1).

4.3.6.5. Vulnerability Assessment

Losses from invasive species threats stem from three sources: (1) lost revenue from diseased, damaged, or deceased crops, livestock, lumber, or other agricultural commodities; (2) economic losses from the cost of eradication programs; and (3) losses in the form of illness or death of humans. Data is most readily available for the first source, agricultural losses. Invasive species may threaten the 1,558 farms located in Chester County, which sold approximately $736,075,000 in agricultural products in 2022. Most sales to date have come from crop sales, totaling $610,942,250 (83%). Livestock sales made up the remaining 17% (USDA, 2022). However, it is unlikely that all crops would be lost due to a single invasive species event, given that each species has different levels of seriousness. Table 4.3.6-5 below shows the acreage of agricultural land in each municipality, which represents potentially vulnerable areas to invasive species. It is difficult to estimate the costs of eradication programs and potential losses to illness or death as these situations depend largely on the species and its location.

Table 4.3.6-5 Agricultural Land by Municipality (NLCD, 2023)

MUNICIPALITY	AGRICULTURAL LAND (ACRES)
Atglen Borough	141.9
Avondale Borough	53.5
Birmingham Township	1,178.1
Caln Township	284.9
Charlestown Township	1,754.5
Coatesville City	0.2
Downingtown Borough	29.4
East Bradford Township	2,402.8
East Brandywine Township	1,348.9
East Caln Township	2.6
East Coventry Township	2,611.2
East Fallowfield Township	3,760.9
East Goshen Township	275.3
East Marlborough Township	4,303.8
East Nantmeal Township	3,434.2
East Nottingham Township	7,571.7

Table 4.3.6-5 Agricultural Land by Municipality (NLCD, 2023)

MUNICIPALITY	AGRICULTURAL LAND (ACRES)
East Pikeland Township	1,402.6
East Vincent Township	3,900
East Whiteland Township	244.5
Easttown Township	317
Elk Township	3,336.7
Elverson Borough	105.8
Franklin Township	3,825.1
Highland Township	7,612.5
Honey Brook Borough	40.6
Honey Brook Township	8,279.8
Kennett Square Borough	0
Kennett Township	2,586.3
London Britain Township	1,975.9
London Grove Township	5,191
Londonderry Township	4,528
Lower Oxford Township	6,655.2
Malvern Borough	23.6
Modena Borough	7.4
New Garden Township	2,777.3
New London Township	3,314.3
Newlin Township	3,619.4
North Coventry Township	1,603.9
Oxford Borough	256.7
Parkesburg Borough	74.5
Penn Township	2,887
Pennsbury Township	1,918.9
Phoenixville Borough	50
Pocopson Township	2,096.8
Sadsbury Township	1,406.2
Schuylkill Township	496.9
South Coatesville Borough	78.7
South Coventry Township	1,311.8
Spring City Borough	4.5
Thornbury Township	342.7
Tredyffrin Township	520.3
Upper Oxford Township	7,034.3
Upper Uwchlan Township	946.4
Uwchlan Township	494.2
Valley Township	407.6
Wallace Township	1,948.7
Warwick Township	3,063.3
West Bradford Township	2,775.2
West Brandywine Township	2,569.5

Table 4.3.6-5 Agricultural Land by Municipality (NLCD, 2023)

MUNICIPALITY	AGRICULTURAL LAND (ACRES)
West Caln Township	4,561
West Chester Borough	0
West Fallowfield Township	7,643.1
West Goshen Township	27.4
West Grove Borough	0
West Marlborough Township	7,620.8
West Nantmeal Township	4,335.1
West Nottingham Township	3,205.3
West Pikeland Township	1,717.6
West Sadsbury Township	3,785.7
West Vincent Township	4,203.8
West Whiteland Township	587.8
Westtown Township	818.8
Willistown Township	3,188.2

For DARA, invasive species can affect watershed conditions and may contribute indirectly to debris, vegetation management needs, and storm-related impacts.

Education plays an important role in reducing invasive species and promoting planting with native species. The Chester County Planning Commission provides information online about the benefits of landscaping with native plants and where to find information on choosing the right plants for specific sites. The Planning Commission also provides examples of ordinances that promote use of native plants or ban the planting of specific invasives. Municipalities can update their subdivision and land development ordinances or pass resolutions to help control invasive species (CCPC, 2025). Vulnerability to invasive species can decrease as education and policy tools are expanded through the county.

4.3.6.6. Equity in Vulnerable Communities

According to the US Department of Agriculture National Invasive Species Information Center, invasive species introduce a variety of social and economic equity concerns. Direct impacts, such as effects on property values, agricultural productivity, and public utility operations may be of particular concern to low-income communities and those who work in the agriculture and utility sectors (USDA, 2025). Underserved communities are also particularly vulnerable to the economic impacts of invasive species as well as to pathogens related to invasive species, as many underserved communities lack the resources to map and report sightings (DOI, 2025).

4.3.7. Pandemic and Infectious Disease

4.3.7.1. Location and Extent



Pandemics are defined as a disease affecting or attacking the population of an extensive region, including several countries, and/or continent(s). It is further described as extensively epidemic. Generally, pandemic diseases cause sudden, pervasive illness in all age groups on a global scale. Infectious diseases are also highly virulent but are not spread person-to-person.

Pandemic and infectious disease events cover a wide geographical area and can affect large populations, potentially including the entire population of the county. The exact size and extent of an infected population is dependent upon how easily the illness is spread, the mode of transmission and the amount of contact between infected and uninfected individuals. The transmission rates of pandemic illnesses are often higher in denser areas where there are large concentrations of people. The transmission rate of infectious diseases will depend on the mode of transmission of a given illness. Pandemic events can also occur after other natural disasters, particularly floods, when there is the potential for bacteria to grow and contaminate water.

Chester County is primarily concerned with the possibility of a pandemic flu outbreak. Influenza, also known as "the flu", is a contagious disease that is caused by the influenza virus and most commonly attacks the respiratory tract in humans. Influenza is considered to have pandemic potential if it is novel, meaning that people have no immunity to it, virulent, meaning that it causes deaths in normally healthy individuals, and easily transmittable from person-to-person (CDC, 2024d).

Different strains of influenza mutate over time and replace older stands of the virus and thus have drastically different effects. The H1N1 virus, colloquially known as swine flu, is of particular concern. This virus was first detected in people in the United States in April 2009. On June 11, 2009, the World Health Organization signaled that a pandemic of 2009 H1N1 flu was underway (CDC, 2009). Avian influenza, also known as bird flu, infects birds. A recent strain, H5N1, has caused particular concern due to its ability to pass from wild birds to poultry then on to people. This virus has killed more than half of the people infected with it, although the avian flu is less likely to infect humans (Mayo Clinic, 2024).

In late 2019 and early 2020, a novel coronavirus began to spread into a worldwide pandemic. Named COVID-19, this type of coronavirus is a new virus that causes respiratory illness and is extremely contagious even prior to exhibiting symptoms and may be transmitted between people even if the infected person is asymptomatic.

Chester County is also vulnerable to vector borne diseases (VBDs), which are human illnesses caused by parasites, viruses, and bacteria that are transmitted by vectors (e.g., mosquitoes, ticks, fleas). Some examples include Lyme Disease, West Nile Virus, and Dengue Fever. Cases of VBDs have increased significantly since 2004, with more than 1 million cases reported between

2001 and 2023 in the US. Annual reported VBD cases more than doubled during this period. Several factors drive the emergence and increased spread of VBDs, putting more people at greater risk (CDC, 2024e):

- Changing Land Use Patterns like reforestation can lead to increased deer populations and suburban growth, exposing more people to more infected tick bites each year.
- Global travel and trade play a role in introducing invasive vectors and pathogens throughout the US (e.g., travelers have inadvertently brought chikungunya and Zika viruses into the US, and almost every year travelers have been associated with local spread of dengue in southern states).
- A changing climate influences the geographic distribution and seasonality of VBDs. This includes:
    - Changing weather patterns and increased frequency of severe and unpredictable weather, such as heat waves and droughts.
    - Longer and warmer summers and shorter and milder winters lengthen vector seasons in the US.
    - Temperature and precipitation affect disease transmission by impacting the replication, interaction, and survival of disease vectors.

4.3.7.2. Range of Magnitude

The magnitude of a pandemic or infectious disease threat in Chester County will vary significantly depending on the aggressiveness of the virus in question and the ease of transmission. Pandemic influenza is easily transmitted from person-to-person, but advances in medical technologies have greatly reduced the number of deaths caused by influenza over time. The magnitude of a pandemic may be exacerbated by the fact that an influenza pandemic will cause outbreaks across the United States, limiting the ability to transfer assistance from one jurisdiction to another. Additionally, effective preventative and therapeutic measures, including vaccines and other medications, will likely be in short supply or will not be available.

In terms of lives lost, the impacts various pandemic influenza outbreaks have had globally over the last century have declined (see Table 4.3.7-2 in the next section). The severity of illness from the 2009 H1N1 influenza flu virus varied, with the gravest cases occurring mainly among those considered at high risk. High-risk populations that are considered more vulnerable include children, the elderly, pregnant women, and chronic disease patients with reduced immune system capacity. These populations are described in more detail in **Section 4.3.7.5**. Most people infected with swine flu in 2009 recovered without needing medical treatment (CDC, 2010). Unlike a regular flu season, according to the CDC, the overwhelming majority of the people who died, as many as 77%, were 18 to 64 years old with up to 11% of the deaths estimated in those 17 years old and younger.

The 1918 Spanish flu pandemic was the worst-case pandemic event in the 20th century for both Pennsylvania and worldwide. County data is unavailable, and mortality figures were probably

under-reported. It is recorded that 8,000 Pennsylvanians died from the flu or its complications in the first month alone (US DHHS, 2009). Infection rates were much worse in denser cities, which should be a high priority for response actions in future flu events.

Chester County has faced varying impacts of the COVID-19 pandemic. It is believed that the virus originated in the Wuhan province of China in November 2019. Shortly afterwards, the virus began to spread to nearby countries like Japan and South Korea. By March 2020, the virus had reached almost every country worldwide, with the most cases in the United States. At first, concern was focused on people who might be infected due to recent travel. However, community infections soon began to crop up in many cities and towns. This led to a statewide shutdown of schools and businesses and the cancellation of large events for Spring and Summer 2020. Only life sustaining services were permitted to remain open, including medical facilities, pharmacies, and grocery stores. People were advised to remain home as much as possible in attempt to slow the transmission of COVID-19. State health officials note that the virus has infected all age ranges at about the same rate, and that no age group can be considered more or less vulnerable to infection (CDC, 2024f).

This virus quickly became a great concern in the early months of the pandemic due to its high rates of transmission and high incidence of mortality in addition to so little being known about it. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes. Most people infected with COVID-19 will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness (PA DOH, 2023a). Some people who have been infected with COVID-19 can experience long-term effects from the infection, known as post-COVID conditions (PCC) or long COVID. PCCs can include a wide range of ongoing health problems that can last weeks, months, or years. Some general symptoms of PCC can include ongoing fatigue, symptoms that get worse with physical or mental activity, fever, difficulty breathing, chest pain, heart palpitations, headache, dizziness, diarrhea, and joint or muscle pain. These are more often found in people who had severe COVID-19 illness, but anyone who has been infected with COVID-19 can experience PCCs.

At the end of 2020, the first COVID-19 vaccine for emergency use was authorized by the FDA and by March 2021 more than 100 million COVID-19 vaccine doses had been administered (CDC, 2024f). While the Federal Public Health Emergency for COVID-19 expired on May 11th, 2023, new variants have begun to pop up and case levels remain significant nationwide (US DHHS, 2024). COVID-19 is still impacting populations in Chester County at the time of this plan development.

Those not vaccinated and who become infected may have a higher risk of developing PCCs, compared to people previously vaccinated. In some cases, a person with PCCs may not have tested positive for the virus or known they were infected (CDC, 2022b). Viruses like COVID-19 constantly change through mutation, which sometimes results in a new variant of the virus. Some

changes and mutations may allow the virus to spread more easily or make it resistant to treatments and vaccines. It is essential to track and monitor the incidence of variants during a pandemic to effectively respond to changing trends in transmission and patient care (WHO, 2023). Variants are designated as:

- Variant Under Monitoring (VUM): Variants where data indicates there is a potential or clear impact on approved or authorized medical countermeasures or that have been associated with more severe disease or increased transmission but are no longer detected or are circulating at very low levels in the United States.
- Variant of Interest (VOI): A variant with specific genetic markers that have been associated with changes to receptor binding, reduced neutralization by antibodies generated against previous infection or vaccination, reduced efficacy of treatments, potentially diagnostic impact, or predicated increase in transmissibility or disease severity.
- Variant of Concern (VOC): A variant for which there is evidence of an increase in transmissibility, more severe disease (for example, increased hospitalizations or deaths), significant reduction in neutralizations by antibodies generated during previous infection or vaccination, reduced effectiveness of treatments or vaccines, or diagnostics detection failures.

The COVID-19 pandemic impacted how all county services were delivered, particularly with changes in clinic operations (virtual, masking, social distancing, contact tracing). The Chester County Health Department (CCHD) continues to operate remote services, which can be ramped up in a pandemic event. CCHD reported the following operational impacts from the COVID-19 pandemic. These impacts can be expected if another pandemic occurs.

- Diverted resources to help coordinate and administer relevant vaccinations and PPE.
- Coordinated the procurement and transportation of vaccinations and other medical and PPE supplies.
- Dedicated effort to possible vaccine response, in collaboration with the department's Public Health Emergency Preparedness Team.
- Conducted mobile vaccination clinics.
- Curtailed regular clinics to reallocate staff or allow for social distancing.
- Developed communications to combat mis/disinformation.

The community also faces many challenges with how the COVID-19 pandemic impacted the economy. During the pandemic, supply chain shortages for essential goods like masks and baby formula impacted the county's ability to provide services. Increased inflation following the pandemic is causing ongoing economic challenges.

The range of magnitude for VBDs can range from impacting single individuals to wider populations. Some VBDs can replicate in their hosts (i.e., a reservoir host) and spread to new vector populations if that vector comes in contact with the already infected host. For example,

Dengue fever replicates in humans; if someone travels and contracts Dengue, then comes back to Chester County and is bit by a mosquito here, that mosquito could potentially spread Dengue throughout the local mosquito population in Chester County. The potential for this depends on the specific vector, host, and disease (WHO, 2024).

The potential impacts of pandemic and infectious diseases to community lifelines include:

Table 4.3.7-1 Most Likely Lifelines Impacted by Pandemic and Infectious Diseases

LIFELINES	NOTES
	Government services and administration will be significantly impacted by widespread disease. Response plans will need to be developed.
	Staffing issues may occur due to illness at various points in the food supply chain.
	Hospitals will be impacted through staffing issues, an increase in patients, and supply chain issues as the disease becomes more widespread.

4.3.7.3. Past Occurrence

The United States Department of Health and Human Services estimates that influenza pandemics have occurred for at least 300 years at unpredictable intervals. There have been several pandemic influenza outbreaks over the past 100 years. A list of events and worldwide deaths are shown in Table 4.3.7-2.

Table 4.3.7-2 Significant Influenza Outbreaks over the Past Century (Global Security, 2009; WHO, 2009; WHO, 2025)

DATE	PANDEMIC	WORLDWIDE DEATHS (APPROXIMATE)
1918-1920	Spanish Flu/H1n1	50 Million
1957-1958	Asian Flu/H2n2	1.5-2 Million
1968-1969	Hong Kong Flu/H3n2	1 Million
2009-2010	Swine Flu/H1n1	12,000
2019 - Present	COVID-19	7 million

Deaths occurred in the United States as a result of the Spanish Flu, Asian Flu, and Hong Kong Flu outbreaks. The Spanish Flu claimed 500,000 lives in the United States. There were 350,000 cases and 8,000 deaths in Pennsylvania. Most deaths resulting from the Asian flu occurred

between September 1957 and March 1958; there were about 70,000 deaths in the United States and approximately 15% of the population of Pennsylvania was affected. The first cases of the Hong Kong Flu in the United States were detected in September of 1968 with deaths peaking between December 1968 and January 1969 (Global Security, 2009).

The Chester County Health Department (CCHD) provides an annual influenza surveillance report. Table 4.3.7-3 lists the number of seasonal flu cases in Chester County from the 2018/2019 flu season.

Table 4.3.7-3 Number of Flu Cases in Chester County by Flu Season (CCHD, 2023; PA Open Data, 2025)

Flu Season	# of Cases
2018/2019	2,939
2019/2020	3,769
2020/2021	7*
2021/2022	2,307
2022/2023	4,413
2023/2024	4,680
2024/2025	7,474

**Abnormally low influenza activity most likely due to COVID-19 mitigation measures*

An avian flu outbreak in Pennsylvania occurred in 1983 through 1984, in which 17 million birds were lost. There has not been an outbreak since in the Commonwealth, although there have recently been outbreaks in the Midwest. From 1996 to 1997, a number of table-egg farms in Lancaster and Lebanon Counties tested positive for H7N2 avian influenza. As a result, nine flocks were lost, and the Pennsylvania Department of Agriculture (PADA) imposed a quarantine on a 75-square-mile area restricting movement of poultry or poultry products into or out of the area (Jacob et al., 1998).

As noted, the COVID-19 outbreak began in China in November 2019 and reached the United States in late February 2020. Most counties in Pennsylvania were affected by March 2020. By October 1, 2020, there were more than 162,140 confirmed cases in Pennsylvania, with almost 7,000 cases and 375 deaths reported in Chester County (PA Open Data, 2024a). Table 4.3.7-4 displays the cumulative COVID-19 cases for Chester County from 2020 to 2024.

Table 4.3.7-4 Cumulative COVID-19 Cases Chester County 2020-2023 (PA Open Data, 2025).

DATE	Cumulative Cases	Cumulative deaths
2020	20,531	590
2021	67,794	1,000
2022	114,503	1,292
2023*	119,013	1,404
2024**	N/A	1,433
*as of 6/15/2023; **as of 3/24/2024		

4.3.7.4. Future Occurrence

Future occurrences of pandemics and infectious diseases are unclear. The precise timing of pandemic influenza is uncertain, but occurrences are most likely when the Influenza Type A virus makes a dramatic change, or antigenic shift, that results in a new or "novel" virus to which the population has no immunity. This emergence of a novel virus is the first step toward a pandemic. Future pandemics may also emerge from other diseases, especially invasive pathogens that Pennsylvanians do not have natural immunity to. While it is unlikely that pandemics and infectious diseases will affect the county, this hazard occurred recently in Spring 2020. It is impossible to predict this type of hazard. The best form of county response is to expect that these events can occur at any time and to constantly evaluate resources and update emergency response plans.

Climate change is increasing the likelihood of future pandemics due to shifts in the behaviors of hosts, vectors, and pathogens, along with changing weather patterns, migration shifts, and changes in livestock and agriculture practices which may allow new transmission pathways to develop. Climate change may also increase the prevalence of waterborne and foodborne illnesses (Kayesa et al, 2024).

Climate change will also force animals into different migration patterns and into new habitats, which will create new interactions and opportunities for pathogens to infect new hosts; this is a concern as most pandemics are driven by diseases that are passed from animals to humans (Baker & Metcalf, 2022). Tick populations may increase as a result of climate changes, especially warmer winters that allow them to be active for longer periods of the year and expand the ranges they can survive in. Since 2019, the Asian long horned tick and the gulf coast tick have been discovered in Pennsylvania possibly due to changing environmental conditions that allow them to survive (Petelin, 2023). Health threats that the CDC projects climate change will increase risk of are:

- Anaplasmosis and Lyme disease
- Dengue
- Fungal diseases
- Hantavirus
- Harmful algae blooms
- Rabies
- Salmonellosis
- Vibriosis
- West Nile virus

It is important to note that even if these changes do not originate in Pennsylvania, the interconnectedness of global commerce and tourism increase the risks of diseases spreading across the world from their origin. Future pandemics and infectious disease outbreaks may emerge from a long list of diseases and invasive pathogens that Pennsylvanians lack natural immunity to, presenting a significant danger.

Looking at the number of historical incidences of pandemic-potential diseases, the probability of future pandemic events can be considered possible according to the Risk Factor Methodology (see Table 4.4-1).

4.3.7.5. Vulnerability Assessment

Certain population groups are at higher risk of pandemic flu infection. These population group includes people 65 years and older, children younger than five years old, pregnant women, and people of any age with certain chronic medical conditions. Such conditions include but are not limited to diabetes, heart disease, asthma and kidney disease (CDC, 2024d). Schools, colleges, convalescent centers, and other institutions serving those younger than five years old and older than 65 years old, are locations conducive to faster transmission of pandemic influenza since populations identified as being at high risk are concentrated at these facilities or because of a large number of people living in close quarters. All communities in Chester County are considered vulnerable to a pandemic event, with the likely greatest impact in terms of population affected and disruption of economic activity occurring at Tredyffrin Township, West Goshen Township, and West Whiteland Township. There are some occupation-specific risks that may make some employees more vulnerable. For example, those working in direct patient care situations are more likely to be exposed to a pandemic disease.

Table 4.3.7-5 below shows the populations aged five or younger in each municipality, along with the population percentage. The municipalities with the largest populations are West Whiteland Township, Tredyffrin Township, Phoenixville Borough, and West Goshen Township. Other municipalities with over 10% of their population aged five or younger are Elverson Borough, East Vincent Borough, Atglen Borough, West Fallowfield Borough, and Oxford Borough.

Table 4.3.7-5 Population Aged 5 or Younger by Municipality (U.S. Census, 2023)

MUNICIPALITY	POPULATION 5 OR UNDER	PERCENT OF POPULATION
Atglen Borough	146	11.1%
Avondale Borough	73	5.7%
Birmingham Township	165	4.0%
Caln Township	727	5.0%
Charlestown Township	171	2.8%
Coatesville City	937	7.0%
Downingtown Borough	532	6.5%
East Bradford Township	419	4.0%

Table 4.3.7-5 Population Aged 5 or Younger by Municipality (U.S. Census, 2023)

MUNICIPALITY	POPULATION 5 OR UNDER	PERCENT OF POPULATION
East Brandywine Township	467	4.7%
East Caln Township	292	5.3%
East Coventry Township	451	6.3%
East Fallowfield Township	366	4.7%
East Goshen Township	705	3.8%
East Marlborough Township	335	4.4%
East Nantmeal Township	78	4.7%
East Nottingham Township	417	4.6%
East Pikeland Township	446	5.3%
Easttown Township	367	3.3%
East Vincent Township	859	11.4%
East Whiteland Township	630	4.4%
Elk Township	68	3.9%
Elverson Borough	168	12.1%
Franklin Township	153	3.5%
Highland Township	62	5.1%
Honey Brook Borough	178	8.5%
Honey Brook Township	360	4.3%
Kennett Township	367	4.2%
Kennett Square Borough	446	7.3%
London Britain Township	205	6.4%
Londonderry Township	159	6.3%
London Grove Township	720	8.1%
Lower Oxford Township	199	3.6%
Malvern Borough	115	3.4%
Modena Borough	19	5.5%
New Garden Township	470	4.1%
Newlin Township	41	3.4%
New London Township	214	3.7%
North Coventry Township	230	2.7%
Oxford Borough	604	10.5%
Parkesburg Borough	382	9.8%
Penn Township	86	1.5%
Pennsbury Township	178	4.6%
Phoenixville Borough	1,166	6.1%
Pocopson Township	165	3.7%
Sadsbury Township	409	9.6%
Schuylkill Township	515	5.8%
South Coatesville Borough	115	6.2%
South Coventry Township	103	3.7%
Spring City Borough	185	5.2%
Thornbury Township	262	8.2%

Table 4.3.7-5 Population Aged 5 or Younger by Municipality (U.S. Census, 2023)

MUNICIPALITY	POPULATION 5 OR UNDER	PERCENT OF POPULATION
Tredyffrin Township	1,485	4.7%
Upper Oxford Township	236	9.3%
Upper Uwchlan Township	748	5.9%
Uwchlan Township	1,211	6.3%
Valley Township	268	3.4%
Wallace Township	148	4.0%
Warwick Township	41	1.6%
West Bradford Township	685	4.7%
West Brandywine Township	335	4.4%
West Caln Township	564	6.3%
West Chester Borough	453	2.4%
West Fallowfield Township	266	10.9%
West Goshen Township	1,110	4.8%
West Grove Borough	205	7.3%
West Marlborough Township	30	3.4%
West Nantmeal Township	104	4.7%
West Nottingham Township	252	9.0%
West Pikeland Township	174	4.3%
West Sadsbury Township	217	8.4%
Westtown Township	866	7.7%
West Vincent Township	457	6.8%
West Whiteland Township	1,538	7.7%
Willistown Township	732	6.5%

Table 4.3.7-6 below shows the populations aged 65 or older in each municipality, along with the population percentage. The municipalities with the largest populations are East Goshen Township, Tredyffrin Township, and West Goshen Township. Both East Goshen Township and Elverson Borough have at least one-third of their population aged 65 or older.

Table 4.3.7-6 Population Aged 65 or Older by Municipality (U.S. Census, 2023)

MUNICIPALITY	POPULATION 65 OR OLDER	PERCENT OF POPULATION
Atglen Borough	94	7.1%
Avondale Borough	128	10.0%
Birmingham Township	853	20.9%
Caln Township	2,615	18.0%
Charlestown Township	870	14.1%
Coatesville City	1,493	11.2%
Downingtown Borough	1,182	14.5%
East Bradford Township	1,835	17.3%
East Brandywine Township	1,309	13.2%
East Caln Township	952	17.3%

Table 4.3.7-6 Population Aged 65 or Older by Municipality (U.S. Census, 2023)

MUNICIPALITY	POPULATION 65 OR OLDER	PERCENT OF POPULATION
East Coventry Township	1,255	17.6%
East Fallowfield Township	993	12.8%
East Goshen Township	6,429	35.0%
East Marlborough Township	1,872	24.7%
East Nantmeal Township	525	31.8%
East Nottingham Township	1211	13.4%
East Pikeland Township	1,675	19.9%
Easttown Township	1,992	18.1%
East Vincent Township	1,160	15.4%
East Whiteland Township	1,739	12.0%
Elk Township	271	15.7%
Elverson Borough	460	33.0%
Franklin Township	746	16.8%
Highland Township	220	18.0%
Honey Brook Borough	233	11.2%
Honey Brook Township	2,428	29.2%
Kennett Township	2,316	26.4%
Kennett Square Borough	909	14.9%
London Britain Township	543	17.0%
Londonderry Township	539	21.3%
London Grove Township	1,053	11.9%
Lower Oxford Township	517	9.3%
Malvern Borough	746	21.8%
Modena Borough	39	11.2%
New Garden Township	1,719	15.0%
Newlin Township	330	27.0%
New London Township	612	10.5%
North Coventry Township	1,589	18.9%
Oxford Borough	1,027	17.8%
Parkesburg Borough	481	12.4%
Penn Township	1,739	30.8%
Pennsbury Township	915	23.6%
Phoenixville Borough	2,438	12.8%
Pocopson Township	937	21.0%
Sadsbury Township	549	12.9%
Schuylkill Township	1,183	13.4%
South Coatesville Borough	212	11.5%
South Coventry Township	442	15.8%
Spring City Borough	458	12.9%
Thornbury Township	411	12.9%
Tredyffrin Township	5,707	17.9%
Upper Oxford Township	430	16.9%

Table 4.3.7-6 Population Aged 65 or Older by Municipality (U.S. Census, 2023)

MUNICIPALITY	POPULATION 65 OR OLDER	PERCENT OF POPULATION
Upper Uwchlan Township	1,376	10.8%
Uwchlan Township	3,298	17.1%
Valley Township	1,129	14.2%
Wallace Township	730	19.5%
Warwick Township	677	26.1%
West Bradford Township	2,022	13.9%
West Brandywine Township	2,249	29.9%
West Caln Township	1,916	21.4%
West Chester Borough	1,840	9.6%
West Fallowfield Township	362	14.9%
West Goshen Township	4,638	19.9%
West Grove Borough	278	10.0%
West Marlborough Township	242	27.2%
West Nantmeal Township	473	21.5%
West Nottingham Township	433	15.4%
West Pikeland Township	544	13.5%
West Sadsbury Township	453	17.6%
Westtown Township	2,143	19.1%
West Vincent Township	936	13.9%
West Whiteland Township	2,574	12.9%
Willistown Township	2,948	26.1%

There are no true environmental impacts of pandemics and infectious disease threats, but there will be significant economic and social costs beyond the possibility of disease-related deaths. Widespread illness may increase the likelihood of shortages of personnel to perform essential community services. In addition, high rates of illness and worker absenteeism occur within the business community, and these contribute to social and economic disruption. Social and economic disruptions could be temporary but may be amplified in today's closely interrelated and interdependent systems of trade and commerce. Social disruption may be greatest when rates of absenteeism impair essential services, such as power, transportation, and communications.

Jurisdictional losses in a pandemic or infectious disease outbreak stem from lost wages and productivity, not losses to buildings or land. Losses are difficult to estimate because the exact rates of absenteeism and cost of treating a widespread disease will depend on the virus or bacterium in question, the availability of vaccination or treatment, and the severity of symptoms. For historical context, the Asian and Hong Kong Flu pandemics killed over 1.5 million people worldwide and caused an estimated $32 billion loss due to lost productivity and medical expenses (Saunders-Hastings & Krewski, 2016). With Pennsylvania's economy so integral to the national economy, economic losses from a pandemic or infectious disease threat could be significant. An avian flu outbreak could cause some economic loss for poultry farmers in Chester

County. According to the 2022 Agricultural Census, livestock, poultry, and product sales make up about 17% of Chester County's agricultural sales. Poultry and egg sales totaled around $31,374,000 in 2022.

The COVID-19 pandemic had significant impacts on economic activity across the country. Thousands of individuals were laid off across the commonwealth as non-essential businesses were forced to close. In just one week, over three million Americans filed for unemployment; the greatest amount ever (Rushe & Holpuch, 2020). The service and hospitality industries were particularly impacted. Construction projects and other businesses were forced to pause operations while many others decided to permanently close. To combat these impacts, the commonwealth and the federal government released relief packages for individuals and businesses. Chester County was awarded approximately $102 million in American Rescue Plan Act (ARPA) funds. This money was spent on Government Services, Mental Health Services, Public Health and Safety Services, Housing Services/Affordable Housing, Infrastructure, Community Services, Skills Training, Food Programs, Library Services, and Childcare. Funding was provided to school districts, nonprofits, local businesses, fire/EMS companies, and both county and municipal entities.

The COVID-19 pandemic has also spurred conversations around creating safe public spaces and work environments in regard to pandemic and infectious disease. The International Code Council (ICC) published an overview of code compliance that helps facilitate response to pandemic instances. For example, properly designed, installed, and maintained ventilation systems can help in mitigating the spread of pathogens (ICC, 2020). Many building owners have chosen to inspect and upgrade these systems during shelter in place orders. This is essential towards stopping the spread of pathogens in high density residential buildings and ensures workers will return to a safe environment when it is safe to work in offices again.

4.3.7.6. Equity in Vulnerable Communities

Equity considerations during pandemics and infectious disease outbreaks are crucial as there are a number of populations at an increased risk. Low-income populations are more likely to lack access to quality healthcare and have pre-existing health conditions. Furthermore, these populations may be unable to follow quarantine measures as they are essential workers. Municipalities face a variety of risks in these cases:

- Concentrations of low-income residents: West Chester Borough, City of Coatesville, Oxford Borough, and City of Phoenixville.
- At least one-quarter of population without health insurance: West Fallowfield Township and Honey Brook Township.
- Over one-third of population 65 and older: East Goshen Township, Kennett Township, West Brandywine Township, and Willistown Township.
- Households with inadequate broadband connections will have inequitable access to both remote work and remote learning.

Having measures and protections in place for these groups is essential to mitigate and reduce the extensivity of pandemic and infectious disease events.

4.3.8. Radon Exposure



4.3.8.1. Location and Extent

Radioactivity caused by airborne radon has been recognized for many years as an important component in the natural background radioactivity exposure of humans, but it was not until the 1980s that the wide geographic distribution of elevated values in houses and the possibility of extremely high radon values in houses was recognized. In 1984, routine monitoring of employees leaving the Limerick nuclear power plant near Reading, Pennsylvania, showed that the readings on an employee frequently exceeded expected radiation levels, yet only natural, non-fission-product radioactivity was detected on him. Radon levels in his home were detected around 2,500 pCi/L (picocuries per Liter), much higher than the 4 pCi/L guideline of the Environmental Protection Agency or even the 67 pCi/L limit for uranium miners. As a result of this event, the Reading Prong section of Pennsylvania where the employee lived became the focus of the first large-scale radon scare in the world.

Radon is a gas that cannot be seen or smelled. It is a noble gas that originates from the natural radioactive decay of uranium and thorium. Like other noble gases (e.g., helium, neon, and argon), radon forms essentially no chemical compounds and tends to exist as a gas or as a dissolved atomic constituent in groundwater. Two isotopes of radon are significant in nature, 222Rn and 220Rn, formed in the radioactive decay series of 238U and 232Th, respectively. The isotope thoron (i.e. 220Rn) has a half-life (time for decay of half of a given group of atoms) of 55 seconds, barely long enough for it to migrate from its source to the air inside a house and poses a health risk. However, radon (i.e. 222Rn), which has a half-life of 3.8 days, is a widespread hazard (DOI, 1992).

The distribution of radon is correlated with the distribution of radium (i.e. 226Ra), its immediate radioactive parent, and with uranium, its original ancestor. Due to the short half-life of radon, the distance that radon atoms can travel from their parent before decay is generally limited to distances of feet or tens of feet (DOI, 1992).

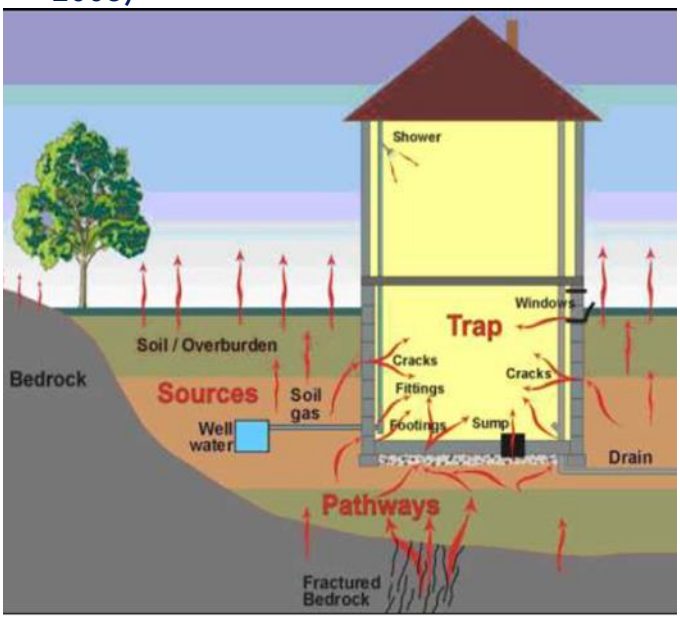
Three sources of radon in houses are now recognized (shown in Figure 4.3.8-1):

- Radon in soil air that flows into the house.
- Radon dissolved in water from private wells and exsolved during water usage; this is rarely a problem in Pennsylvania; and
- Radon emanating from uranium-rich building materials (e.g. concrete blocks or gypsum wallboard); this is not known to be a problem in Pennsylvania.

High radon levels were initially thought to be exacerbated in houses that are tightly sealed, but it is now recognized that rates of air flow into and out of houses, plus the location of air inflow and the radon content of air in the surrounding soil, are key factors in radon concentrations. Outflows of air from a house, caused by a furnace, fan, thermal "chimney" effect, or wind effects, require that air be drawn into the house to compensate. If the upper part of the house is tight

enough to impede influx of outdoor air (radon concentration generally <0.1 pCi/L), then an appreciable fraction of the air may be drawn in from the soil or fractured bedrock through the foundation and slab beneath the house, or through cracks and openings for pipes, sumps, and similar features (see figure 4.3.8-1). Soil gas typically contains between a few hundred to a few thousand pCi/L of radon; therefore, even a small rate of soil gas inflow can lead to elevated radon concentrations in a house.

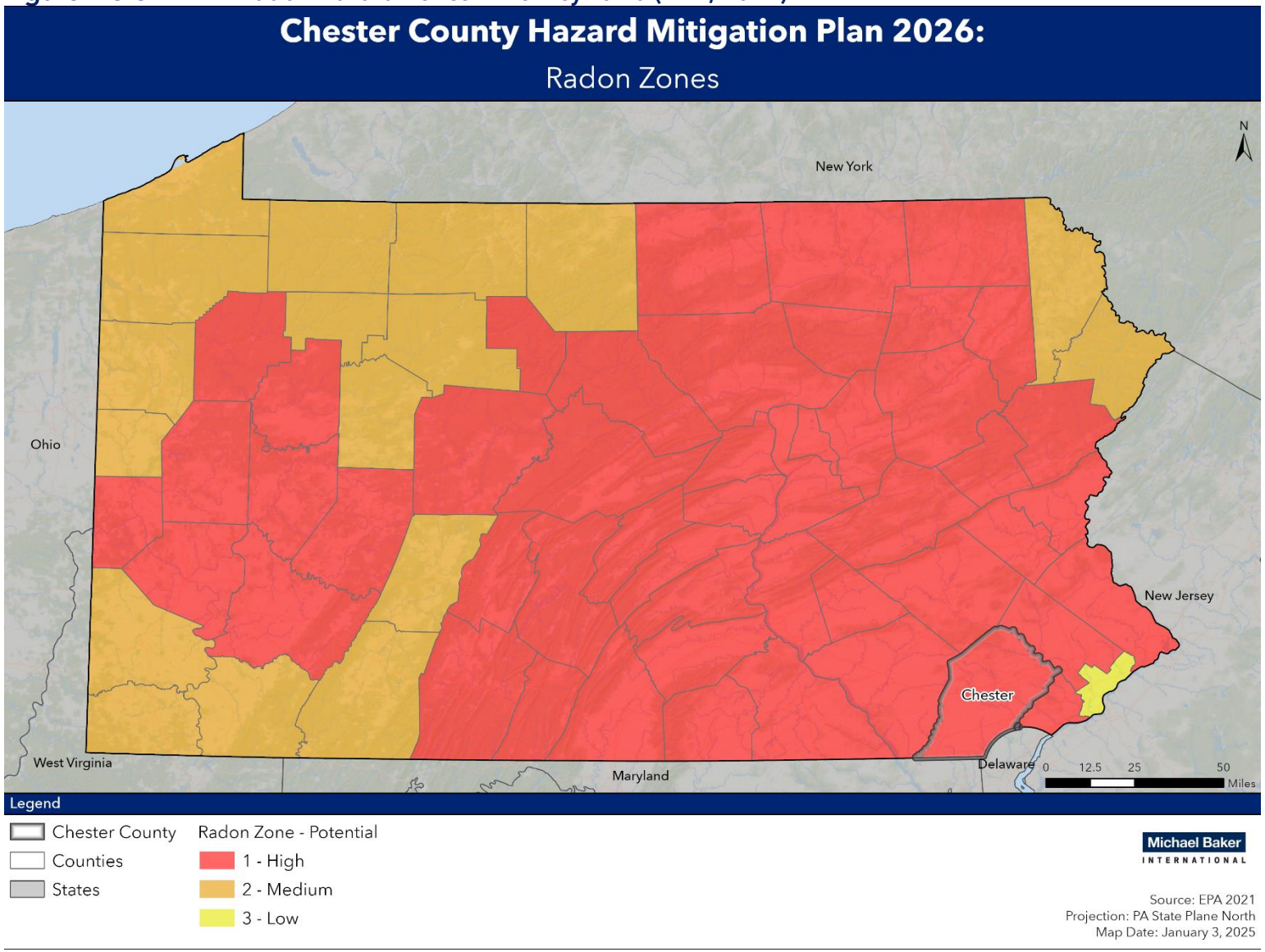
Figure 4.3.8-1 Sketch of Radon Entry Points into a House (Arizona Geological Survey, 2006)



The radon concentration of soil gas depends upon several soil properties, the importance of which is still being evaluated. In general, ten to fifty percent of newly formed radon atoms escape the host mineral of their parent radium and gain access to the air-filled pore space. The radon content of soil gas clearly tends to be higher in soils containing higher levels of radium and uranium, especially if the radium occupies a site on or near the surface of a grain from which the radon can easily escape. The amount of pore space in the soil and its permeability for air flow, including cracks and channels, are important factors determining radon concentration in soil gas and its rate of flow into a house. Soil depth and moisture content, mineral host and form for radium, and other soil properties may also be important. For houses built on bedrock, fractured zones may supply air having radon concentrations similar to those found in deep soil.

Each county in Pennsylvania is classified as having a *low*, *moderate*, or *high* radon hazard potential. Chester County is classified as having a high hazard, meaning there is a predicted indoor radon level greater than 4 pCi/L (see Figure 4.3.8-2).

Figure 4.3.8-2 Radon Hazard Zones in Pennsylvania (EPA, 2021)



Areas where houses have high levels of radon can be divided into three groups in terms of uranium content in rock and soil:

- Areas of very elevated uranium content (>50 ppm) around uranium deposits and prospects. Although very high levels of radon can occur in such areas, the hazard normally is restricted to within a few hundred feet of the deposit. In Pennsylvania, such localities occupy an insignificant area.
- Areas of common rocks containing a higher-than-average uranium content (5 to 50 ppm). In Pennsylvania, such rock types include granitic and felsic alkali igneous rocks and black shales. In the Reading Prong, high uranium values in rock or soil and high radon levels in houses are associated with Precambrian granitic gneisses commonly containing 10 to 20 ppm uranium but locally containing more than 500 ppm uranium. In Pennsylvania, elevated uranium occurs in black shales of the Devonian Marcellus Formation and possibly the Ordovician Martinsburg Formation. High radon values are locally present in areas underlain by these formations.
- Areas of soil or bedrock that have normal uranium content but properties that promote high radon levels in houses. This group is incompletely understood at present. Relatively high soil permeability can lead to high radon levels, the clearest example being houses built on glacial eskers. Limestone-dolomite soils also appear to be predisposed for high radon levels in houses, perhaps because of the deep clay-rich residuum in which radium is concentrated by weathering on iron oxide or clay surfaces, coupled with moderate porosity and permeability.

Figures 4.3.8-3, 4.3.8-4, 4.3.8-5, and 4.3.8-6 show the radon test data available for Chester County by zip code. As shown in Figure 4.3.8-3, most communities have average basement radon readings of over 4.0 pCi/L and many communities in the western part of the county are above the threshold of action of 8.0 pCi/L. Most communities had maximum basement readings over 50 pCi/L (see Figure 4.3.9-4).

There have been five basement recordings over 1,000 pCi/L recorded in Chester County's testing database. The highest recorded reading was 1669 pCi/L in Coatesville, followed by 1530 pCi/L, 1468 pCi/L, and 1329.9 pCi/L all recorded in Parkesburg. The fifth highest level recorded was 1,122.8 in Coatesville. All these recordings occurred between 1997 and 2002.

Figure 4.3.8-3 Chester County Average Basement Radon Test Results, 2024

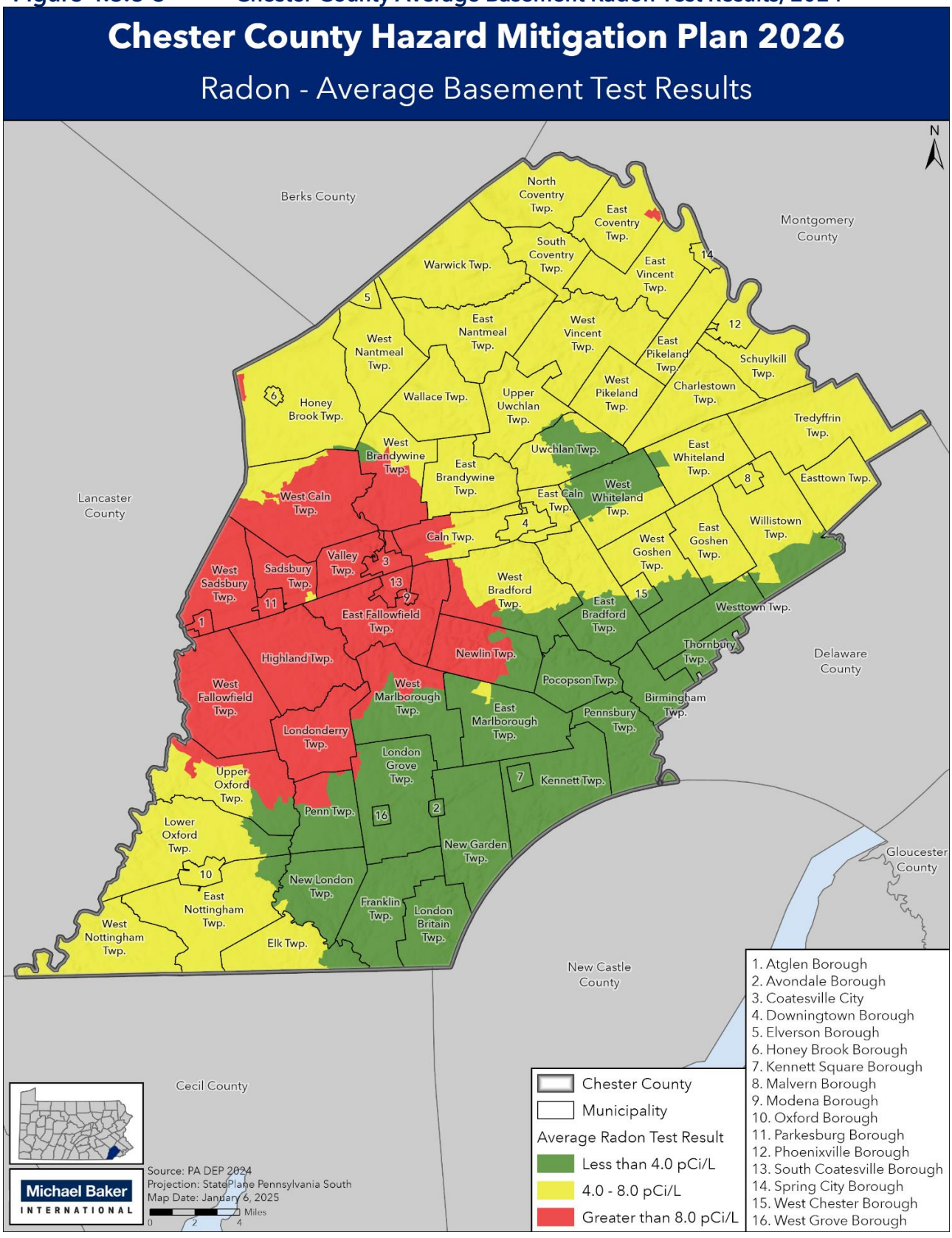


Figure 4.3.8-4 Chester County Maximum Basement Radon Test Results, 2024

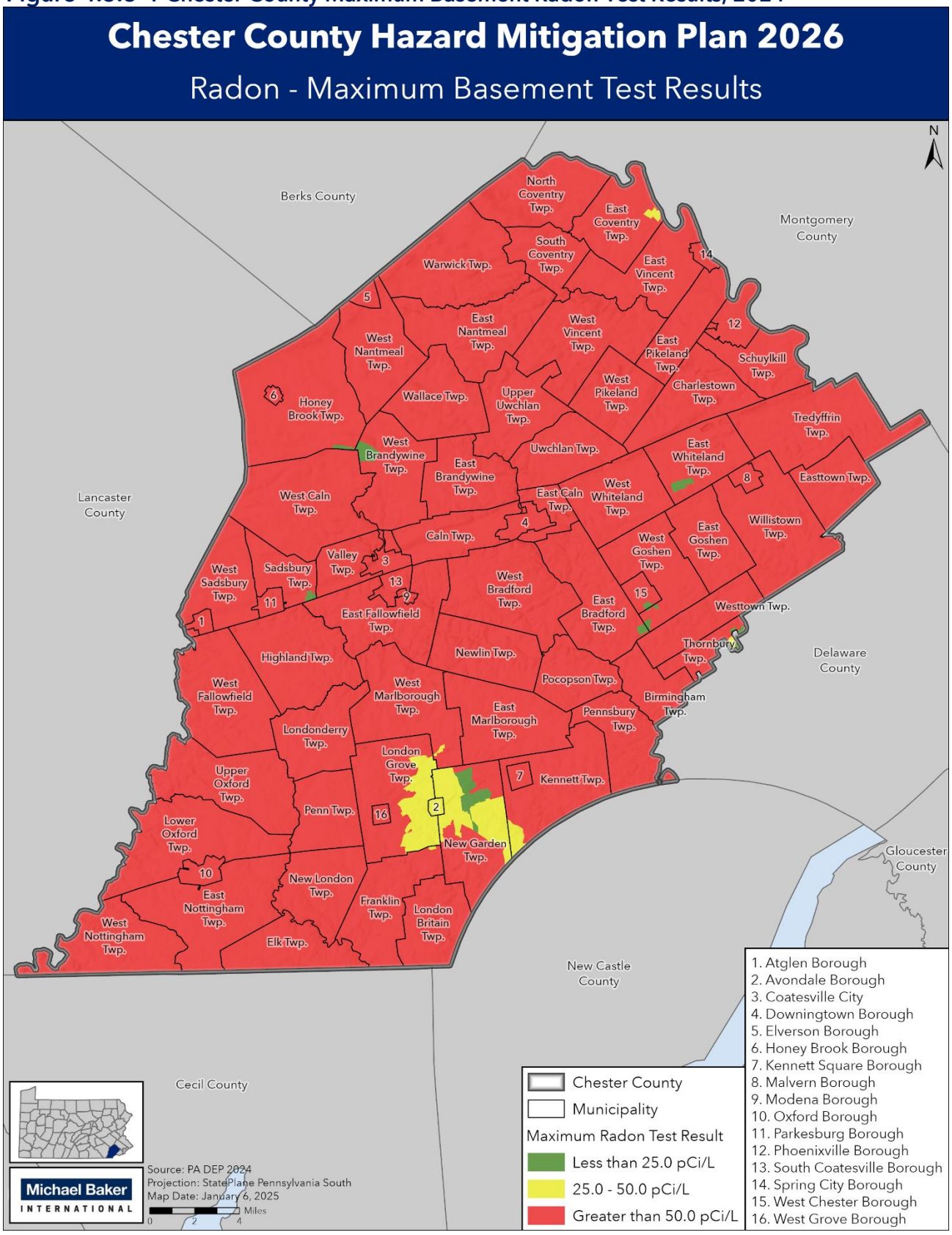


Figure 4.3.8-5 Chester County Average First Floor Radon Test Results, 2024

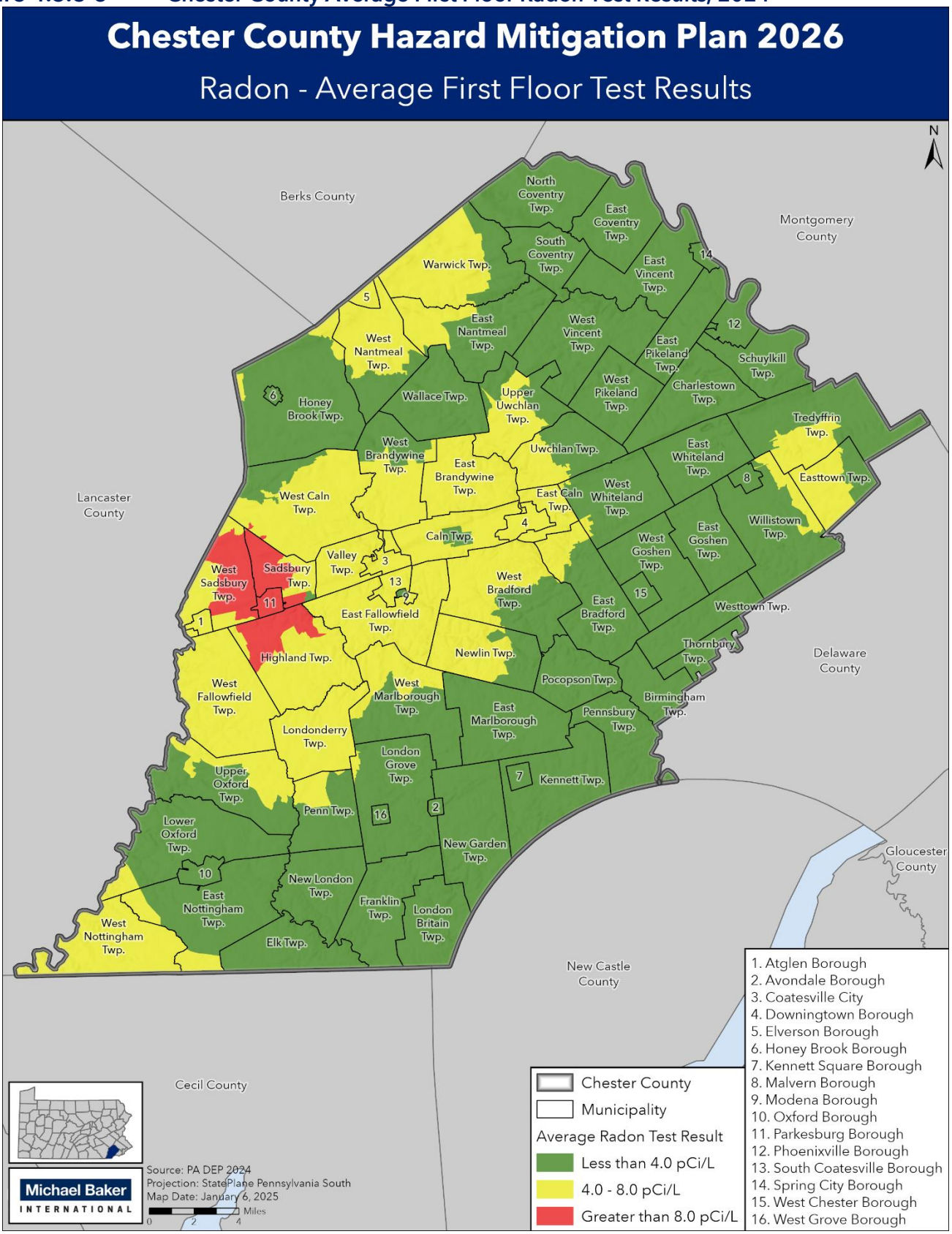
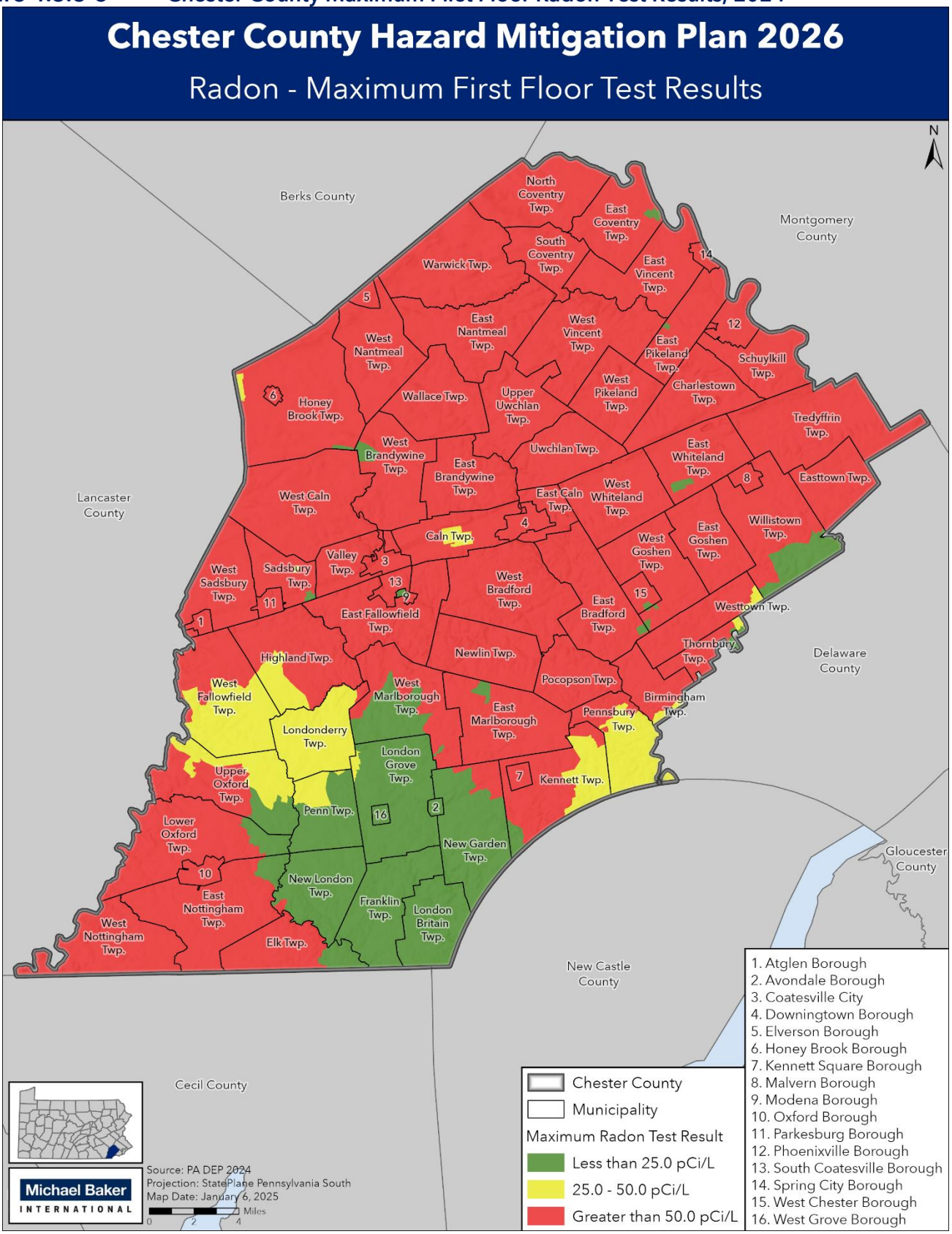


Figure 4.3.8-6 Chester County Maximum First Floor Radon Test Results, 2024



4.3.8.2. Range of Magnitude

Exposure to radon is the second leading cause of lung cancer after smoking. It is the number one cause of lung cancer among non-smokers. Radon is responsible for about 21,000 lung cancer deaths every year; approximately 2,900 of which occur among people who have never smoked. Lung cancer is the only known effect on human health from exposure to radon in air and thus far, there is no evidence that children are at greater risk of lung cancer than adults. The main hazard is from the radon daughter products (218Po, 214Pb, 214Bi), which may become attached to lung tissue and induce lung cancer by their radioactive decay (EPA, 2016).

According to the EPA, the average radon concentration in the indoor air of homes nationwide is about 1.3 pCi/L. The EPA recommends homes be fixed if the radon level is 4 pCi/L or more. However, because there is no known safe level of exposure to radon, the EPA also recommends that Americans consider fixing their home for radon levels between 2 pCi/L and 4 pCi/L (EPA, 2016). Table 4.3.8-1 shows the relationship between various radon levels, probability of lung cancer, comparable risks from other hazards, and action thresholds. As is shown in Table 4.3.9-1, a smoker exposed to radon has a much higher risk of lung cancer.

Table 4.3.8-1 Radon risk for Smokers and Non-Smokers (EPA, 2016).

RADON LEVEL (pCi/L)	IF 1,000 PEOPLE WERE EXPOSED TO THIS LEVEL OVER A LIFETIME…*	RISK OF CANCER FROM RADON EXPOSURE COMPARES TO…**	ACTION THRESHOLD
SMOKERS			
20	About 260 people could get lung cancer	250 times the risk of drowning	Fix structure
10	About 150 people could get lung cancer	200 times the risk of dying in a home fire	
8	About 120 people could get lung cancer	30 times the risk of dying in a fall	
4	About 62 people could get lung cancer	5 times the risk of dying in a car crash	
2	About 32 people could get lung cancer	6 times the risk of dying from poison	Consider fixing structure between 2 and 4 pCi/l
1.3	About 20 people could get lung cancer	(Average indoor radon level)	Reducing radon levels 2pCi/l is difficult
0.4	About 3 people could get lung cancer	(Average outdoor radon level)	
NON-SMOKERS			
20	About 36 people could get lung cancer	35 times the risk of drowning	Fix structure
10	About 18 people could get lung cancer	20 times the risk of dying in a home fire	
8	About 15 people could get lung cancer	4 times the risk of dying in a fall	
4	About 7 people could get lung cancer	The risk of dying in a car crash	
2	About 4 people could get lung cancer	The risk of dying from poison	Consider fixing structure between 2 and 4 pCi/l
1.3	About 2 people could get lung cancer	(Average indoor radon level)	Reducing radon levels below 2pCi/l is difficult
0.4	-	(Average outdoor radon level)	

NOTE: Risk may be lower for former smokers.

* Lifetime risk of lung cancer deaths from EPA Assessment of Risks from Radon in Homes (EPA 402-R-03-003).

The worst-case scenario for radon exposure would be that a large area of tightly sealed homes provided residents with high levels of exposure over a prolonged period without the residents being aware. This scenario to exposure then could lead to many people with cancer attributed to the radon exposure.

The potential impacts of radon exposure community lifelines are as follows:

Table 4.3.8-2 Most Likely Lifelines Impacted by Radon Exposure

LIFELINES	IMPACTS
	Direct exposure to radon can pose serious health risks and impact the safety of the community.
	Shelters may be at risk if exposed to radon.
	Exposure will increase the chances of lung cancer-causing potential increase in the number of services and resources needed if communities develop more instances of cancer.

4.3.8.3. Past Occurrence

Current data on abundance and distribution of radon as it affects individual houses in the state of Pennsylvania in general is considered incomplete and potentially biased. Chester County is no exception. The EPA has estimated that the national average indoor radon concentration is 1.3 pCi/L and the level for action is 4.0 pCi/L; however, they have estimated that the average indoor concentration in Pennsylvania basements is about 7.1 pCi/L and 3.6 pCi/L on the first floor (PA DEP, 2019).

The PA DEP Bureau of Radiation Protection provides information for homeowners on how to test for radon in their houses. If a test results in radon concentrations over 4 pCi/L, then the Bureau works to help the homeowners make repairs to their houses to mitigate against high radon levels. The Bureau has testing data going back to 1986 and their results are provided by zip code.

In Chester County, there have been 311,136 tests reported to the Bureau. Of those tests, 273,952 have been basement tests. Figures 4.3.8-3, 4.3.8-4, 4.3.8-5, and 4.3.8-6 in **Section 4.3.8.1** show the radon test data available for Chester County by zip code, with municipal boundaries shown. As shown in Figure 4.3.8-3, most communities have average basement radon readings of over 4.0 pCi/L and many communities in the western part of the county are above the threshold of action of 8.0 pCi/L. Most communities had maximum basement readings over 50 pCi/L (see Figure 4.3.8-4).

4.3.8.4. Future Occurrence

Radon exposure retains a significant probability given present soil, geologic, and geomorphic factors in Chester County. Future occurrence of high radon level hazards can be considered *likely* as defined by the Risk Factor Methodology probability criteria (see Table 4.4-1). Development in areas where previous radon levels have been significantly high will continue to

be more susceptible to exposure. However, new incidents of concentrated exposure may occur with future development or deterioration of older structures. Exposure can be limited with proper testing for both past and future development and appropriate mitigation measures.

Climate change and radon exposure, though distinct issues, intersect in ways that can influence public health. As climate change alters precipitation patterns and increases the frequency of extreme weather events, soil moisture levels fluctuate, which can impact radon release from the ground. Drier conditions can enhance radon migration into homes, while wetter soils might impede it. Additionally, rising temperatures often lead to increased use of air conditioning and improved home insulation, resulting in tightly sealed buildings with reduced ventilation. This can trap radon indoors, elevating exposure risks. Extreme weather events, such as heavy rainfall or flooding, can damage building foundations and radon mitigation systems, creating new pathways for radon entry and necessitating repairs. Addressing these intertwined challenges requires integrating radon mitigation into climate adaptation strategies, ensuring that efforts to improve energy efficiency and building resilience also consider radon risk reduction.

4.3.8.5. Vulnerability Assessment

Structures in Chester County, particularly in high vulnerability areas as shown in Figures 4.3.8-5 and 4.3.8-6, could be susceptible to moderate levels of radon.

Smokers can be up to ten times more vulnerable to lung cancer from high levels of radon depending on the level of radon they are exposed to. Older houses that have crawl spaces or unfinished basements are more vulnerable as well because of the increased exposure to soils which could be releasing higher levels of radon gas. Table 4.3.8-3 below shows the number of housing units that are at least 55 years old in each municipality. Modena Borough has the largest concentration of these units, with 90.3% of all units fitting into this category. West Chester Borough has the most total units with 4,324, which is 58.7% of all housing units in the borough.

Table 4.3.8-3 Housing Units At Least 55 Years Old by Municipality (U.S. Census Bureau, 5-Year ACS, 2023)

MUNICIPALITY	UNITS	PERCENT OF TOTAL UNITS
Atglen Borough	126	31.1%
Avondale Borough	338	67.1%
Birmingham Township	214	13.7%
Caln Township	1,596	28.2%
Charlestown Township	320	15.0%
Coatesville City	3,280	61.4%
Downingtown Borough	2,118	57.9%
East Bradford Township	502	13.7%
East Brandywine Township	571	16.5%
East Caln Township	399	14.9%
East Coventry Township	877	32.4%
East Fallowfield Township	581	21.7%
East Goshen Township	1,316	14.4%

Table 4.3.8-3 Housing Units At Least 55 Years Old by Municipality (U.S. Census Bureau, 5-Year ACS, 2023)

MUNICIPALITY	UNITS	PERCENT OF TOTAL UNITS
East Marlborough Township	687	23.6%
East Nantmeal Township	248	38.9%
East Nottingham Township	449	15.5%
East Pikeland Township	1,156	33.4%
Easttown Township	2,124	52.6%
East Vincent Township	843	33.2%
East Whiteland Township	1,363	24.7%
Elk Township	153	25.8%
Elverson Borough	173	28.0%
Franklin Township	211	12.3%
Highland Township	225	48.1%
Honey Brook Borough	368	47.1%
Honey Brook Township	547	17.4%
Kennett Township	712	19.5%
Kennett Square Borough	1,646	70.1%
London Britain Township	214	20.0%
Londonderry Township	157	16.7%
London Grove Township	474	16.1%
Lower Oxford Township	320	26.7%
Malvern Borough	744	42.5%
Modena Borough	130	90.3%
New Garden Township	703	17.1%
Newlin Township	164	35.0%
New London Township	259	12.1%
North Coventry Township	1,850	51.5%
Oxford Borough	840	36.6%
Parkesburg Borough	601	38.5%
Penn Township	171	7.6%
Pennsbury Township	339	23.9%
Phoenixville Borough	4,601	49.2%
Pocopson Township	259	23.1%
Sadsbury Township	435	25.9%
Schuylkill Township	1,487	47.0%
South Coatesville Borough	409	53.5%
South Coventry Township	356	32.2%
Spring City Borough	1,618	77.3%
Thornbury Township	203	17.2%
Tredyffrin Township	5,742	44.4%
Upper Oxford Township	268	30.8%
Upper Uwchlan Township	154	3.7%

Table 4.3.8-3 Housing Units At Least 55 Years Old by Municipality (U.S. Census Bureau, 5-Year ACS, 2023)

MUNICIPALITY	UNITS	PERCENT OF TOTAL UNITS
Uwchlan Township	1,354	17.5%
Valley Township	1,104	36.8%
Wallace Township	295	24.2%
Warwick Township	592	54.0%
West Bradford Township	1,031	20.1%
West Brandywine Township	548	18.3%
West Caln Township	604	17.7%
West Chester Borough	4,324	58.7%
West Fallowfield Township	297	34.6%
West Goshen Township	3,266	34.5%
West Grove Borough	463	49.6%
West Marlborough Township	333	72.5%
West Nantmeal Township	248	31.3%
West Nottingham Township	322	28.0%
West Pikeland Township	333	24.0%
West Sadsbury Township	293	34.2%
Westtown Township	1,487	33.9%
West Vincent Township	419	16.7%
West Whiteland Township	1,863	22.7%
Willistown Township	1,912	42.0%

Additionally, houses that rely on wells for their water may face additional risk, although this type of exposure is low and rare in Pennsylvania (US EPA, 2016). Table 4.3.8-4 shows the number of domestic wells in each municipality. There are over 23,000 domestic wells in Chester County. West Caln Township is the only municipality with over 1,000 wells, while West Bradford Township (879) and West Brandywine Township (800) are the only others with at least 800.

Table 4.3.8-4 Domestic Wells by Municipality (PaGWIS, 2025)

MUNICIPALITY	Number of Wells
Atglen Borough	10
Avondale Borough	27
Birmingham Township	240
Caln Township	346
Charlestown Township	514
Coatesville City	20
Downingtown Borough	30
East Bradford Township	507
East Brandywine Township	578
East Caln Township	54
East Coventry Township	558
East Fallowfield Township	585
East Goshen Township	291

Table 4.3.8-4 Domestic Wells by Municipality (PaGWIS, 2025)

MUNICIPALITY	Number of Wells
East Marlborough Township	722
East Nantmeal Township	214
East Nottingham Township	532
East Pikeland Township	451
Easttown Township	422
East Vincent Township	285
East Whiteland Township	138
Elk Township	181
Elverson Borough	58
Franklin Township	424
Highland Township	171
Honey Brook Borough Honey Brook Township	490*
Kennett Township	650
Kennett Square Borough	36
London Britain Township	546
Londonderry Township	165
London Grove Township	512
Lower Oxford Township	470
Malvern Borough	15
Modena Borough	36
New Garden Township	596
Newlin Township	299
New London Township	378
North Coventry Township	593
Oxford Borough	18
Parkesburg Borough	38
Penn Township	372
Pennsbury Township	410
Phoenixville Borough	81
Pocopson Township	345
Sadsbury Township	257
Schuylkill Township	184
South Coatesville Borough	10
South Coventry Township	298
Spring City Borough	9
Thornbury Township	193
Tredyffrin Township	238
Upper Oxford Township	282
Upper Uwchlan Township	637
Uwchlan Township	245
Valley Township	238
Wallace Township	556
Warwick Township	310

Table 4.3.8-4 Domestic Wells by Municipality (PaGWIS, 2025)

MUNICIPALITY	Number of Wells
West Bradford Township	879
West Brandywine Township	800
West Caln Township	1,031
West Chester Borough	141
West Fallowfield Township	229
West Goshen Township	417
West Grove Borough	17
West Marlborough Township	159
West Nantmeal Township	295
West Nottingham Township	249
West Pikeland Township	443
West Sadsbury Township	335
Westtown Township	253
West Vincent Township	531
West Whiteland Township	316
Willistown Township	415
Unknown	35
TOTAL	23,410
*Wells reported as "Honey Brook"	

Proper testing for radon levels should be completed throughout Chester County, especially in the areas of higher incidence levels and for vulnerable populations that face the contributing risks described above. This testing will determine the level of vulnerability that residents face in their homes, as well as in their businesses and schools.

Figure 4.3.8-7 Radon System Manometer in Basement (Scott Home Inspection, 2017) (IRadon, 2024



Figure 4.3.8-8 Radon Mitigation Systems (Scott Home Inspection, 2017) (IRadon, 2024)



The EPA determines that an average radon mitigation system costs $1,000. The EPA also states that current state surveys show that one home in five has elevated radon levels. Using this methodology, radon loss estimation is factored by assuming that 20% of the buildings within the zip codes with elevated rest results have elevated radon values and each would require a radon mitigation system installed at the EPA estimated average of $1,000. According to the Pennsylvania State Hazard Mitigation Plan, Chester County has 139,296 buildings in areas with high radon test results, while approximately 20%, or 27,859 of these buildings will be impacted. The estimated costs for radon mitigation totaled $33,431,040.

Radon exposure has minimal environmental impacts. Due to the relatively short half-life of radon, it tends to only affect living and breathing organisms such as humans or pets which are routinely in contained areas (i.e. basement or house) where the gas is released.

4.3.8.6. Equity in Vulnerable Communities

Communities with an aged housing stock are the most likely to be exposed to radon exposure as radon creeps in through poor foundations or ventilation systems. Low-income communities are more likely to have aged housing stock, so proper awareness is essential. Public awareness materials should also be provided in secondary languages in municipalities such as West Chester Borough and New Garden Township who have higher concentrations of households with Limited English Proficiency. Low-income communities may also be at an increased risk as home repairs, testing kits, and mitigation systems are significant financial investments. This puts West Chester Borough, City of Coatesville, Oxford Borough, and City of Phoenixville at higher risk due to concentrations of low-income residents. Additionally, those who live in rural areas, where geological conditions may lead to higher radon levels, are at an increased risk.

4.3.9. Tornado, Windstorm

4.3.9.1. Location and Extent



Tornadoes and potentially damaging high winds occur throughout Pennsylvania. Tornados and high winds can be experienced at any location in Chester County. This is underscored by public survey respondents ranking tornado/windstorm as one of the top five hazards threatening the county.

A tornado, a violently rotating funnel-like vortex, is an extraordinary feature of severe thunderstorms. A condensation funnel does not need to reach the ground for a tornado to be present; a debris cloud beneath a thunderstorm is all that is needed to confirm the presence of a tornado, even in the total absence of a funnel. While the extent of tornado damage is usually localized, the extreme winds of this vortex can be among the most destructive on earth when they move through populated, developed areas.

Tornadoes can occur at any time during the day or night but are most frequent during late afternoon into early evening, the warmest hours of the day. May to August is the most likely time for tornadoes to occur in Pennsylvania. Tornado movement is characterized in two ways: direction and speed of spinning winds and forward movement of the tornado, also known as the storm track. Rotational wind speeds of the vortex can range from 100 mph to more than 250 mph. In addition, the speed of forward motion can be zero to 45 or 50 mph. Therefore, some estimates place the maximum velocity (combination of ground speed, wind speed, and upper winds) of tornadoes at about 300 mph.

The forward motion of the tornado path can be a few hundred yards or several hundred miles in length. The width of tornadoes can vary greatly but generally ranges from less than 100 feet to over a mile in width. Some tornadoes never touch the ground and are short-lived, while others may touch the ground several times.

Straight-line winds often accompany tornados and are caused by the movement of air from areas of higher pressure to areas of lower pressure – the greater the difference in pressure, the stronger the winds. Windstorms are generally defined as sustained wind speeds of 40 mph or greater lasting for one hour or longer, or winds of 58 mph or greater for any duration.

4.3.9.2. Range of Magnitude

The destruction caused by tornadoes ranges from light to catastrophic depending on the intensity, size, and duration of the storm. Typically, tornadoes cause the greatest damage to structures of light construction, such as mobile homes. The impact of tornado hazards is ultimately dependent on the population or amount of property present in the area in which the tornado occurs. Tornado events are often so severe that property loss or human fatality is typically inevitable if evacuation or proper construction standards are not implemented.

Since 2007, the Enhanced Fujita Scale (or the EF-Scale) has been used in the United States to describe the magnitude of tornadoes. Prior to 2007, the Fujita Scale (F-Scale) was commonly used to describe magnitude. The EF scale is based on new information about the relationship between wind speed, given in miles per hour (mph), and corresponding damage. It categorizes tornadoes from EF0 to EF5, with EF0 being the lowest magnitude, yet most commonly occurring type of tornado. The strongest tornado recorded in Chester County was a category F3. Table 4.3.9-1 shows the relationship between the EF- and F- Scales. The types of damage that can be expected with each category of tornado are described in Table 4.3.9-2.

Table 4.3.9-1 Enhanced Fujita Scale (EF-Scale) categories with associated wind speeds

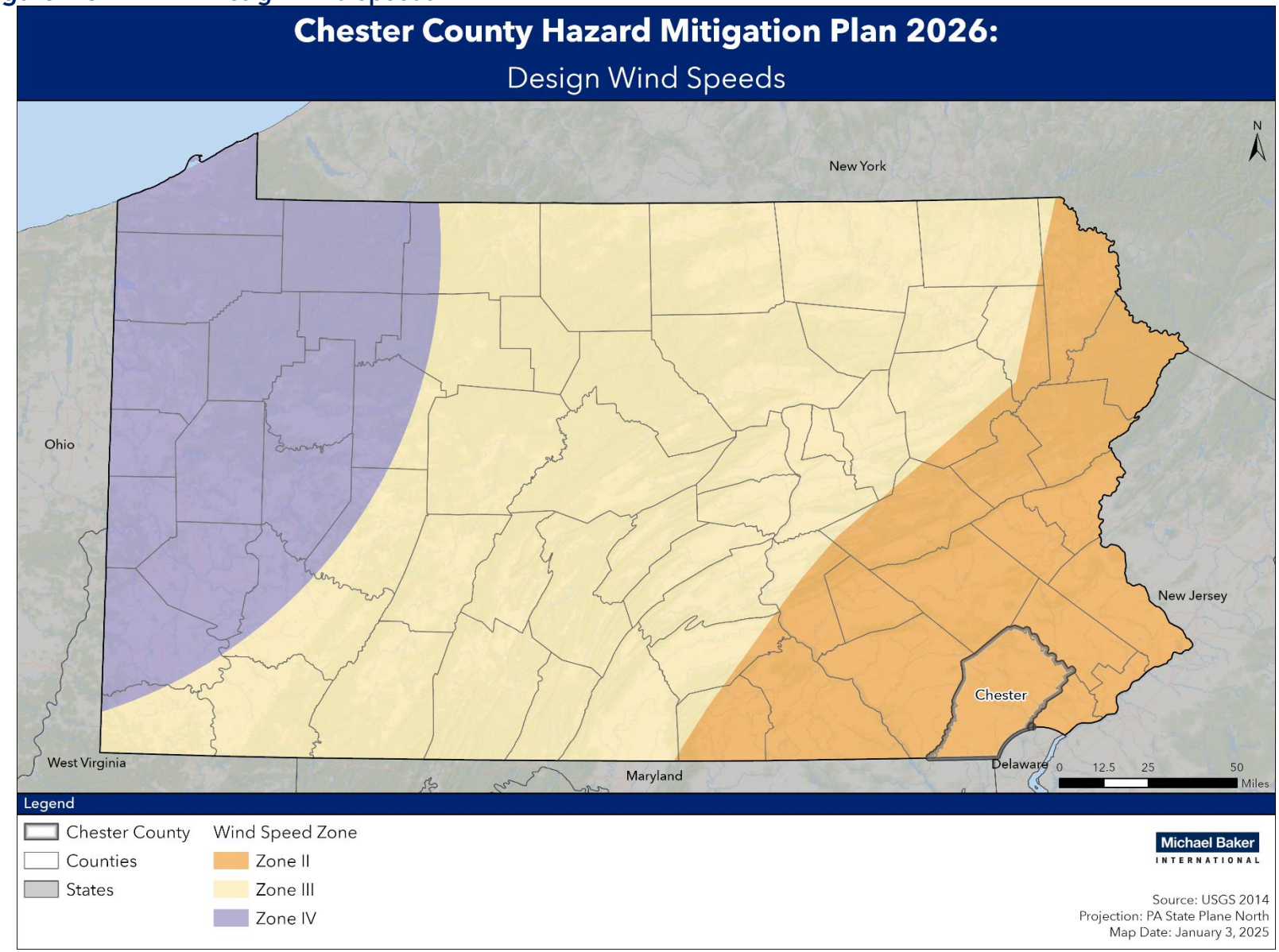
FUJITA SCALE		ENHANCE FUJITA SCALE	
F NUMBER	3-SECOND GUST (MPH)	EF NUMBER	3-SECOND GUST (MPH)
0	45-78	0	65-85
1	79-117	1	86-110
2	118-161	2	111-135
3	162-209	3	136-165
4	210-261	4	166-200
5	262-317	5	Over 200

Table 4.3.9-2 Expected Tornado Damages

F OR EF SCALE	EXAMPLES OF POSSIBLE DAMAGE
0	Light damage. Some damage to chimneys; broken tree branches; shallow-rooted trees pushed over; damage to sign boards.
1	Moderate damage. Roof surface peeled off; mobile homes pushed off foundations or overturned; moving automobiles pushed off roads.
2	Considerable damage. Roofs torn off frame houses; mobile homes demolished; boxcars pushed over; large trees snapped or uprooted; light-object missiles generated.
3	Severe damage. Roofs and some walls torn off well-constructed houses; trains overturned; most trees in forest uprooted; cars lifted off ground and thrown.
4	Devastating damage. Well-constructed houses leveled; structures with weak foundations damaged or destroyed with an expanded debris field; cars overturned and scattered, and miscellaneous debris generated at various velocities and distances.
5	Catastrophic damage. Well-built houses swept away completely, leaving only the slab foundations.

Figure 4.3.9-1 shows wind speed zones developed by the American Society of Civil Engineers based on 40 years of tornado history and over 100 years of hurricane history. It identifies wind speeds that could occur across the United States to be used as the basis for design and evaluation of the structural integrity of shelters and critical facilities. Chester County falls in Zone II, meaning the whole county is susceptible to winds up to 160 miles per hour. The hurricane susceptibility shown on the map is discussed in **Section 4.3.5**. Shelters and critical facilities should be able to withstand a three second gust of up to 160 mph, regardless of whether the gust is the result of a tornado, hurricane, tropical storm, or windstorm event. In Chester County, all new residential and commercial structures are required to be constructed per the International Building Code (IBC), which requires structures to be designed to a 90-mph wind speed.

Figure 4.3.9-1 Design Wind Speeds



Since tornado and windstorm events are typically localized, environmental impacts are rarely widespread. However, where these events occur, severe damage to buildings and plant species is likely. Tree damage is commonly seen after high wind events. This includes loss of trees and an increased threat of wildfire in areas where dead trees are not removed. Hazardous material facilities should meet design requirements to withstand a three-second gust of up to 160 mph to prevent the release of hazardous materials into the environment.

The potential impacts of a tornado or windstorm on community lifelines are as follows:

Table 4.3.9-3 Most Likely Lifelines Impacted by Tornadoes or Windstorms

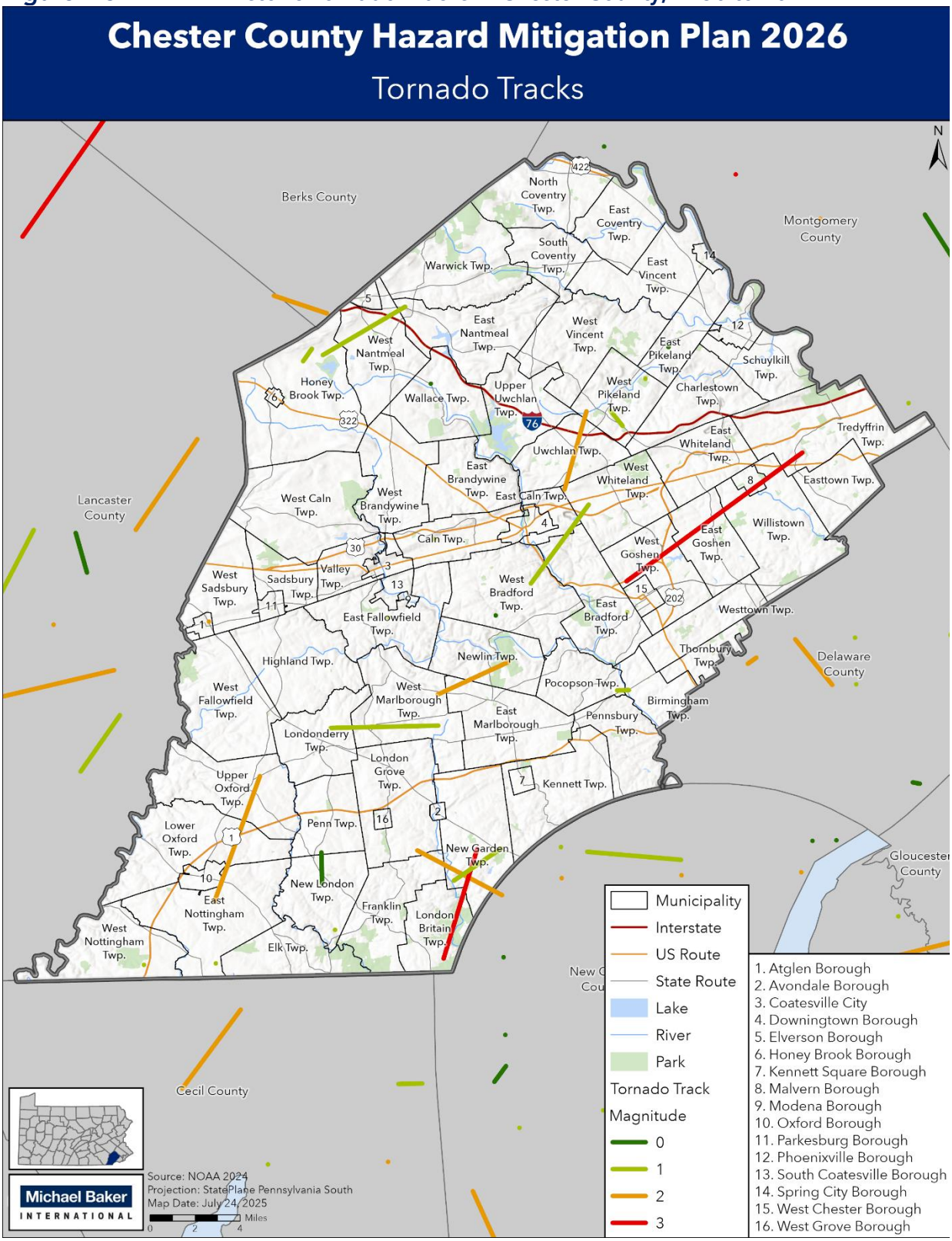
LIFELINES	NOTES
	Government officials, including police and fire, will be needed for community safety due to potential harm from tornadoes, high winds, and associated weather conditions.
	Tornadoes and windstorms cause significant damage to agricultural operations and structures.
	Energy lifelines may be impacted in response and recovery phases due to potential direct damage from tornadoes and windstorms.
	Material storage facilities and operations may be damaged due to significant damage from tornadoes and windstorms.

4.3.9.3. Past Occurrence

Tornadoes and windstorm events in Pennsylvania have impacted the western and southeastern sections of the state most frequently. The most intense tornadoes impacting Chester County occurred in 1955 and 1994, both reaching a level F3. The costliest tornadoes in terms of property damage occurred in 1994 ($5,000,000), 1999 ($3,000,000), and 1979 ($2,500,000).

A list of tornado and windstorm events that have occurred in Chester County between 1950 and 2024 is shown in Table 4.3.9-4 with an associated F-Scale or EF-Scale magnitude where applicable. Note that the NOAA NCEI database did not start collecting information about windstorms until 1996.

Figure 4.3.9-2 Historic Tornado Tracks in Chester County, 1950 to 2024



High winds moving in a straight line are the movement of air from areas of higher pressure to areas of lower pressure. As the difference in pressure increases, the strength and speed of the winds increase. As noted, windstorms are generally defined as having sustained straight-line wind speeds of 40 mph or greater that last for one hour or longer, or winds of 58 mph (i.e. 50 knots) or greater for any duration. There have been 36 windstorm events in Chester County since 1996, when the NOAA NCEI started tracking additional storm event types.

Table 4.3.9-4 Previous Tornado and Windstorm Events in Chester County (NCEI 2024)

DATE	TYPE OF EVENT	WIND SPEED (MPH)	MAGNITUDE (FUJITA SCALE)	DEATHS	INJURIES	PROPERTY DAMAGE ($)
6/22/1953	Tornado	N/A	F1	0	0	$2,500
3/22/1955	Tornado	N/A	F3	1	0	$250,000
8/19/1955	Tornado	N/A	F2	0	0	$25,000
11/14/1969	Tornado	N/A	F1	0	0	$25,000
11/28/1973	Tornado	N/A	F0	0	0	$25,000
8/4/1974	Tornado	N/A	F1	0	0	$25,000
4/3/1975	Tornado	N/A	F2	0	0	$2,500
9/5/1979	Tornado	N/A	F2	1	4	$2,500,000
7/16/1980	Tornado	N/A	F1	0	0	$2,500
7/17/1988	Tornado	N/A	F1	0	1	$250,000
11/16/1989	Tornado	N/A	F0	0	0	$0
7/9/1990	Tornado	N/A	F1	0	0	$250,000
7/17/1992	Tornado	N/A	F2	0	0	$250,000
8/28/1992	Tornado	N/A	F2	0	3	$250,000
7/27/1994	Tornado	N/A	F3	0	11	$5,000,000
7/27/1994	Tornado	N/A	F1	0	0	$500,000
8/13/1994	Tornado	N/A	F0	0	0	$0
8/13/1994	Tornado	N/A	F1	0	0	$0
9/8/1996	Tornado	N/A	F0	0	0	$0
11/2/1997	Tornado	N/A	F0	0	0	$25,000
4/1/1998	Tornado	N/A	F1	0	1	$25,000
5/31/1998	Tornado	N/A	F1	0	0	$200,000
5/31/1998	Tornado	N/A	F1	0	0	$300,000
11/26/1999	Tornado	N/A	F1	0	12	$3,000,000
8/29/2006	Tornado	N/A	F1	0	0	$75,000
9/27/2010	Tornado	N/A	EF0	0	0	$25,000
12/22/2012	Strong Wind	47	N/A	0	0	$500
12/22/2012	Strong Wind	46	N/A	0	0	$500

Table 4.3.9-4 Previous Tornado and Windstorm Events in Chester County (NCEI 2024)

DATE	TYPE OF EVENT	WIND SPEED (MPH)	MAGNITUDE (FUJITA SCALE)	DEATHS	INJURIES	PROPERTY DAMAGE ($)
12/26/2012	Strong Wind	53	N/A	0	0	$2,000
12/26/2012	Strong Wind	56	N/A	0	0	$3,000
1/31/2013	Strong Wind	54	N/A	0	0	$1,000
1/31/2013	High Wind	57	N/A	0	0	$10,000
3/6/2013	Strong Wind	46	N/A	0	0	$2,000
11/24/2013	Strong Wind	46	N/A	0	0	$100
11/24/2013	Strong Wind	46	N/A	0	0	$100
1/6/2014	Strong Wind	46	N/A	0	0	$100
1/6/2014	Strong Wind	46	N/A	0	0	$100
3/12/2014	Strong Wind	53	N/A	0	0	$2,000
3/12/2014	Strong Wind	49	N/A	0	0	$2,000
11/2/2014	Strong Wind	45	N/A	0	0	$2,500
11/2/2014	Strong Wind	45	N/A	0	0	$2,500
2/2/2015	Strong Wind	46	N/A	0	0	$9,000
2/2/2015	Strong Wind	46	N/A	0	0	$8,000
2/15/2015	Strong Wind	53	N/A	0	0	$5,000
2/15/2015	Strong Wind	52	N/A	0	0	$5,000
6/30/2015	Tornado	N/A	EF1	0	0	$250,000
4/3/2016	High Wind	57	N/A	0	0	$0
4/3/2016	High Wind	57	N/A	0	0	$0
2/13/2017	High Wind	60	N/A	0	0	$0
2/13/2017	High Wind	60	N/A	0	0	$0
3/14/2017	Strong Wind	49	N/A	0	0	$10
3/2/2018	High Wind	60	N/A	0	0	$0
3/2/2018	High Wind	60	N/A	0	0	$0
4/4/2018	High Wind	57	N/A	0	0	$0
2/24/2019	High Wind	57	N/A	0	0	$0
2/25/2019	High Wind	57	N/A	0	0	$0
4/30/2020	High Wind	60	N/A	0	0	$0
4/30/2020	High Wind	57	N/A	0	0	$0
4/30/2021	High Wind	57	N/A	0	0	$0
4/30/2021	High Wind	57	N/A	0	0	$0
9/1/2021	Tornado	N/A	EF2	0	0	$500,000
6/16/2023	Tornado	N/A	EF1	0	0	$0

Table 4.3.9-4 Previous Tornado and Windstorm Events in Chester County (NCEI 2024)

DATE	TYPE OF EVENT	WIND SPEED (MPH)	MAGNITUDE (FUJITA SCALE)	DEATHS	INJURIES	PROPERTY DAMAGE ($)
1/9/2024	High Wind	60	N/A	0	0	$0
2/26/2025	High Wind	62	N/A	0	0	$0
2/26/2025	High Wind	57	N/A	0	0	$0
TOTAL				2	32	$13,812,910

In 2023 and 2024, four adverse/severe weather events were reported to the Chester County Department of Emergency Services that were related to tornado or windstorm events. The storm on July 25, 2024, had nine reported incidents related to it. Event information is included in Table 4.3.9-5 below:

Table 4.3.9-5 Adverse/Severe Weather Events in Chester County (Chester County DES, 2023-24)

DATE	EVENT DETAILS	LOCATION (IF APPLICABLE)
4/15/23	Tree struck by lightning. Fell on car. 1 Fatality.	Highland Road and Limestone Road Highland Township
6/19/23	Straight line wind damage	
8/7/23	Trees into numerous homes.	London Britain Township
7/25/24	Numerous trees into homes. 76,000 residents without power.	
	Tree into house.	106 N Hawthorne Road, West Brandywine, PA
	Roof blown off of barber shop. No injuries.	Area of N Seventh Ave/ Merchant Street, Coatesville.
	Tree into house.	47 Lenape Way, West Brandywine, PA
	Tree into house.	19 Castle Ln, West Brandywine, PA
	Tree into house.	1149 Hilltop Ln, Vally, PA
	Tree into house.	42 Mulligan Ct, East Brandywine, PA
	Tree into house.	91 Irish Ln, Valley, PA
	Tree into house.	300 Kennett Pike, Kennett Township, PA

One of the deadliest tornadoes in Pennsylvania occurred during a tornado outbreak on May 31, 1985, when up to 43 tornadoes touched down in Pennsylvania, Ohio, New York, and southeastern Ontario. One storm, rated at EF5 (F4) intensity, tracked across the state forests of central Pennsylvania during the early evening producing tornadic winds of 200 to 250 mph. Officials estimated that 85,000 to 90,000 trees were leveled across its track. In total, this event destroyed 13 houses, a large steel fire tower, and many miles of state forest. Major population centers centers avoided damage by the tornado which saved many lives. The tornado was estimated to remain on the ground for more than one hour and 25 minutes and covered a path

of about 70 miles. This event represents the worst-case scenario in Chester County, especially if the tornado track was close to population centers.

4.3.9.4. Future Occurrence

For the period between 1950 and 2024, 29 tornadoes were reported in Chester County by NCEI. While the chance of being hit by a tornado is small, the damage that results when the tornado arrives can be potentially devastating. An F4 tornado, with a 0.01-percent-annual probability of occurring, can carry wind velocities of 200 mph, resulting in a force of more than 100 pounds per square foot of surface area. This is a "wind load" that exceeds the design limits of most buildings.

According to NCEI, there have been 36 wind events in Chester County between 1996 and 2024. Chester County experiences windstorm events more commonly than tornadoes, which cause power failures, loss of communication networks, and residents requiring temporary shelters and provision of supplies. The probability of tornadoes and windstorms in Chester County can be considered *possible* as defined by the Risk Factor Methodology probability criteria (see Table 4.4.1-1).

4.3.9.5. Vulnerability Assessment

For tornadoes or high winds, aged and dilapidated structures or structures not built to applicable building codes are more susceptible to damage. Mobile homes and campgrounds are especially susceptible to damage due to tornadoes or high wind. Strong winds can rip roofs from any dilapidated structures and overturn mobile homes. Past experiences with tornadoes in Chester County shows that death and injury are possibilities. Vulnerability to the effects of a tornado or high wind is somewhat dependent upon the age of a structure; as building codes become more stringent, buildings are capable of enduring greater wind forces.

In Chester County, high winds occur annually. The most common detrimental effects are interruptions in power supply and communications services due to downed wires and blocked roadways due to downed trees. Most severe power failures or outages are regional events. With the loss of power, electrical-powered equipment and systems will not be operational. Examples include lighting, HVAC and ancillary support equipment, communication systems, ventilation system, refrigerators, sterilizers, and medical equipment. This can cause food spoilage, loss of heat or air conditions, basement flooding (sump pump failure), lack of light, loss of water (well pump failure), lack of phone service, or lack of internet. While it is most often a short-term nuisance rather than a catastrophic hazard, utility interruptions can cause challenges for communication and response, particularly in more rural areas of the county. A worst-case scenario for utility interruption in Chester County would involve a power outage during winter snow or ice storms, which have the potential to cause power outages for prolonged periods of time. See **Section 4.3.21** for more information about utility interruption.

All structures and infrastructure might be exposed to the effects of tornadoes or high winds. Depending upon the severity of a tornado or high wind, any existing structures might be damaged to some extent. Any future structures might be exposed to tornados or high winds as

this hazard does not occur in specific locations. However, future buildings will be somewhat protected from the effects of tornado or high wind as they will meet the most current State building code requirements for bracing and roof design.

Manufactured housing (i.e., mobiles homes or trailers) is particularly vulnerable to high winds and tornadoes. The U.S. Census Bureau defines manufactured homes as "movable dwellings, eight feet or wider and 40 feet or longer, designed to be towed on its own chassis, with transportation gear integral to the unit when it leaves the factory, and without need of a permanent foundation (U.S. Census Bureau, 2020)." They can include multi-wide and expandable manufactured homes but exclude travel trailers, motor homes, and modular housing. Due to their lightweight and often unanchored design, manufactured housing is extremely vulnerable to high winds and will generally sustain the most damage.

There is an estimated total of 1,981 mobile home structures in Chester County. Table 4.3.9-6 details the total residential structures and the number of mobile home structures in each municipality. West Caln Township (346 mobile homes), East Whiteland Township (172), Honey Brook Township (166), East Nottingham Township (143), and West Nottingham Township (118) have the most mobile homes. West Caln Township and West Nottingham Township have the highest percentages of residential structures that are mobile homes, each with 6%. There are 17 municipalities in the county that have no mobile homes. Higher concentrations of mobile home structures increase the vulnerability of the area to tornadoes and windstorms.

Table 4.3.9-6 Mobile homes in Chester County (U.S. Census Bureau, 2023)

MUNICIPALITY	TOTAL RESIDENTIAL STRUCTURES	TOTAL MOBILE HOMES	PERCENT MOBILE HOMES
Atglen Borough	577	3	1%
Avondale Borough	405	6	1%
Birmingham Township	1,624	0	0%
Caln Township	4,701	8	0%
Charlestown Township	2,266	2	0%
Coatesville City	2,732	0	0%
Downingtown Borough	2,291	1	0%
East Bradford Township	3,658	2	0%
East Brandywine Township	3,683	2	0%
East Caln Township	1,269	4	0%
East Coventry Township	3,563	20	1%
East Fallowfield Township	3,944	33	1%
East Goshen Township	5,665	0	0%
East Marlborough Township	3,571	4	0%
East Nantmeal Township	1,508	9	1%

Table 4.3.9-6 Mobile homes in Chester County (U.S. Census Bureau, 2023)

MUNICIPALITY	TOTAL RESIDENTIAL STRUCTURES	TOTAL MOBILE HOMES	PERCENT MOBILE HOMES
East Nottingham Township	4,885	143	3%
East Pikeland Township	3,552	12	0%
Easttown Township	3,727	19	1%
East Vincent Township	4,029	0	0%
East Whiteland Township	4,401	172	4%
Elk Township	1,367	71	5%
Elverson Borough	584	4	1%
Franklin Township	2,456	26	1%
Highland Township	1,307	15	1%
Honey Brook Borough	732	17	2%
Honey Brook Township	4,909	166	3%
Kennett Township	1,751	0	0%
Kennett Square Borough	3,867	4	0%
London Britain Township	1,782	1	0%
Londonderry Township	4,078	51	1%
London Grove Township	1,692	30	2%
Lower Oxford Township	2,579	96	4%
Malvern Borough	1,066	1	0%
Modena Borough	201	8	4%
New Garden Township	5,451	85	2%
Newlin Township	2,921	33	1%
New London Township	1,193	19	2%
North Coventry Township	4,288	33	1%
Oxford Borough	1,704	24	1%
Parkesburg Borough	1,371	2	0%
Penn Township	2,901	47	2%
Pennsbury Township	1,712	0	0%
Phoenixville Borough	4,731	0	0%
Pocopson Township	1,757	0	0%
Sadsbury Township	1,987	22	1%
Schuylkill Township	4,096	2	0%
South Coatesville Borough	506	2	0%
South Coventry Township	1,653	16	1%
Spring City Borough	1,199	2	0%
Thornbury Township	1,060	0	0%

Table 4.3.9-6 Mobile homes in Chester County (U.S. Census Bureau, 2023)

MUNICIPALITY	TOTAL RESIDENTIAL STRUCTURES	TOTAL MOBILE HOMES	PERCENT MOBILE HOMES
Tredyffrin Township	9,617	0	0%
Upper Oxford Township	2,109	53	3%
Upper Uwchlan Township	3,909	0	0%
Uwchlan Township	5,805	14	0%
Valley Township	2,926	81	3%
Wallace Township	2,065	17	1%
Warwick Township	2,192	22	1%
West Bradford Township	5,801	22	0%
West Brandywine Township	4,141	68	2%
West Caln Township	6,070	346	6%
West Chester Borough	3,147	0	0%
West Fallowfield Township	2,226	29	1%
West Goshen Township	8,075	0	0%
West Grove Borough	964	6	1%
West Marlborough Township	983	6	1%
West Nantmeal Township	1,832	52	3%
West Nottingham Township	2,014	118	6%
West Pikeland Township	2,050	0	0%
West Sadsbury Township	1,915	95	5%
West Vincent Township	3,127	0	0%
West Whiteland Township	5,656	7	0%
Westtown Township	3,838	0	0%
Willistown Township	5,275	0	0%
Total	214,689	1,981	1%

Table 4.3.9-7 below shows the expected annual losses to tornadoes by census tract in Chester County.

Table 4.3.9-7 Expected Annual Losses to Tornadoes by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3001.01	Tredyffrin Township	$43,694.81	Relatively Low
3001.03	Tredyffrin Township	$37,036.19	Relatively Low
3001.04	Tredyffrin Township	$77,019.14	Relatively Moderate

Table 4.3.9-7 Expected Annual Losses to Tornadoes by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3001.06	Tredyffrin Township	$67,926.83	Relatively Moderate
3001.07	Tredyffrin Township	$87,596.15	Relatively Moderate
3001.08	Tredyffrin Township	$91,862.51	Relatively Moderate
3001.09	Tredyffrin Township	$55,051.67	Relatively Low
3002.01	Easttown Township	$78,340.32	Relatively Moderate
3002.02	Easttown Township	$87,880.82	Relatively Moderate
3003.01	Willistown Township	$64,965.13	Relatively Moderate
3003.02	Willistown Township	$68,362.87	Relatively Moderate
3003.03	Willistown Township	$50,157.28	Relatively Low
3004	Malvern Borough	$42,493.77	Relatively Low
3005.01	Schuylkill Township	$83,915.00	Relatively Moderate
3005.02	Schuylkill Township	$55,985.67	Relatively Low
3006	Phoenixville	$69,950.44	Relatively Moderate
3007	Phoenixville	$62,735.57	Relatively Moderate
3008	Phoenixville	$46,971.66	Relatively Low
3009	Phoenixville	$33,991.09	Relatively Low
3010.01	East Pikeland Township	$70,588.81	Relatively Moderate
3010.02	East Pikeland Township	$57,068.71	Relatively Low
3011	Spring City Borough	$43,874.56	Relatively Low
3013	East Coventry Township	$99,248.55	Relatively Moderate
3014.01	North Coventry Township	$44,108.96	Relatively Low
3014.02	North Coventry Township	$84,520.61	Relatively Moderate
3015	South Coventry Township	$45,550.18	Relatively Low
3016	Warwick Township	$40,624.60	Relatively Low
3017	East Nantmeal Township	$34,794.75	Relatively Low
3018	West Vincent Township	$122,264.11	Relatively Moderate
3019	West Pikeland Township	$74,945.27	Relatively Moderate
3020	Charlestown Township	$105,896.95	Relatively Moderate
3021.02	East Whiteland Township	$58,815.26	Relatively Low
3021.03	East Whiteland Township	$96,371.92	Relatively Moderate
3021.04	East Whiteland Township	$111,820.05	Relatively Moderate
3022.03	West Whiteland Township	$75,534.20	Relatively Moderate
3022.04	West Whiteland Township	$82,546.07	Relatively Moderate
3022.05	West Whiteland Township	$84,774.37	Relatively Moderate

Table 4.3.9-7 Expected Annual Losses to Tornadoes by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3022.06	West Whiteland Township	$73,560.81	Relatively Moderate
3022.07	West Whiteland Township	$28,598.30	Relatively Low
3023	West Chester Borough	$38,638.24	Relatively Low
3024	West Chester Borough	$47,866.00	Relatively Low
3025	West Chester Borough	$52,186.18	Relatively Low
3026	West Chester Borough	$54,289.07	Relatively Low
3027.02	West Goshen Township	$73,467.35	Relatively Moderate
3027.03	West Goshen Township	$93,203.03	Relatively Moderate
3027.04	West Goshen Township	$71,570.96	Relatively Moderate
3027.05	West Goshen Township	$46,272.38	Relatively Low
3027.06	West Goshen Township	$74,515.21	Relatively Moderate
3028.02	East Goshen Township	$93,192.35	Relatively Moderate
3028.03	East Goshen Township	$25,593.02	Relatively Low
3028.04	East Goshen Township	$50,359.24	Relatively Low
3028.06	East Goshen Township	$29,743.19	Relatively Low
3028.07	East Goshen Township	$49,154.59	Relatively Low
3029.01	Westtown Township	$63,788.51	Relatively Moderate
3029.02	Westtown Township	$82,584.31	Relatively Moderate
3030	Thornbury Township	$49,951.39	Relatively Low
3031	Birmingham Township	$70,448.05	Relatively Moderate
3033.01	Kennett Township	$69,244.28	Relatively Moderate
3033.02	Kennett Township	$100,773.18	Relatively Moderate
3034.01	Kennett Square Borough	$57,631.95	Relatively Low
3034.02	Kennett Square Borough	$31,109.23	Relatively Low
3035.01	East Marlborough Township	$91,152.87	Relatively Moderate
3035.02	East Marlborough Township	$59,701.06	Relatively Low
3038.01	West Bradford Township	$69,878.72	Relatively Moderate
3038.03	West Bradford Township	$50,913.37	Relatively Low
3038.04	West Bradford Township	$91,049.80	Relatively Moderate
3039.01	East Bradford Township	$78,244.46	Relatively Moderate
3039.02	East Bradford Township	$86,853.60	Relatively Moderate
3040	East Caln Township	$83,388.94	Relatively Moderate
3041.01	Downingtown Borough	$70,606.07	Relatively Moderate
3041.02	Downingtown Borough	$46,379.03	Relatively Low

Table 4.3.9-7 Expected Annual Losses to Tornadoes by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3042.01	Caln Township	$105,689.69	Relatively Moderate
3043	East Brandywine Township	$154,973.21	Relatively Moderate
3044.03	Uwchlan Township	$65,023.62	Relatively Moderate
3044.04	Uwchlan Township	$69,595.28	Relatively Moderate
3044.05	Uwchlan Township	$100,277.21	Relatively Moderate
3044.06	Uwchlan Township	$72,447.82	Relatively Moderate
3045.02	Upper Uwchlan Township	$57,851.81	Relatively Low
3045.03	Upper Uwchlan Township	$86,475.87	Relatively Moderate
3045.04	Upper Uwchlan Township	$65,237.31	Relatively Moderate
3046	Wallace Township	$59,690.96	Relatively Low
3049	Honey Brook Township	$123,209.86	Relatively Moderate
3050	Honey Brook Borough	$23,803.77	Relatively Low
3051.01	West Caln Township	$65,178.45	Relatively Moderate
3051.02	West Caln Township	$62,710.97	Relatively Moderate
3053	Valley Township	$117,079.17	Relatively Moderate
3054	Coatesville City	$46,299.68	Relatively Low
3055	Coatesville City	$43,127.44	Relatively Low
3056	Coatesville City	$33,465.57	Relatively Low
3057	Coatesville City	$27,505.97	Relatively Low
3060	East Fallowfield Township, Modena Borough	$110,113.98	Relatively Moderate
3063	West Grove Borough	$34,817.12	Relatively Low
3065.01	New Garden Township	$80,521.09	Relatively Moderate
3065.03	New Garden Township	$50,422.94	Relatively Low
3065.04	New Garden Township	$97,019.51	Relatively Moderate
3066	London Britain Township	$60,576.95	Relatively Low
3067	Franklin Township	$82,024.76	Relatively Moderate
3068	Elk Township	$31,448.11	Relatively Low
3069	New London Township	$105,815.87	Relatively Moderate
3070	Penn Township	$99,614.48	Relatively Moderate
3071	Londonderry Township	$44,352.77	Relatively Low
3072	Highland Township	$27,629.25	Relatively Low
3073	Parkesburg Borough	$62,774.50	Relatively Moderate
3074	Sadsbury Township	$50,245.91	Relatively Low
3077	West Fallowfield Township	$47,526.90	Relatively Low

Table 4.3.9-7 Expected Annual Losses to Tornadoes by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3078	Upper Oxford Township	$46,288.49	Relatively Low
3079	Lower Oxford Township	$91,342.94	Relatively Moderate
3080	Oxford Borough	$80,827.66	Relatively Moderate
3081.01	East Nottingham Township	$70,610.96	Relatively Moderate
3081.02	East Nottingham Township	$72,290.52	Relatively Moderate
3082	West Nottingham Township	$43,101.00	Relatively Low
3110	East Vincent Township	$108,845.11	Relatively Moderate
3111	Pennsbury Township	$72,913.88	Relatively Moderate
3112	Newlin Township, West Marlborough Township	$50,073.48	Relatively Low
3113	Pocopson Township	$75,088.45	Relatively Moderate
3114.01	Caln Township	$104,293.88	Relatively Moderate
3114.03	West Brandywine Township	$48,350.80	Relatively Low
3114.04	West Brandywine Township	$62,782.39	Relatively Moderate
3115	West Nantmeal Township, Elverson Borough	$60,443.43	Relatively Low
3116	South Coatesville Borough	$33,971.15	Relatively Low
3117.01	London Grove Township	$62,494.85	Relatively Moderate
3117.02	London Grove Township, Avondale Borough	$113,502.83	Relatively Moderate
3118	West Sadsbury Township, Atglen Borough	$60,599.16	Relatively Low
9800	West Chester Borough	$73,333.79	Relatively Moderate
TOTAL		$8,390,896.17	

Table 4.3.9-8 below shows the expected annual losses to strong winds by census tract in Chester County.

Table 4.3.9-8 Expected Annual Losses to Strong Winds by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3001.01	Tredyffrin Township	$27,110.28	Relatively Moderate
3001.03	Tredyffrin Township	$23,099.06	Relatively Moderate
3001.04	Tredyffrin Township	$47,594.11	Relatively High

Table 4.3.9-8 Expected Annual Losses to Strong Winds by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3001.06	Tredyffrin Township	$42,848.80	Relatively High
3001.07	Tredyffrin Township	$52,706.18	Relatively High
3001.08	Tredyffrin Township	$57,089.52	Relatively High
3001.09	Tredyffrin Township	$34,035.84	Relatively Moderate
3002.01	Easttown Township	$48,349.58	Relatively High
3002.02	Easttown Township	$53,878.71	Relatively High
3003.01	Willistown Township	$40,064.69	Relatively High
3003.02	Willistown Township	$41,552.85	Relatively High
3003.03	Willistown Township	$30,746.60	Relatively Moderate
3004	Malvern Borough	$26,707.43	Relatively Moderate
3005.01	Schuylkill Township	$51,130.99	Relatively High
3005.02	Schuylkill Township	$33,352.58	Relatively Moderate
3006	Phoenixville	$44,414.46	Relatively High
3007	Phoenixville	$39,822.74	Relatively High
3008	Phoenixville	$29,536.18	Relatively Moderate
3009	Phoenixville	$21,174.93	Relatively Moderate
3010.01	East Pikeland Township	$37,765.60	Relatively Moderate
3010.02	East Pikeland Township	$30,694.30	Relatively Moderate
3011	Spring City Borough	$24,055.15	Relatively Moderate
3013	East Coventry Township	$53,960.13	Relatively High
3014.01	North Coventry Township	$23,844.91	Relatively Moderate
3014.02	North Coventry Township	$45,097.33	Relatively High
3015	South Coventry Township	$24,327.55	Relatively Moderate
3016	Warwick Township	$22,150.56	Relatively Moderate
3017	East Nantmeal Township	$18,815.34	Relatively Moderate
3018	West Vincent Township	$64,617.72	Relatively High
3019	West Pikeland Township	$39,324.09	Relatively High
3020	Charlestown Township	$58,991.88	Relatively High
3021.02	East Whiteland Township	$35,715.54	Relatively Moderate
3021.03	East Whiteland Township	$55,462.13	Relatively High
3021.04	East Whiteland Township	$62,431.13	Relatively High
3022.03	West Whiteland Township	$40,939.82	Relatively High
3022.04	West Whiteland Township	$44,943.40	Relatively High
3022.05	West Whiteland Township	$42,672.88	Relatively High

Table 4.3.9-8 Expected Annual Losses to Strong Winds by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3022.06	West Whiteland Township	$39,475.50	Relatively High
3022.07	West Whiteland Township	$13,507.81	Relatively Moderate
3023	West Chester Borough	$20,970.74	Relatively Moderate
3024	West Chester Borough	$26,339.66	Relatively Moderate
3025	West Chester Borough	$28,237.72	Relatively Moderate
3026	West Chester Borough	$29,817.58	Relatively Moderate
3027.02	West Goshen Township	$42,379.88	Relatively High
3027.03	West Goshen Township	$48,626.90	Relatively High
3027.04	West Goshen Township	$38,533.77	Relatively High
3027.05	West Goshen Township	$29,316.93	Relatively Moderate
3027.06	West Goshen Township	$43,797.96	Relatively High
3028.02	East Goshen Township	$55,703.29	Relatively High
3028.03	East Goshen Township	$16,056.98	Relatively Moderate
3028.04	East Goshen Township	$31,572.52	Relatively Moderate
3028.06	East Goshen Township	$19,455.84	Relatively Moderate
3028.07	East Goshen Township	$30,966.95	Relatively Moderate
3029.01	Westtown Township	$39,869.62	Relatively High
3029.02	Westtown Township	$51,079.24	Relatively High
3030	Thornbury Township	$30,605.01	Relatively Moderate
3031	Birmingham Township	$40,618.20	Relatively High
3033.01	Kennett Township	$33,818.62	Relatively Moderate
3033.02	Kennett Township	$49,267.42	Relatively High
3034.01	Kennett Square Borough	$28,961.44	Relatively Moderate
3034.02	Kennett Square Borough	$15,399.61	Relatively Moderate
3035.01	East Marlborough Township	$44,789.37	Relatively High
3035.02	East Marlborough Township	$29,875.93	Relatively Moderate
3038.01	West Bradford Township	$37,487.30	Relatively Moderate
3038.03	West Bradford Township	$27,510.34	Relatively Moderate
3038.04	West Bradford Township	$48,863.52	Relatively High
3039.01	East Bradford Township	$41,709.87	Relatively High
3039.02	East Bradford Township	$46,222.82	Relatively High
3040	East Caln Township	$44,389.58	Relatively High
3041.01	Downingtown Borough	$37,608.80	Relatively Moderate
3041.02	Downingtown Borough	$25,101.06	Relatively Moderate

Table 4.3.9-8 Expected Annual Losses to Strong Winds by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3042.01	Caln Township	$56,825.56	Relatively High
3043	East Brandywine Township	$82,339.65	Relatively High
3044.03	Uwchlan Township	$34,492.48	Relatively Moderate
3044.04	Uwchlan Township	$37,744.96	Relatively Moderate
3044.05	Uwchlan Township	$53,460.81	Relatively High
3044.06	Uwchlan Township	$37,648.68	Relatively Moderate
3045.02	Upper Uwchlan Township	$30,305.19	Relatively Moderate
3045.03	Upper Uwchlan Township	$45,598.37	Relatively High
3045.04	Upper Uwchlan Township	$34,779.82	Relatively Moderate
3046	Wallace Township	$31,941.51	Relatively Moderate
3049	Honey Brook Township	$68,566.03	Relatively High
3050	Honey Brook Borough	$13,052.05	Relatively Moderate
3051.01	West Caln Township	$35,365.16	Relatively Moderate
3051.02	West Caln Township	$34,537.42	Relatively Moderate
3053	Valley Township	$62,916.03	Relatively High
3054	Coatesville City	$25,850.71	Relatively Moderate
3055	Coatesville City	$23,905.14	Relatively Moderate
3056	Coatesville City	$18,679.58	Relatively Moderate
3057	Coatesville City	$15,314.34	Relatively Moderate
3060	East Fallowfield Township, Modena Borough	$59,653.70	Relatively High
3063	West Grove Borough	$17,698.18	Relatively Moderate
3065.01	New Garden Township	$39,526.32	Relatively High
3065.03	New Garden Township	$24,738.47	Relatively Moderate
3065.04	New Garden Township	$47,380.90	Relatively High
3066	London Britain Township	$29,928.17	Relatively Moderate
3067	Franklin Township	$40,889.33	Relatively High
3068	Elk Township	$16,139.35	Relatively Moderate
3069	New London Township	$52,605.01	Relatively High
3070	Penn Township	$49,887.20	Relatively High
3071	Londonderry Township	$22,930.93	Relatively Moderate
3072	Highland Township	$16,205.11	Relatively Moderate
3073	Parkesburg Borough	$33,971.85	Relatively Moderate
3074	Sadsbury Township	$27,418.34	Relatively Moderate
3077	West Fallowfield Township	$26,016.14	Relatively Moderate

Table 4.3.9-8 Expected Annual Losses to Strong Winds by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3078	Upper Oxford Township	$25,039.08	Relatively Moderate
3079	Lower Oxford Township	$47,228.51	Relatively High
3080	Oxford Borough	$40,695.60	Relatively High
3081.01	East Nottingham Township	$35,745.16	Relatively Moderate
3081.02	East Nottingham Township	$37,365.02	Relatively Moderate
3082	West Nottingham Township	$22,261.46	Relatively Moderate
3110	East Vincent Township	$59,043.00	Relatively High
3111	Pennsbury Township	$37,254.20	Relatively Moderate
3112	Newlin Township, West Marlborough Township	$26,720.34	Relatively Moderate
3113	Pocopson Township	$39,801.98	Relatively High
3114.01	Caln Township	$56,049.06	Relatively High
3114.03	West Brandywine Township	$26,135.21	Relatively Moderate
3114.04	West Brandywine Township	$33,794.14	Relatively Moderate
3115	West Nantmeal Township, Elverson Borough	$33,136.79	Relatively Moderate
3116	South Coatesville Borough	$18,063.03	Relatively Moderate
3117.01	London Grove Township	$31,689.30	Relatively Moderate
3117.02	London Grove Township, Avondale Borough	$56,234.22	Relatively High
3118	West Sadsbury Township, Atglen Borough	$33,483.70	Relatively Moderate
9800	West Chester Borough	$38,082.74	Relatively High
TOTAL		$4,605,097.86	

Overall, however, tornado and windstorm events are not specific to select parts of the county. Rather, a tornado could strike in any part of the county at any time and could cause as much or as little damage as possible for the given magnitude event. Historically, however, Chester County has been most typically impacted by minimal (EF0-EF2) tornadoes, with few events resulting in significant monetary damage.

4.3.9.6. Equity in Vulnerable Communities

Regarding equity, there are several communities of consideration when it comes to planning for tornadoes and windstorms. Manufactured home communities, primarily mobile homes, are extremely at risk in the face of tornadoes as they are highly susceptible to high-speed winds. Additionally, households without vehicles, smartphones, or people with disabilities are also at

higher risk if evacuation becomes necessary as all of these factors present significant barriers to active response times. The City of Coatesville and Spring City Borough have census tracts where more than 20% of the population has a disability while Honey Brook Township, West Fallowfield Township, Oxford Borough, Penn Township, Lower Oxford Township, and City of Coatesville have high concentrations of residents without smartphones.

4.3.10. Wildfire

4.3.10.1. Location and Extent



Wildfire is an uncontrolled fire spreading through vegetative fuels, exposing and possibly consuming structures. A wildland fire is a wildfire in an area in which development is essentially nonexistent, except for roads, railroads, power lines, and similar facilities. An urban-wildland interface fire is a wildfire in a geographical area where structures and other human development meet or intermingle with wildland or vegetative fuels. The most high-risk areas of the county are at the forest-urban interface, where the potential for wildfire to spread to structures is greatest.

Wildfires can occur at any time of the year, but are most likely to occur in the county during a drought. Wildland fires in Pennsylvania can occur in fields, grass, and brush as well as in the forest itself. Under dry conditions or drought, wildfires have the potential to burn forests as well as croplands. Any small fire in a wooded area, if not quickly detected and suppressed, can get out of control. Most wildland fires are caused by human carelessness, negligence, and ignorance. In 2023, debris burning accounted for the most wildfires, while incendiary causes accounted for most acres burned in Pennsylvania (DCNR, 2025a). However, some are precipitated by lightning strikes, and in rare instances, spontaneous combustion. Note that 99% of wildfires in Pennsylvania are caused by people, often by debris burns (DCNR, 2025b).

Forests are the dominant land use in Pennsylvania and represent 28.5% of the land area in Chester County. A portion of the William Penn State Forest is in Chester County. This forest, as well as State Game Land areas, are of particular concern for wildfire events due to the large area of expanded woodland. However, a wildfire could develop in any portion of the county.

4.3.10.2. Range of Magnitude

Wildfire events can range from small fires that can be managed by local firefighters to large fires impacting many acres of land. Large events may require evacuation from one or more communities and necessitate regional or national firefighting support. The impact of severe wildfires can be devastating. A wildfire has the potential to kill people, livestock, fish, and wildlife. They often destroy property, valuable timber, and forage, recreational, and scenic values.

Vegetation loss is an environmental concern with wildfires, but it typically is not a serious impact in that they burn dead trees, leaves, and grasses to allow more open space for new and different types of vegetation to grow and receive sunlight. Another positive effect of a wildfire is that it stimulates the growth of new shoots on trees and shrubs, and its heat can open pinecones and other seed pods. The most significant negative impact is the potential for severe erosion, silting of stream beds and reservoirs, and flooding due to ground-cover loss following a fire event.

In addition to the risk wildfires pose to the public and property owners, the safety of firefighters is also a concern. Although loss of life among firefighters does not occur often in Pennsylvania, it is always a risk. More common firefighting injuries include falls, sprains, abrasions, and heat-related injuries such as dehydration. Response to wildfires also exposes emergency responders to the risk of motor vehicle accidents and can place them in remote areas away from the communities that they are chartered to protect.

The worst-case scenario for a wildfire in Chester County would be an uncontrolled fire that spreads from forested areas into bordering residential areas, causing significant damage to homes and other assets in addition to natural resources. See Table 4.3.10-4 for details on structures and critical facilities in high-hazard and forested areas.

The potential impacts of wildfire on community lifelines are as follows:

Table 4.3.10-1 Most Likely Lifelines Impacted by Wildfires

LIFELINES	NOTES
	Fire departments will need to respond and possibly support recovery efforts where community safety is threatened.
	Wildfire directly threatens structures, including shelters, and potentially agricultural operations.
	Potential serious injuries and fatalities may occur, requiring response in the medical system.

4.3.10.3. Past Occurrence

Chester County falls in Pennsylvania Forest District 17, William Penn, a nine-county district in southeast Pennsylvania, as shown in Figure 4.3.10-1.

Figure 4.3.10-1 Fire Districts in Pennsylvania.



Table 4.3.10-2 below lists wildfire statistics for PA Forest District 17. These are visualized in Figure 4.3.10-2. This data accounts for more than just Chester County. However, it points towards the regional risk of wildfire. Figure 4.3.10-3 shows the origin of wildfires in Chester County.

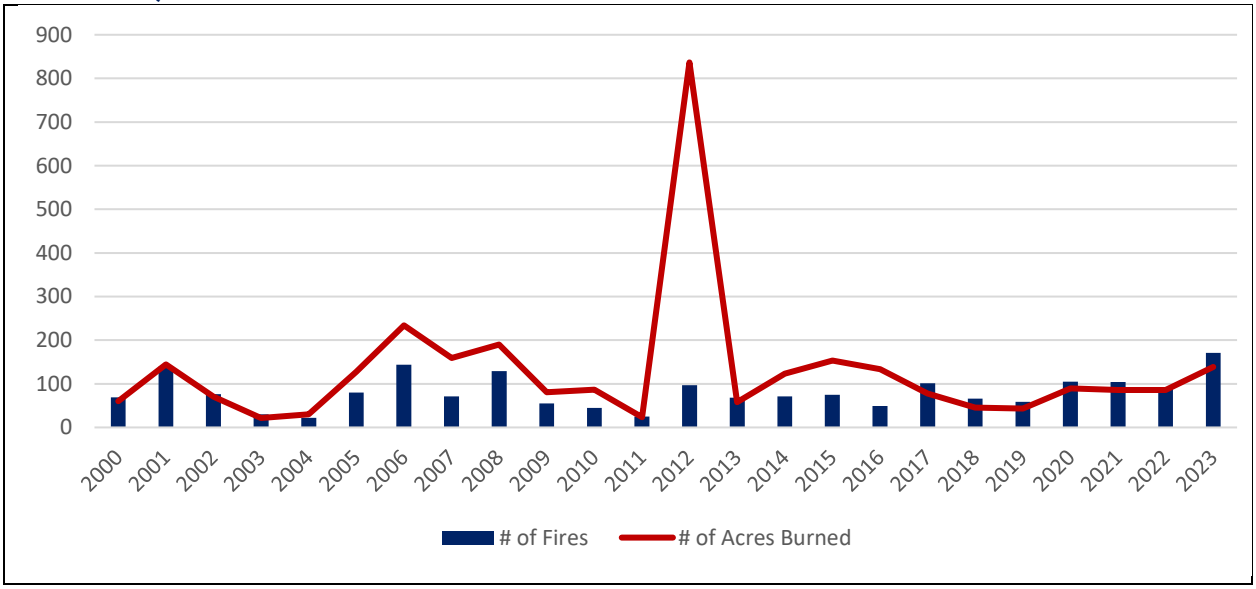
Table 4.3.10-2 Wildfires in PA Forest District 17 (DCNR, 2025a)

YEAR	NUMBER OF FIRES	ACRES BURNED
2000	69	60.3
2001	139	144.3
2002	76	70.7
2003	30	21.6
2004	22	30.3
2005	80	127.7
2006	144	234.1
2007	71	159.4
2008	129	189.9
2009	55	80.7
2010	45	86.8
2011	25	23.1
2012	97	836.6
2013	68	57.7

Table 4.3.10-2 Wildfires in PA Forest District 17 (DCNR, 2025a)

YEAR	NUMBER OF FIRES	ACRES BURNED
2014	71	123.5
2015	75	153.1
2016	49	133.3
2017	101	78
2018	66	45.1
2019	59	43.3
2020	105	89.4
2021	104	85.8
2022	90	85.5
2023	171	138.4
TOTAL	1,941	3,098.6

Figure 4.3.10-2 Number of Fires and Acres Burned in PA Forest District 17 (DCNR, 2025a)



The highest number of wildfire events recorded between 2000 and 2023 was in 2023 with 171 fires, in 2006 with 144 wildfires, and in 2001 with 139 wildfires. However, 2012 saw the most acres burned, with 836.6 acres burned that year. No single year comes close to the 2012 acreage, although 234.1 acres were burned in 2006 and 189.9 acres were burned in 2008.

Furthermore, Chester County EMS provided brush fire data from 2023 through April 21, 2025, as seen in Table 4.3.10-3.

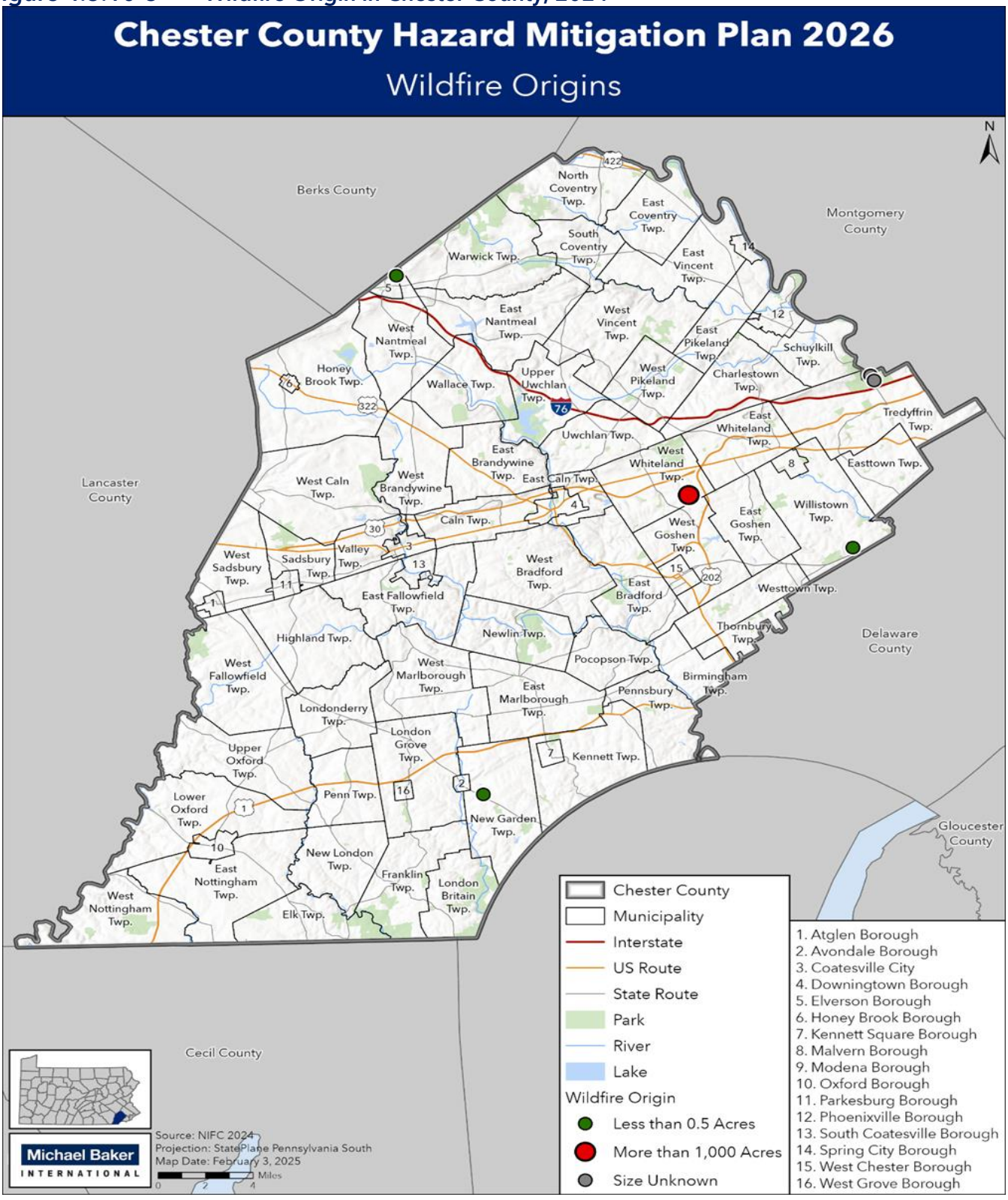
Table 4.3.10-3 Brush Fires in Chester County from 2023 to 2025 (Chester County EMS, 2025)

YEAR	NUMBER OF FIRES
2023	323
2024	400

Table 4.3.10-3 Brush Fires in Chester County from 2023 to 2025 (Chester County EMS, 2025)

YEAR	NUMBER OF FIRES
2025	234
TOTAL	957

Figure 4.3.10-3 Wildfire Origin in Chester County, 2024



4.3.10.4. Future Occurrence

Previous events indicate that annual large wildfire occurrences in the county are unlikely, but possible. Weather conditions like drought can increase the likelihood of wildfires occurring. Many wildfires are the result of human-caused ignitions. Any fire, without the quick response or attention of firefighters, forestry personnel, or visitors to the forest, has the potential to become a wildfire. Therefore, the probability of an urban fire or wildfire occurring in Chester County is considered *possible* as defined by the Risk Factor Methodology probability criteria (see Table 4.4-1).

The Climate Mapping for Resilience and Adaptation (CMRA) Tool provides a county-level assessment report for wildfire, shown in Figure 4.3.10-4 below. The future climate indicators for wildfire are precipitation and temperature thresholds. According to CMRA, the number of days per year with no precipitation is projected to increase slightly, while the number of days with a maximum temperature above 90 degrees Fahrenheit is expected to increase significantly. These projections show that the conditions in the future may make wildfires more likely.

Figure 4.3.10-4 Chester County Wildfire Hazard Assessment Report (CMRA, 2025)



Future Climate Indicators

Indicator	Modeled History (1976 - 2005)	Early Century (2015 - 2044)		Mid Century (2035 - 2064)		Late Century (2070 - 2099)	
		Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions	Lower Emissions	Higher Emissions
	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max
Precipitation:							
Days per year with no precipitation (dry days)	**180 days** 175 - 185	**181 days** 169 - 192	**181 days** 170 - 195	**181 days** 168 - 196	**182 days** 169 - 199	**181 days** 169 - 195	**184 days** 164 - 212
Maximum number of consecutive dry days	**12 days** 11 - 13	**12 days** 10 - 14	**12 days** 10 - 14	**12 days** 10 - 15	**12 days** 11 - 15	**12 days** 11 - 14	**13 days** 11 - 17
Days per year with precipitation (wet days)	**185 days** 180 - 190	**184 days** 173 - 196	**184 days** 170 - 195	**184 days** 169 - 197	**183 days** 166 - 196	**184 days** 170 - 196	**182 days** 154 - 201
Temperature thresholds:							
Annual days with maximum temperature > 90°F	**11 days** 11 - 17	**32 days** 17 - 44	**34 days** 19 - 48	**41 days** 22 - 59	**50 days** 25 - 69	**50 days** 26 - 75	**82 days** 36 - 107
Annual days with maximum temperature > 100°F	**0 days** 0 - 0	**2 days** 0 - 5	**2 days** 0 - 5	**3 days** 1 - 10	**5 days** 1 - 15	**5 days** 1 - 10	**19 days** 2 - 47

N/A = Data Not Available for the selected area

4.3.10.5. Vulnerability Assessment

Figure 4.3.10-5 shows wildfire hazard potential in Chester County (USFS, 2023). All of county is identified as either having "low" or "very low" hazard potential. Figure 4.3.10-6 shows forested areas throughout Chester County in 2023. The county has sporadic forest coverage, which is also particularly vulnerable to wildfire events. Communities that have more developed areas adjacent to wooded land also have potentially greater vulnerability to wildfire hazard.

Figure 4.3.10-5 Wildfire Hazard Potential in Chester County, 2023

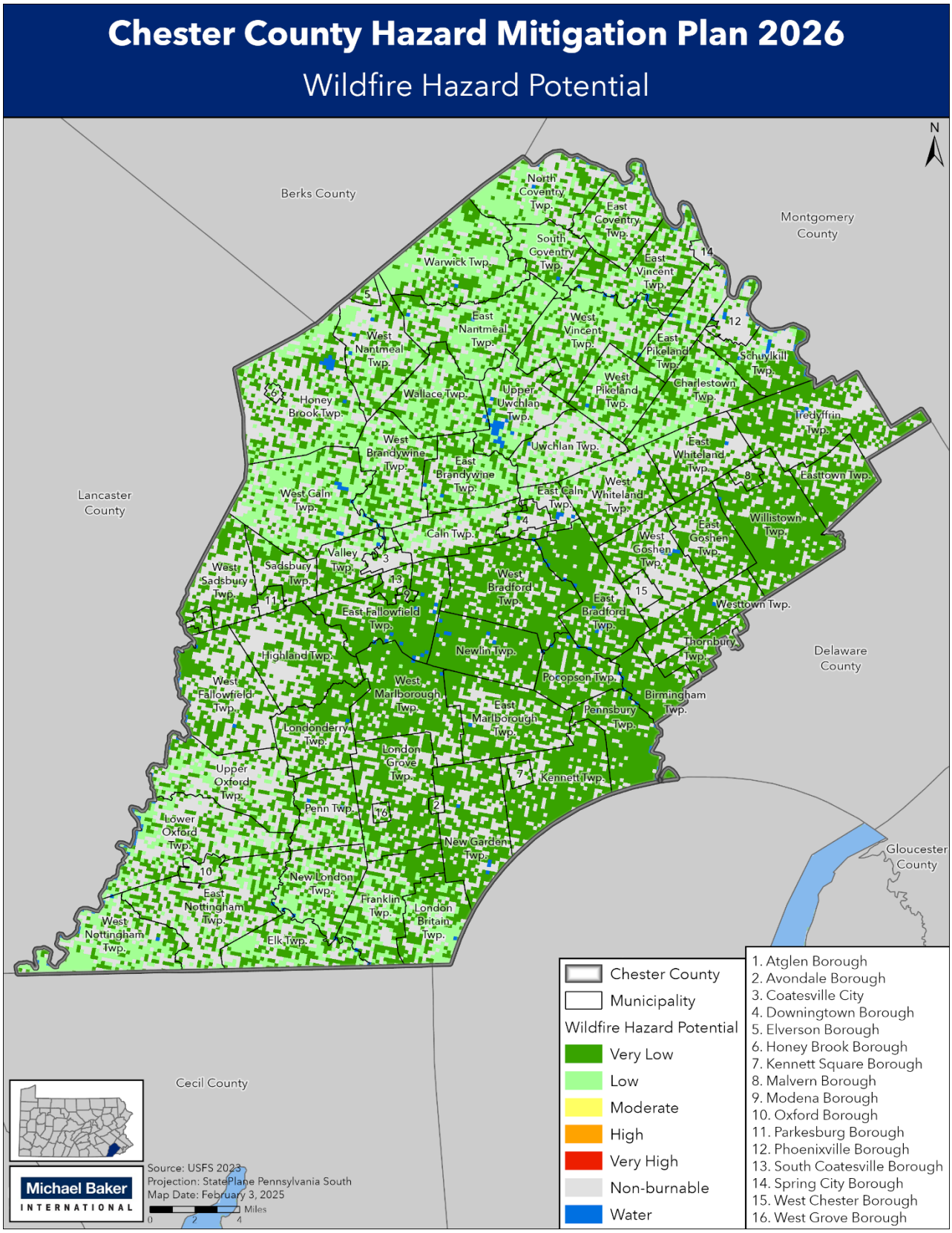


Figure 4.3.10-6 Forested Areas in Chester County, 2023

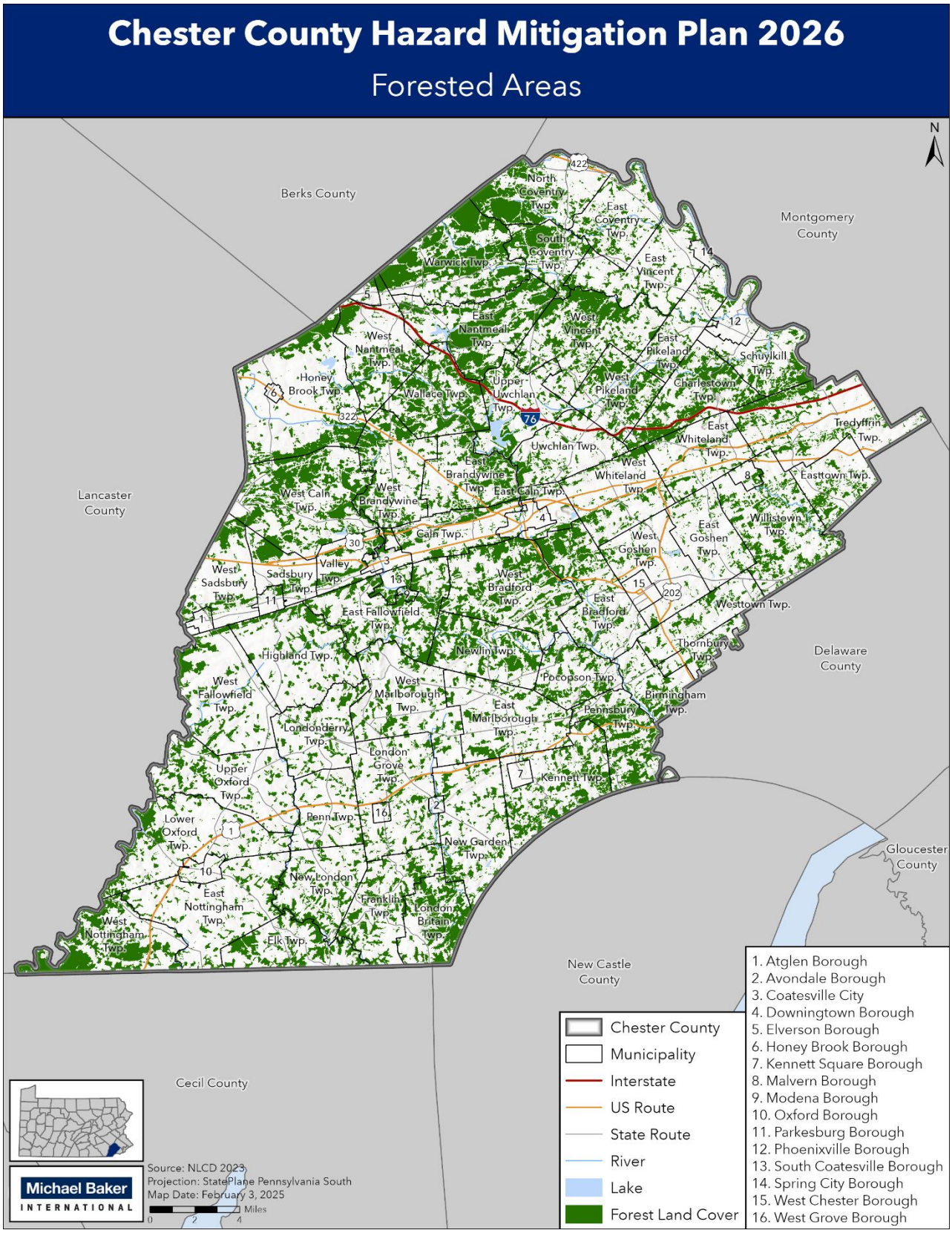


Table 4.3.10-4 lists the total addressable structures and critical facilities (excluding oil and gas wells) in each municipality that are in forested land use areas. As indicated in the table, West Caln Township has the highest number of vulnerable structures located in wooded areas, with 1,086 structures. It is the only municipality with more than 1,000 structures located in wooded areas. East Nantmeal Township, Charlestown Township, and Warwick Township are the only other municipalities with at least 25% of structures in wooded areas. Tredyffrin Township has the most critical facilities in wooded areas (13). It is the only township with more than ten critical facilities in wooded areas. Pennsbury Township, New London Township, and Elk Township are the only municipalities with at least 25% of critical facilities in wooded areas (28%, 28%, and 25%, respectively). Mitigation tactics such as brush clearing and prescribed burns around these facilities could reduce wildfire risk.

Table 4.3.10-4 Structures and Critical Facilities Vulnerable to Wildfire

MUNICIPALITY	TOTAL STRUCTURES	TOTAL STRUCTURES IN WOODED AREAS	PERCENT STRUCTURES IN WOODED AREAS	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN WOODED AREAS	PERCENT CRITICAL FACILITIES IN WOODED AREAS
Atglen Borough	577	2	0%	8	0	0%
Avondale Borough	405	6	1%	5	0	0%
Birmingham Township	1,624	195	12%	11	2	18%
Caln Township	4,701	196	4%	57	0	0%
Charlestown Township	2,266	590	26%	29	4	14%
Coatesville City	2,732	10	0%	27	0	0%
Downingtown Borough	2,291	5	0%	41	0	0%
East Bradford Township	3,658	397	11%	43	3	7%
East Brandywine Township	3,683	486	13%	49	3	6%
East Caln Township	1,269	114	9%	28	0	0%
East Coventry Township	3,563	306	9%	34	4	12%
East Fallowfield Township	3,944	358	9%	26	3	12%
East Goshen Township	5,665	182	3%	32	1	3%
East Marlborough Township	3,571	287	8%	25	0	0%
East Nantmeal Township	1,508	424	28%	16	2	13%
East Nottingham Township	4,885	242	5%	36	1	3%

Table 4.3.10-4 Structures and Critical Facilities Vulnerable to Wildfire

MUNICIPALITY	TOTAL STRUCTURES	TOTAL STRUCTURES IN WOODED AREAS	PERCENT STRUCTURES IN WOODED AREAS	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN WOODED AREAS	PERCENT CRITICAL FACILITIES IN WOODED AREAS
East Pikeland Township	3,552	214	6%	23	1	4%
Easttown Township	3,727	264	7%	28	3	11%
East Vincent Township	4,029	123	3%	81	3	4%
East Whiteland Township	4,401	169	4%	35	2	6%
Elk Township	1,367	144	11%	12	3	25%
Elverson Borough	584	30	5%	4	0	0%
Franklin Township	2,456	317	13%	17	2	12%
Highland Township	1,307	159	12%	15	0	0%
Honey Brook Borough	732	0	0%	5	0	0%
Honey Brook Township	4,909	545	11%	31	1	3%
Kennett Township	1,751	3	0%	14	0	0%
Kennett Square Borough	3,867	477	12%	44	6	14%
London Britain Township	1,782	375	21%	13	3	23%
Londonderry Township	4,078	188	5%	38	0	0%
London Grove Township	1,692	101	6%	9	2	22%
Lower Oxford Township	2,579	192	7%	36	1	3%
Malvern Borough	1,066	8	1%	10	0	0%
Modena Borough	201	18	9%	5	0	0%
New Garden Township	5,451	343	6%	44	3	7%
Newlin Township	2,921	237	8%	15	0	0%
New London Township	1,193	236	20%	18	5	28%
North Coventry Township	4,288	527	12%	37	2	5%
Oxford Borough	1,704	11	1%	17	0	0%
Parkesburg Borough	1,371	17	1%	15	1	7%
Penn Township	2,901	91	3%	25	1	4%
Pennsbury Township	1,712	384	22%	25	7	28%
Phoenixville	4,731	6	0%	32	0	0%

Table 4.3.10-4 Structures and Critical Facilities Vulnerable to Wildfire

MUNICIPALITY	TOTAL STRUCTURES	TOTAL STRUCTURES IN WOODED AREAS	PERCENT STRUCTURES IN WOODED AREAS	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN WOODED AREAS	PERCENT CRITICAL FACILITIES IN WOODED AREAS
Borough						
Pocopson Township	1,757	305	17%	27	0	0%
Sadsbury Township	1,987	129	6%	18	0	0%
Schuylkill Township	4,096	304	7%	36	2	6%
South Coatesville Borough	506	10	2%	6	0	0%
South Coventry Township	1,653	387	23%	18	1	6%
Spring City Borough	1,199	3	0%	6	0	0%
Thornbury Township	1,060	140	13%	10	1	10%
Tredyffrin Township	9,617	444	5%	139	13	9%
Upper Oxford Township	2,109	189	9%	18	0	0%
Upper Uwchlan Township	3,909	188	5%	27	0	0%
Uwchlan Township	5,805	264	5%	42	0	0%
Valley Township	2,926	77	3%	33	0	0%
Wallace Township	2,065	394	19%	19	2	11%
Warwick Township	2,192	547	25%	13	2	15%
West Bradford Township	5,801	799	14%	33	2	6%
West Brandywine Township	4,141	509	12%	30	1	3%
West Caln Township	6,070	1,086	18%	20	0	0%
West Chester Borough	3,147	5	0%	26	0	0%
West Fallowfield Township	2,226	174	8%	21	2	10%
West Goshen Township	8,075	148	2%	78	3	4%
West Grove Borough	964	7	1%	6	0	0%
West Marlborough Township	983	58	6%	21	0	0%
West Nantmeal Township	1,832	268	15%	21	0	0%
West Nottingham Township	2,014	334	17%	12	0	0%
West Pikeland Township	2,050	354	17%	22	0	0%

Table 4.3.10-4 Structures and Critical Facilities Vulnerable to Wildfire

MUNICIPALITY	TOTAL STRUCTURES	TOTAL STRUCTURES IN WOODED AREAS	PERCENT STRUCTURES IN WOODED AREAS	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN WOODED AREAS	PERCENT CRITICAL FACILITIES IN WOODED AREAS
West Sadsbury Township	1,915	245	13%	16	0	0%
West Vincent Township	3,127	625	20%	25	2	8%
West Whiteland Township	5,656	292	5%	86	3	3%
Westtown Township	3,838	219	6%	28	1	4%
Willistown Township	5,275	531	10%	55	4	7%
TOTAL	214,689	18,014	8%	2,027	108	5%

Table 4.3.10-5 below shows the populations in each municipality that are in forested land use areas. West Bradford Township and West Caln Township both have over 5,000 residents living in wooded areas (5,481 and 5,072 people, respectively). Uwchlan Township (4,256) is the only other municipality with over 4,000. Honey Brook Borough, Malvern Borough, and West Chester Borough are the only municipalities with no population living in wooded areas. There are five municipalities where at least 50% of the population lives in wooded areas – Wallace Township (67%), Warwick Township (61%), East Nantmeal Township (59%), West Caln Township (57%), and Modena Borough (50%).

Table 4.3.10-5 Population Vulnerable to Wildfire by Municipality

MUNICIPALITY	TOTAL 2020 POPULATION	TOTAL POPULATION IN WOODED AREAS	PERCENT POPULATION IN WOODED AREAS
Atglen Borough	1,313	9	1%
Avondale Borough	1,274	20	2%
Birmingham Township	4,082	1,276	31%
Caln Township	14,432	3,450	24%
Charlestown Township	6,001	2,734	46%
Coatesville City	13,350	1,320	10%
Downingtown Borough	7,892	228	3%
East Bradford Township	10,339	2,441	24%
East Brandywine Township	9,738	3,533	36%
East Caln Township	5,384	2,413	45%
East Coventry Township	7,068	1,217	17%

Table 4.3.10-5 Population Vulnerable to Wildfire by Municipality

MUNICIPALITY	TOTAL 2020 POPULATION	TOTAL POPULATION IN WOODED AREAS	PERCENT POPULATION IN WOODED AREAS
East Fallowfield Township	7,626	1,444	19%
East Goshen Township	18,410	2,114	11%
East Marlborough Township	7,306	2,269	31%
East Nantmeal Township	1,832	1,090	59%
East Nottingham Township	8,982	1,195	13%
East Pikeland Township	8,260	1,043	13%
Easttown Township	7,433	757	10%
East Vincent Township	13,917	2,621	19%
East Whiteland Township	10,984	1,687	15%
Elk Township	1,698	511	30%
Elverson Borough	1,330	449	34%
Franklin Township	4,433	1,472	33%
Highland Township	1,259	311	25%
Honey Brook Borough	1,892	0	0%
Honey Brook Township	8,274	2,114	26%
Kennett Township	5,936	134	2%
Kennett Square Borough	8,289	2,527	30%
London Britain Township	3,179	1,563	49%
Londonderry Township	8,797	2,418	27%
London Grove Township	2,476	630	25%
Lower Oxford Township	5,436	597	11%
Malvern Borough	3,419	0	0%
Modena Borough	541	272	50%
New Garden Township	11,363	2,800	25%
Newlin Township	5,810	1,508	26%
New London Township	1,358	527	39%
North Coventry Township	8,441	2,679	32%
Oxford Borough	5,736	126	2%
Parkesburg Borough	3,862	39	1%
Penn Township	5,644	792	14%
Pennsbury Township	3,876	1,407	36%
Phoenixville Borough	18,602	747	4%
Pocopson Township	4,455	803	18%
Sadsbury Township	4,125	362	9%
Schuylkill Township	8,780	1,290	15%

Table 4.3.10-5 Population Vulnerable to Wildfire by Municipality

MUNICIPALITY	TOTAL 2020 POPULATION	TOTAL POPULATION IN WOODED AREAS	PERCENT POPULATION IN WOODED AREAS
South Coatesville Borough	1,601	454	28%
South Coventry Township	2,796	1,155	41%
Spring City Borough	3,494	58	2%
Thornbury Township	3,177	811	26%
Tredyffrin Township	31,927	3,925	12%
Upper Oxford Township	2,560	577	23%
Upper Uwchlan Township	12,275	2,414	20%
Uwchlan Township	19,161	4,256	22%
Valley Township	7,985	1,726	22%
Wallace Township	3,711	2,474	67%
Warwick Township	2,590	1,577	61%
West Bradford Township	14,316	5,481	38%
West Brandywine Township	7,331	2,440	33%
West Caln Township	8,910	5,072	57%
West Chester Borough	18,671	0	0%
West Fallowfield Township	2,459	289	12%
West Goshen Township	23,040	809	4%
West Grove Borough	2,770	78	3%
West Marlborough Township	819	265	32%
West Nantmeal Township	2,251	460	20%
West Nottingham Township	2,748	828	30%
West Pikeland Township	4,024	1,029	26%
West Sadsbury Township	2,436	886	36%
West Vincent Township	6,668	2,733	41%
West Whiteland Township	19,632	2,845	14%
Westtown Township	11,154	2,167	19%
Willistown Township	11,273	2,825	25%
TOTAL	534,413	106,573	20%

Table 4.3.10-6 below lists the expected annual losses to wildfire by census tract in Chester County.

Table 4.3.10-6 Expected Annual Losses to Wildfire by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3001.01	Tredyffrin Township	$0.03	Very Low
3001.03	Tredyffrin Township	$0.00	No Expected Annual Losses
3001.04	Tredyffrin Township	$87.30	Very Low
3001.06	Tredyffrin Township	$35.47	Very Low
3001.07	Tredyffrin Township	$670.81	Relatively Low
3001.08	Tredyffrin Township	$1,812.87	Relatively Low
3001.09	Tredyffrin Township	$0.00	No Expected Annual Losses
3002.01	Easttown Township	$91.33	Very Low
3002.02	Easttown Township	$345.48	Very Low
3003.01	Willistown Township	$629.80	Relatively Low
3003.02	Willistown Township	$891.36	Relatively Low
3003.03	Willistown Township	$66.33	Very Low
3004	Malvern Borough	$0.00	No Expected Annual Losses
3005.01	Schuylkill Township	$264.08	Very Low
3005.02	Schuylkill Township	$490.48	Relatively Low
3006	Phoenixville	$10.38	Very Low
3007	Phoenixville	$0.00	No Expected Annual Losses
3008	Phoenixville	$0.00	No Expected Annual Losses
3009	Phoenixville	$209.13	Very Low
3010.01	East Pikeland Township	$384.18	Relatively Low
3010.02	East Pikeland Township	$35.78	Very Low
3011	Spring City Borough	$0.00	No Expected Annual Losses
3013	East Coventry Township	$188.78	Very Low
3014.01	North Coventry Township	$142.98	Very Low
3014.02	North Coventry Township	$410.66	Relatively Low
3015	South Coventry Township	$282.10	Very Low
3016	Warwick Township	$107.04	Very Low
3017	East Nantmeal Township	$307.52	Very Low
3018	West Vincent Township	$633.77	Relatively Low
3019	West Pikeland Township	$284.58	Very Low
3020	Charlestown Township	$834.20	Relatively Low
3021.02	East Whiteland Township	$0.00	Very Low

Table 4.3.10-6 Expected Annual Losses to Wildfire by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3021.03	East Whiteland Township	$219.12	Very Low
3021.04	East Whiteland Township	$97.57	Very Low
3022.03	West Whiteland Township	$0.00	No Expected Annual Losses
3022.04	West Whiteland Township	$96.93	Very Low
3022.05	West Whiteland Township	$128.81	Very Low
3022.06	West Whiteland Township	$522.87	Relatively Low
3022.07	West Whiteland Township	$0.00	No Expected Annual Losses
3023	West Chester Borough	$816.58	Relatively Low
3024	West Chester Borough	$100.17	Very Low
3025	West Chester Borough	$0.00	No Expected Annual Losses
3026	West Chester Borough	$0.00	No Expected Annual Losses
3027.02	West Goshen Township	$97.26	Very Low
3027.03	West Goshen Township	$566.17	Relatively Low
3027.04	West Goshen Township	$0.00	No Expected Annual Losses
3027.05	West Goshen Township	$1,160.26	Relatively Low
3027.06	West Goshen Township	$34.27	Very Low
3028.02	East Goshen Township	$3,009.20	Relatively Low
3028.03	East Goshen Township	$550.38	Relatively Low
3028.04	East Goshen Township	$331.17	Very Low
3028.06	East Goshen Township	$0.00	No Expected Annual Losses
3028.07	East Goshen Township	$0.00	No Expected Annual Losses
3029.01	Westtown Township	$0.00	Very Low
3029.02	Westtown Township	$587.09	Relatively Low
3030	Thornbury Township	$818.43	Relatively Low
3031	Birmingham Township	$161.52	Very Low
3033.01	Kennett Township	$0.03	Very Low
3033.02	Kennett Township	$69.83	Very Low
3034.01	Kennett Square Borough	$126.16	Very Low
3034.02	Kennett Square Borough	$48.65	Very Low
3035.01	East Marlborough Township	$86.35	Very Low
3035.02	East Marlborough Township	$27.46	Very Low
3038.01	West Bradford Township	$178.41	Very Low
3038.03	West Bradford Township	$741.03	Relatively Low
3038.04	West Bradford Township	$49.70	Very Low

Table 4.3.10-6 Expected Annual Losses to Wildfire by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3039.01	East Bradford Township	$136.07	Very Low
3039.02	East Bradford Township	$85.01	Very Low
3040	East Caln Township	$275.46	Very Low
3041.01	Downingtown Borough	$12.62	Very Low
3041.02	Downingtown Borough	$14.17	Very Low
3042.01	Caln Township	$318.78	Very Low
3043	East Brandywine Township	$1,370.32	Relatively Low
3044.03	Uwchlan Township	$98.84	Very Low
3044.04	Uwchlan Township	$62.71	Very Low
3044.05	Uwchlan Township	$326.23	Very Low
3044.06	Uwchlan Township	$2.07	Very Low
3045.02	Upper Uwchlan Township	$59.11	Very Low
3045.03	Upper Uwchlan Township	$0.00	No Expected Annual Losses
3045.04	Upper Uwchlan Township	$159.75	Very Low
3046	Wallace Township	$131.08	Very Low
3049	Honey Brook Township	$1,134.69	Relatively Low
3050	Honey Brook Borough	$5.00	Very Low
3051.01	West Caln Township	$181.10	Very Low
3051.02	West Caln Township	$333.93	Very Low
3053	Valley Township	$361.85	Relatively Low
3054	Coatesville City	$0.00	No Expected Annual Losses
3055	Coatesville City	$0.00	No Expected Annual Losses
3056	Coatesville City	$0.00	No Expected Annual Losses
3057	Coatesville City	$0.00	No Expected Annual Losses
3060	East Fallowfield Township, Modena Borough	$175.34	Very Low
3063	West Grove Borough	$0.00	No Expected Annual Losses
3065.01	New Garden Township	$32.39	Very Low
3065.03	New Garden Township	$19.76	Very Low
3065.04	New Garden Township	$0.00	No Expected Annual Losses
3066	London Britain Township	$34.08	Very Low
3067	Franklin Township	$397.79	Relatively Low
3068	Elk Township	$31.52	Very Low
3069	New London Township	$13.76	Very Low
3070	Penn Township	$96.99	Very Low

Table 4.3.10-6 Expected Annual Losses to Wildfire by Census Tract (FEMA NRI, 2025)

CENSUS TRACT	MUNICIPALITIES	EXPECTED ANNUAL LOSSES	EXPECTED ANNUAL LOSS RATING
3071	Londonderry Township	$204.88	Very Low
3072	Highland Township	$236.46	Very Low
3073	Parkesburg Borough	$296.56	Very Low
3074	Sadsbury Township	$373.61	Relatively Low
3077	West Fallowfield Township	$371.61	Relatively Low
3078	Upper Oxford Township	$441.81	Relatively Low
3079	Lower Oxford Township	$253.45	Very Low
3080	Oxford Borough	$299.09	Very Low
3081.01	East Nottingham Township	$198.77	Very Low
3081.02	East Nottingham Township	$397.57	Relatively Low
3082	West Nottingham Township	$165.81	Very Low
3110	East Vincent Township	$250.47	Very Low
3111	Pennsbury Township	$35.60	Very Low
3112	Newlin Township, West Marlborough Township	$258.16	Very Low
3113	Pocopson Township	$839.05	Relatively Low
3114.01	Caln Township	$527.97	Relatively Low
3114.03	West Brandywine Township	$28.72	Very Low
3114.04	West Brandywine Township	$446.46	Relatively Low
3115	West Nantmeal Township, Elverson Borough	$269.81	Very Low
3116	South Coatesville Borough	$60.37	Very Low
3117.01	London Grove Township	$358.96	Relatively Low
3117.02	London Grove Township, Avondale Borough	$1,849.79	Relatively Low
3118	West Sadsbury Township, Atglen Borough	$379.08	Relatively Low
9800	West Chester Borough	$0.00	No Expected Annual Losses
TOTAL		$34,256.33	

4.3.10.6. Equity in Vulnerable Communities

Communities in rural areas are more susceptible to wildfires than their urban counterparts due to potential proximity to large fire-prone wooded areas. These areas may have limited evacuation routes, increasing the risk for residents in the path of wildfire. Additionally, households with people with disabilities, specifically related to lung or respiratory issues, are going to be at an increased risk of harm, and county hospitals should be prepared. The City of

Coatesville and Spring City Borough have census tracts where more than 20% of the population has a disability, but are at lower risk overall to wildfires.

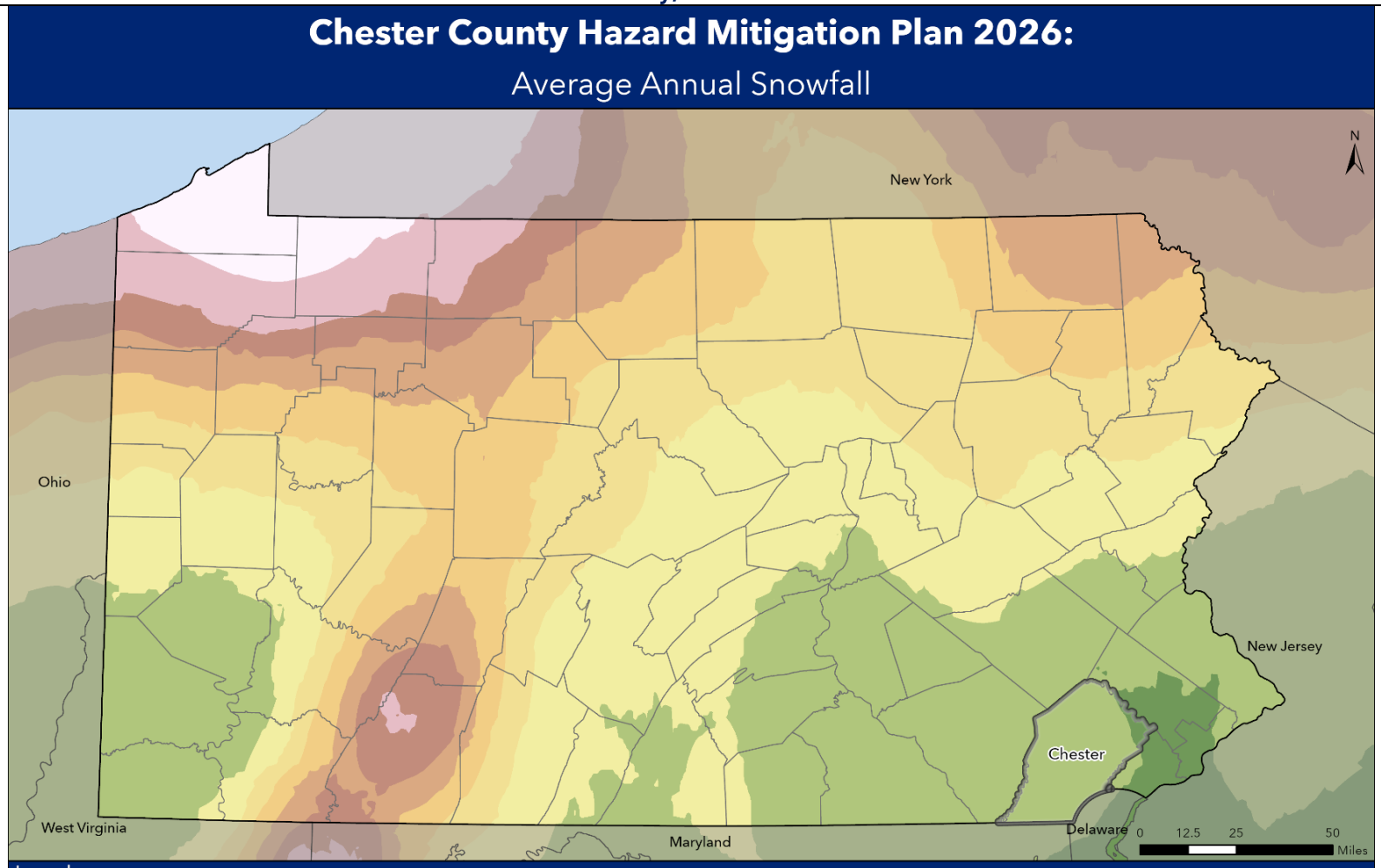
4.3.11. Winter Storm



4.3.11.1. Location and Extent

Heavy snow or ice occurs throughout the Commonwealth of Pennsylvania. Every municipality in Chester County is affected by these storms. Chester County experiences all levels of winter storms, from ice storms and freezing rain to heavy snow and blizzards. Hazard Identification survey respondents ranked winter storms in the top five hazards presenting the most risk to the county. Generally, the average annual snowfall is consistent throughout the county, with the area receiving between 20 and 30 inches of snow annually (see Figure 4.3.11-1 below) (NOAA NWS, 2021). This dataset from NOAA in 2021 is the most current, comprehensive, and publicly available geospatial data at the time of this Plan Update. This map continues to depict current conditions.

Figure 4.3.11-1 Mean Annual Snowfall for Chester County, 2021



4.3.11.2. Range of Magnitude

Winter storms consist of cold temperatures, heavy snow or ice, and sometimes strong winds. Because winter storms are a regular occurrence in Chester County, they are considered hazards only when they result in damage to specific structures and/or overwhelm local capabilities to handle disruptions to traffic, communications, and electric power. The cost of removing snow, repairing damages, especially from ice storms, and the loss to businesses can have a negative economic impact on communities. Winter storms can generate other hazards including infrastructure disruption (blocked roads and power outages), human-caused hazards (traffic accidents and trapped vehicles), and technological problems (communication system outages and overload). Winter storms can adversely affect roadways, utilities, business activities. and business activities. Which can cause loss of life, frostbite, or freezing.

Winter storms can include one or more of the following weather events:

1. Heavy Snowstorm: Accumulations of four inches or more in a six-hour period, or six inches or more in a 12-hour period.
2. Sleet Storm: Sleet is formed when snow falling to the earth partially melts as it passes through a layer of warm air. The precipitation then passes through a cold layer of air and refreezes into solid pellets. Sleet causes surfaces to become slippery, posing hazards to pedestrians and motorists.
3. Ice Storm: An ice storm occurs when rain freezes upon impact with the ground or other objects such as trees and power lines. Heavy accumulations of ice can bring down trees and utility poles, disrupting power and communication for days while crews make the necessary repairs. The icy conditions are also dangerous for pedestrians and vehicular traffic.
4. Blizzard: According to NOAA NWS, a blizzard is a severe snowstorm that occurs when winds reach 35 mph or more. The blowing snow reduces visibility to less than one-quarter of a mile for at least three hours. Storms that meet these criteria are not frequent in Chester County; however, storms that produce blizzard-like conditions are a common occurrence.
5. Severe Blizzard: Wind velocity of 45 mph, temperatures of 10° Fahrenheit or lower, a high density of snow with visibility frequently measured in feet prevailing over an extended period of time.

Any of the above events can result in the closure of secondary roads, particularly in rural locations, the loss of utility services and the depletion of oil heating supplies. Environmental impacts often include damage to shrubbery and trees due to heavy snow loading, ice buildup and/or high winds, which can break limbs or even bring down large trees. Gradual melting of snow and ice provides excellent groundwater recharge. However, high temperatures following heavy snowfall can cause rapid surface water runoff and severe flooding. The blizzard of 1996 represents the largest impact Chester County is anticipated to encounter from a winter storm hazard. During this event, heavy snow fell across the county, resulting in two to three feet of

snow in places. A storm of this magnitude could be considered a worst-case scenario winter storm for Chester County.

The potential impacts of winter storms on community lifelines are as follows:

Table 4.3.11-1 Most Likely Lifelines Impacted by Winter Storm

LIFELINES	NOTES
	Government administrative services may be impacted through transportation infrastructure issues and community safety may be threatened due to potential harm from storm impacts.
	Winter storms can cause damage to structures and water utility infrastructure, while the food supply chain may be disrupted due to impacts on transportation infrastructure.
	Potential direct damage to infrastructure and then potential increased fuel use for those who lost access to electrical heating may occur.
	Transportation lifeline impacted during response and recovery due to direct damage to infrastructure and dangerous road conditions.

4.3.11.3. Past Occurrence

The Commonwealth of Pennsylvania has a long history of severe winter weather. Average annual snowfall in Chester County can range from 20 to 30 inches (NOAA NWS, 2024a). Three of the twenty-five Presidential Disaster and Emergency Declarations affecting Chester County have been in response to hazard events related to winter storms (see Table 4.2-1). Three of the nine Gubernatorial Declarations since 2018 have been for winter storms (see Table 4.2-2). The number of winter storm events occurring each year in Chester County and associated damages are listed in Table 4.3.13-2.

Table 4.3.11-2 Previous Winter Storm Events Impacting Chester County from 2013 to 2024 (NOAA NCEI, 2024)

YEAR	NUMBER OF EVENTS	DAMAGES ($)
2013	4	$0
2014	2	$0
2015	3	$0
2016	2	$0
2017	2	$0

Table 4.3.11-2 Previous Winter Storm Events Impacting Chester County from 2013 to 2024 (NOAA NCEI, 2024)

YEAR	NUMBER OF EVENTS	DAMAGES ($)
2018	5	$0
2019	3	$0
2020	3	$0
2021	6	$0
2022	0	$0
2023	0	$0
2024	3	$0
2025	0	$0
TOTAL	33	$0

4.3.11.4. Future Occurrence

Approximately 35 winter storms occur across Pennsylvania annually. Winter storms are a regular, annual occurrence in Chester County and should be considered *highly likely* as defined by the Risk Factor methodology probability criteria (see Table 4.4-1).

Climate projections show that while precipitation totals are expected to increase, the number of days below 32 degrees Fahrenheit may decrease. This may lead to a decrease in the number of winter storms. That said, the polar jet stream and arctic warming may play a part in large-scale storms still being a potential hazard. Cohen, Pfeiffer, and Francis (2018) noted that warming arctic temperatures have led to a weakening of the polar jet stream, which has allowed warmer, yet still very cold, arctic air to travel southward and provide the other half of the equation for the intense winter storms seen in the Northeast United States. There is a possibility these storms continue to occur and may even occur more frequently, with the warming Atlantic Ocean generating more fuel and the potential for more intense hot air-cold air clashes that strengthen storms (Feuerstein, 2022). However, this study has been criticized due to the small size of the 35-year sample and the potential for compounding factors impacting the data, as various climate modeling techniques have so-far been unable to reproduce the effect and confirm the linkage (Blackport and Screen, 2020). More studies are ongoing.

4.3.11.5. Vulnerability Assessment

In Chester County, accumulations of snow and/or ice during winter months are expected and normal. The most common detrimental effects of snow and/or ice are not collapsed structures but traffic accidents and interruptions in power supply and communications services. Motorists may occasionally become stranded on major highways, especially on I-76 during these storms. Stranded motorists are also likely on US 322 in remote locations.

Emergency medical supplies, food, and fuel are sometimes required during these storms. Areas of vulnerability include low-income and elderly populations, mobile homes, and infrastructure

such as roadways and utilities that can be damaged by such storms and the low-lying areas that can be impacted by flooding related to rapid snowmelt.

Critical facilities, including DARA's WWTP, would be impacted by a storm event, but these structures are largely constructed of concrete and masonry; therefore, they should only suffer minimal structural damage. Because power interruption can occur, backup power is recommended for critical facilities and infrastructure.

Vulnerability to the effects of winter storms on buildings is somewhat dependent on the age of a building. As building codes become more stringent, buildings can support heavier loads and as buildings age, various factors may deteriorate their structural integrity. Vulnerability also depends upon the type of construction and the degree to which a structure has been maintained. The most vulnerable structures are those that were poorly built or are dilapidated. The weight of heavy snow or ice may lead to minor damage or to structural collapse.

All structures and infrastructure in Chester County are exposed to heavy snow and ice. For this analysis, structures built prior to 1940 are identified as being potentially at risk of being somewhat weakened and more susceptible to damage due to heavy snow or ice. The following table shows the number of housing units in Chester County built prior to 1940 according to the ACS 2023 five-year estimates. West Chester Borough, Phoenixville Borough, and Coatesville City have the most units of any municipality in the county built prior to 1940 (all over 2,000). However, Avondale Borough and West Marlborough Township have the largest proportion of housing units built prior to 1940 (53.0% and 52.9%, respectively). While the U.S. Census Bureau provides estimates for residential structures, the age of non-residential structures is not available.

Table 4.3.11-3 Housing Units Built Prior to 1940 by Municipality (U.S. Census, 2023)

MUNICIPALITY	UNITS	PERCENT OF TOTAL UNITS
Atglen Borough	65	16.0%
Avondale Borough	267	53.0%
Birmingham Township	140	9.0%
Caln Township	480	8.5%
Charlestown Township	139	6.5%
Coatesville City	2,059	38.6%
Downingtown Borough	1,081	29.6%
East Bradford Township	280	7.7%
East Brandywine Township	193	5.6%
East Caln Township	84	3.1%
East Coventry Township	170	6.3%
East Fallowfield Township	191	7.1%
East Goshen Township	160	1.8%
East Marlborough Township	365	12.5%
East Nantmeal Township	198	31.1%
East Nottingham Township	137	4.7%

Table 4.3.11-3 Housing Units Built Prior to 1940 by Municipality (U.S. Census, 2023)

MUNICIPALITY	UNITS	PERCENT OF TOTAL UNITS
East Pikeland Township	294	8.5%
Easttown Township	288	11.3%
East Vincent Township	216	3.9%
East Whiteland Township	503	12.4%
Elk Township	77	13.0%
Elverson Borough	147	23.8%
Franklin Township	133	7.8%
Highland Township	82	17.5%
Honey Brook Borough	225	28.8%
Honey Brook Township	232	7.4%
Kennett Township	764	32.5%
Kennett Square Borough	164	4.5%
London Britain Township	88	8.2%
Londonderry Township	239	8.1%
London Grove Township	105	11.2%
Lower Oxford Township	154	12.9%
Malvern Borough	475	27.1%
Modena Borough	66	45.8%
New Garden Township	343	8.3%
Newlin Township	199	9.3%
New London Township	107	22.9%
North Coventry Township	810	22.6%
Oxford Borough	597	26.0%
Parkesburg Borough	382	24.5%
Penn Township	106	4.7%
Pennsbury Township	65	4.6%
Phoenixville Borough	2,633	28.1%
Pocopson Township	116	10.4%
Sadsbury Township	176	10.5%
Schuylkill Township	352	11.1%
South Coatesville Borough	210	27.5%
South Coventry Township	116	10.5%
Spring City Borough	1,044	49.9%
Thornbury Township	49	4.2%
Tredyffrin Township	1,089	8.4%
Upper Oxford Township	173	19.9%
Upper Uwchlan Township	60	1.4%
Uwchlan Township	297	3.8%
Valley Township	514	17.1%
Wallace Township	217	17.8%
Warwick Township	335	30.6%
West Bradford Township	353	6.9%

Table 4.3.11-3 Housing Units Built Prior to 1940 by Municipality (U.S. Census, 2023)

MUNICIPALITY	UNITS	PERCENT OF TOTAL UNITS
West Brandywine Township	208	6.9%
West Caln Township	223	6.5%
West Chester Borough	2,934	39.8%
West Fallowfield Township	141	16.4%
West Goshen Township	638	6.7%
West Grove Borough	276	29.6%
West Marlborough Township	243	52.9%
West Nantmeal Township	173	21.8%
West Nottingham Township	196	17.1%
West Pikeland Township	92	6.6%
West Sadsbury Township	115	13.4%
Westtown Township	197	7.9%
West Vincent Township	281	3.4%
West Whiteland Township	303	6.9%
Willistown Township	308	6.8%

As all structures and infrastructure in Chester County will be exposed to heavy snow and ice, all of Chester County has adopted the 2018 IBC and IRC building codes. New construction will be able to withstand the weight of heavy snow or ice.

4.3.11.6. Equity in Vulnerable Communities

During winter storms, there will be a disproportionate impact on low-income and marginalized communities. Low-income families are more likely to live in poorly insulated or older homes that are less able to withstand extreme cold. These homes may lack sufficient heating, insulation, and weatherproofing, making them more vulnerable to damage from ice, snow, and cold temperatures. Many low-income households also experience energy insecurity and may struggle to afford heating during winter months. Energy shutoffs due to unpaid bills can leave them dangerously exposed to cold weather. This includes West Chester Borough, the City of Coatesville, and Oxford Borough as they have areas with the highest percentage of population below the poverty level. Elderly households or households with people with disabilities may also face additional challenges due to mobility issues. Icy conditions, snow buildup, and impassable roads or sidewalks can prevent them from leaving their homes. East Goshen Township, Kennett Township, West Brandywine Township, and Willistown Township are home to census tracts where over one-third of the population is aged 65 or older. The City of Coatesville and Spring City Borough have census tracts where more than 20% of the population has a disability.

4.3.12. Cyber Terrorism

4.3.12.1. Location and Extent



Cyber terrorism is a broad term that refers to acts associated with the convergence of terrorism and cyberspace. Generally, cyberterrorism involves unlawful attacks or threats against computers, networks, and the information stored therein to intimidate or coerce a government or its people to achieve political or social objectives (Denning, 2000). These acts can range from taking control of a host website to using networked resources to directly cause destruction and harm. Table 4.3.12-1 includes the types and methods of cyberattacks as defined by the Pennsylvania Security.

Table 4.3.12-1 Methods of Cyberattacks (PA OHS, 2022)

THREAT	DESCRIPTION
Botnet (also zombies)	A collection of computers subject to control by an outside party, usually without the knowledge of the owners, using secretly installed software robots. The robots are spread by trojan horses and viruses. The botnets can be used to launch denial-of-service attacks and transmit spam.
Card skimming	The act of using a skimmer to illegally collect data from the magnetic stripe of a credit, debit or ATM card. This information, copied onto another blank card's magnetic stripe, is then used by an identity thief to make purchases or withdraw cash in the name of the actual account holder. Skimming can take place at an atm and can occur at restaurants, taxis, or other places where a user surrenders his or her card to an employee.
Denial-of-service attack	Flooding the networks or servers of individuals or organizations with false data requests so they are unable to respond to requests from legitimate users.
Malicious code (also Malware)	Any code that can be used to attack a computer by spreading viruses, crashing networks, gathering intelligence, corrupting data, distributing misinformation and interfering with normal operations.
Pharming	A cyberattack that redirects website traffic to a fake website by installing malicious code on a victim's computer or by exploiting vulnerabilities in DNS servers. Unlike phishing, pharming does not rely on tricking users into clicking links; instead, it manipulates DNS settings or the computer's hosts file so that users are automatically redirected to fraudulent websites even when they enter the correct web address. This allows attackers to steal personal information such as passwords, credit card numbers, and bank account details.
Phishing	Using fake e-mails to trick individuals into revealing personal information, such as social security numbers, debit and credit card account numbers and passwords, for nefarious uses.
Spam	Unsolicited bulk e-mails that may contain malicious software. Spam is now said to account for around 81% of all e-mail traffic.

Table 4.3.12-1 Methods of Cyberattacks (PA OHS, 2022)

THREAT	DESCRIPTION
Spear phishing	A type of phishing attack that focuses on a single user or department within an organization, addressed by someone within the company in a position of trust and requesting information such as login ids and passwords. Spear phishing scams will often appear to be from a company's own human resources or technical support divisions and may ask employees to update their usernames and passwords. Once hackers get this data, they can gain entry into secured networks. Another type of spear phishing attack will ask users to click on a link, which deploys spyware that can steal data.
Spoofing	Making a message or transaction appear to come from a source other than the originator.
Spyware	Software that collects information without a user`s knowledge and transfers it to a third party.
Trojan horse	A destructive program that masquerades as a benign application. Unlike viruses, trojan horses do not replicate themselves, but they can be just as destructive. One of the most insidious types of trojan horse is a program that claims to rid your computer of viruses but instead introduces viruses onto your computer.
Virus	A program designed to degrade service, cause inexplicable symptoms or damage networks.
Worm	Program or algorithm that replicates itself over a computer network and usually performs malicious actions, such as using up the computer's resources and possibly shutting the system down. A worm, unlike a virus, has the capability to travel without human action and does not need to be attached to another file or program.

Cyberattacks may not always constitute acts of cyberterrorism because some acts may have relatively small impacts and only produce annoyances. A cyberattack is generally considered an act of cyberterrorism when the following motivations are present:

- Effects-based: When computer attacks result in effects that are disruptive enough to generate fear comparable to a traditional act of terrorism.
- Intent-based: When unlawful or politically motivated computer attacks are committed to intimidate or coerce a government or people to further a political objective, or to cause grave harm or severe economic damage (Rollins and Wilson, 2007).

Cyberattacks can be further divided into the following categories based on the complexity of the attack:

- Simple-Unstructured: Simple-unstructured attacks are the most common. These are amateurish attacks with relatively minimal consequences.
- Advanced-Structured: Advanced-structured attacks are more sophisticated and consequential and have a greater emphasis on targeting victims prior to an attack, resulting in a more debilitating effect.

- Complex-Coordinated: Complex-coordinated attacks are the most advanced and most troublesome type of attacks where success could mean a network shutdown (Denning, 2000).

Cyber terrorism can cause severe disruptions to transportation, public safety, and utility services, all of which are critical infrastructure that are highly dependent on information technology. Cyber terrorism can take many forms, including attacks through physical means, electronic means, and the use of malicious code. Cyber terrorists can also have a wide range of personal, political, or cultural agendas. All county departments, as well as individuals, businesses, and other institutions in Chester County, are potential targets for cyberterrorism. Potential threats include identity theft, loss of sensitive information, service disruptions, and other malicious activity.

Cyber terrorists can be difficult to identify because the internet provides a meeting place for individuals from various parts of the world. Individuals or groups planning a cyber-attack are not organized in a traditional manner, as they are able to effectively communicate over long distances without delay. Cyberattacks are also unpredictable and typically occur without warning.

4.3.12.2. Range of Magnitude

In recent years, cyber terrorism has become a significant threat and can impact people, businesses, institutions, local governments, and county and state agencies to varying degrees. Impacts from a large-scale cyberterrorism event could disrupt the county's economy and potentially threaten its economic stability. The magnitude of a cyber terrorism attack will vary greatly based on the extent of systems affected and the duration of the impact. Additionally, the magnitude will vary based upon which specific system is affected by an attack, the ability to preempt an attack, and an attack's effect on continuity of operations. The largest threat to institutions from cyber terrorism comes from any processes that are networked and controlled via computer. The county and individual municipalities should address and take measures to reduce any vulnerabilities that could allow access to sensitive data or processes. In addition, attacks on institutions or organizations outside of the county or even the state can impact residents, businesses, and government services.

The potential impacts of cyberterrorism on community lifelines are as follows:

Table 4.3.12-2 Most Likely Lifelines Impacted by Cyberterrorism

Lifelines	Notes
	Community safety may be threatened. Any government service can be targeted by cyberterrorism activities.
	Energy infrastructure may be a target for cyberterrorism activities.
	Hazardous materials facilities and operations may be targets for cyber terrorists.

4.3.12.3. Past Occurrence

A malware attack occurred in February 2019 on the Chester County government. As a result, various online services for the county were unavailable, including dispatch services, leading to an increase in use of the radio system. No county information was accessed or compromised and essential county services (i.e., 9-1-1 operations, emergency communications, etc.) were not affected. Outside cybersecurity consultants were hired to work with Chester County's Department of Computing and Information Services to resolve the issues (Heinze, 2019).

In late 2024, Chester County Probation/parole and Pretrial Services was targeted by a cyber-attack that impacted 8,281 individuals. This office is responsible for overseeing probation and parole services, ensuring that individuals comply with the terms of their release, and supporting the judicial process in Chester County. The breach was characterized by an inadvertent disclosure of personal information. The office notified those impacted, and identity theft protection services were offered, including a 12-month subscription to Experian's credit monitoring, identity theft detection and restoration, and identity theft insurance (SLF, 2025).

Chester County has also been impacted by statewide and/international cyber-attacks. A large-scale attack was the Equifax data breach in 2017, which was estimated to potentially impact over 5.5 million residents of Pennsylvania and over 145.5 million nationally. The information accessed included names, Social Security numbers, birthdates, addresses, and driver's license numbers (PA Office of the Attorney General, 2017). Additionally, in 2013, all 3 billion Yahoo user accounts that existed at that time were compromised: user names, e-mail addresses, phone numbers, birth dates, hashed passwords and both encrypted and unencrypted security questions and answers were breached (Yahoo 2016). In terms of a data breach cyber-attack, this could be considered a worst-case scenario event. Large-scale data breach events are becoming more common.

Attacks on state-level systems have also occurred recently; these impacted residents across Pennsylvania, including Chester County. In February 2024, the Administrative Office of Pennsylvania Courts was the victim of a denial-of-service attack on its website. The attack did not compromise any data or stop the courts from operating, but state Supreme Court Chief Justice Debra Todd noted it was still "significant and serious" (Levy, 2024). In January 2025, Conduent State & Local Solutions, Inc. experienced disruption due to a cyberattack. The company is contracted by the Pennsylvania Department of Human Services to handle collection and disbursement of child support, and the attack caused a delay in payments. The estimated impact was a delay of $27 million in payments for 121,000 families. No data was compromised, and the payments were eventually sent once operations resumed (Scicchitano, 2025). In August 2025, the PA Office of Attorney General was victim to a ransomware attack. The attack impeded several agency functions, including access to archived e-mails, files, and systems that are essential for pursuing cases. The interruption was caused by an outsider encrypting files in an effort to force the office to make a payment to restore operations, but this ransom was not paid. Initially, the attack took down communications systems, but most of the office's 1,200 staff members regained access to e-mail shortly after the attack (Greig, 2025).

In addition to large-scale acts of cyber terrorism, smaller cyberattacks occur daily. Billions of e-mails are sent each day, and spam and phishing e-mails account for a significant share of all e-mail traffic. Additionally, brute force attacks, which are trial and error attempts to obtain user passwords and pins, are frequently used by criminals attempting to crack encrypted data or gain access to private accounts. Firewalls can be effective at keeping security threats such as these out, but once a cybercriminal gains access to a system, they can attack from within. For example, gaining access to a county employee's e-mail account would allow a hacker to send additional phishing e-mails from within a network, which may not be as monitored as closely as attacks from outside the system. This is known as spear phishing.

4.3.12.4. Future Occurrence

Cyber terrorism is an emerging hazard that has the potential to impact the county's computer infrastructure and the systems and services that are provided to the public. Concerns about cyberterrorism throughout the United States is growing as its impacts could have potentially crippling effects. Security experts describe the threat of cyberterrorism as imminent. The future occurrence of cyberterrorism can be considered *possible* as defined by the Risk Factor Methodology probability criteria (see Table 4.4.1-1).

4.3.12.5. Vulnerability Assessment

Generally, cyber terrorism has no direct effect on the environment; however, the environment may be affected if a hazardous materials release occurs because of a critical infrastructure failure as a result of cyber terrorism. Similarly, an act of cyber terrorism on a nuclear facility could have devastating environmental consequences if the plant suffered an intentional catastrophic failure. See **Section 4.3.19** for more information on Hazardous Materials Release.

All county and municipal facilities are vulnerable to cyber terrorism. While the physical structures of these buildings are generally not at risk, information systems and data stored within them are

vulnerable. Government computer networks contain sensitive information that is integral to the security of the county and municipalities and could be the target of a cyberattack. County and municipal governments may possess and maintain forms of personal and financial information, including tax filings, birth and death records, Social Security numbers, medical information, and more. Additionally, many critical facilities that are essential to Chester County operations are reliant upon computer networks to monitor and control critical functions. For example, an attack on internet access or the power grid could have detrimental impacts on county services and functions. Additionally, a large-scale computer breach could lead to economic costs in lost productivity to the impacted agency/organization and potentially related businesses and industries. Lost revenues and productivity would depend on the type of magnitude of the cyber terrorism event.

All communities in Chester County are vulnerable on some level, directly or indirectly, to a cyber terrorism attack. However, in general, areas with higher concentrations of government or industry facilities may have a higher risk. Additionally, areas with higher concentrations of people, businesses, and critical infrastructure may be at higher risk.

4.3.12.6. Equity in Vulnerable Communities

Households with those 65 or older may be more susceptible to cyber-attacks as older adults have lower levels of digital literacy compared to younger generations. This makes them more susceptible to scams, phishing, and other forms of cybercrime. East Goshen Township, Kennett Township, West Brandywine Township, and Willistown Township are home to census tracts where over one-third of the population is aged 65 or older. People in low-income or marginalized communities often have less access to education and resources on cybersecurity. These communities may not be able to afford the most up-to-date technology or cybersecurity tools, such as firewalls, antivirus, or secure home networks leaving them more exposed to cyber threats. West Chester Borough, the City of Coatesville, and Oxford Borough have areas with the highest percentages of population below the poverty level and may require additional outreach and education efforts.

Human-Made Hazards

4.3.13. Dam Failure

Due to data sensitivity, the Dam Failure profile can be found in **Appendix G**.



4.3.14. Environmental Hazards – Gas and Liquid Pipelines

4.3.14.1. Location and Extent



Pipelines are a vital component of the nation's infrastructure that transport two of the materials most essential to daily life – water and energy products. This profile addresses the risks posed by the gas and liquid pipeline systems that move energy products in Pennsylvania and across Chester County. Pipeline systems are defined by federal regulations as all parts of a pipeline facility through which a hazardous liquid or gas moves, including piping, valves, pumps or compressors, metering and delivery stations, and storage and breakout tanks. Although pipelines are typically located underground, they may also be located aboveground when dictated by operational considerations (such as connections to pump and compressor stations) or environmental conditions (such as geological characteristics) (FEMA, 2015).

Natural gas pipelines are the most common type of pipeline in the United States and serve to transport natural gas from the point of production to the point of use. Three major types of pipelines move natural gas: gathering lines, transmission lines, and distribution lines. Gathering lines are pipelines that move natural gas from the production well to a processing facility. Gas transmission lines are the large pipelines (6 to 48 inches in diameter) that move natural gas from the processing facility to local distribution networks. Gas transmission lines are designed to transport natural gas long distances at high pressures (often 200 – 1,500 psi). There are approximately 300,000 miles of gas transmission pipelines in the United States. Gas distribution lines are the smaller gas mains and service lines (1/2 to 2 inches in diameter) that move natural gas from the transmission network directly to homes and businesses. Gas distribution pipelines are designed to transport natural gas shorter distances at relatively low pressures. There are approximately 2.35 million miles of gas distribution lines in the United States (PHMSA, 2023).

Liquid petroleum pipelines are the second most common type of pipeline in the United States, and serve to transport crude oil, refined product, and highly volatile liquids (HVLs) to local distribution networks. For crude oil and its refined products, there are three major types of pipelines that move the product from producing areas to local distribution networks: gathering lines, transmission lines, and refined product lines. Gathering lines are the smaller pipelines (2 to 8 inches in diameter) that gather crude oil from production wells. Crude oil transmission lines are the larger, cross-country pipelines that transport crude oil and refined products from production sites or refineries to markets. Refined product pipelines transport fuels from refineries to end-use markets and distribution terminals. Last-mile delivery to consumers is often made by tanker trucks from these terminals.

Based on past occurrences, pipeline incidents within Chester County have been accidental and have not been considered terrorist or criminal acts. While past occurrences have not been deemed intentional, an intentional or unintentional release of any of these products in large quantities would pose a threat to the local population, economy, and environment, resulting in lost revenue, injuries, and deaths. Chester County is home to nearly 600 linear miles of

pipelines. Many of the pipelines have been in place for decades; more recently, the construction of new lines and upgrades to existing lines has increased.

In 2013, the Chester County Planning Commission created the Pipeline Information Center (PIC) to inform community members of all pipeline issues, pipeline safety, the new pipeline review process, and the latest information on pipeline project activity within the county (Chester County Planning Commission, n.d.). The Mariner East 2 pipeline is now in operation and carries propane, natural gasoline, and butane.

Figure 4.1.14-1 shows pipelines in Chester County. Almost all municipalities in Chester County are intersected by transmission pipelines. Municipalities not intersected by transmission pipelines are Avondale Borough, East Nottingham Township, Honey Brook Borough, Kennett Square Borough, London Grove Township, Malvern Borough, Modena Borough, Oxford Borough, South Coatesville Borough, West Chester Borough, West Fallowfield Township, West Grove Borough, and West Nottingham Township.

Figure 4.1.14-2 shows pipeline locations along with areas of carbonate rocks near the land surface. This is important to visualize as these areas are more susceptible to subsidence or sinkholes, which can lead to pipeline damage and potential releases.

Figure 4.3.14-1 Pipelines in Chester County

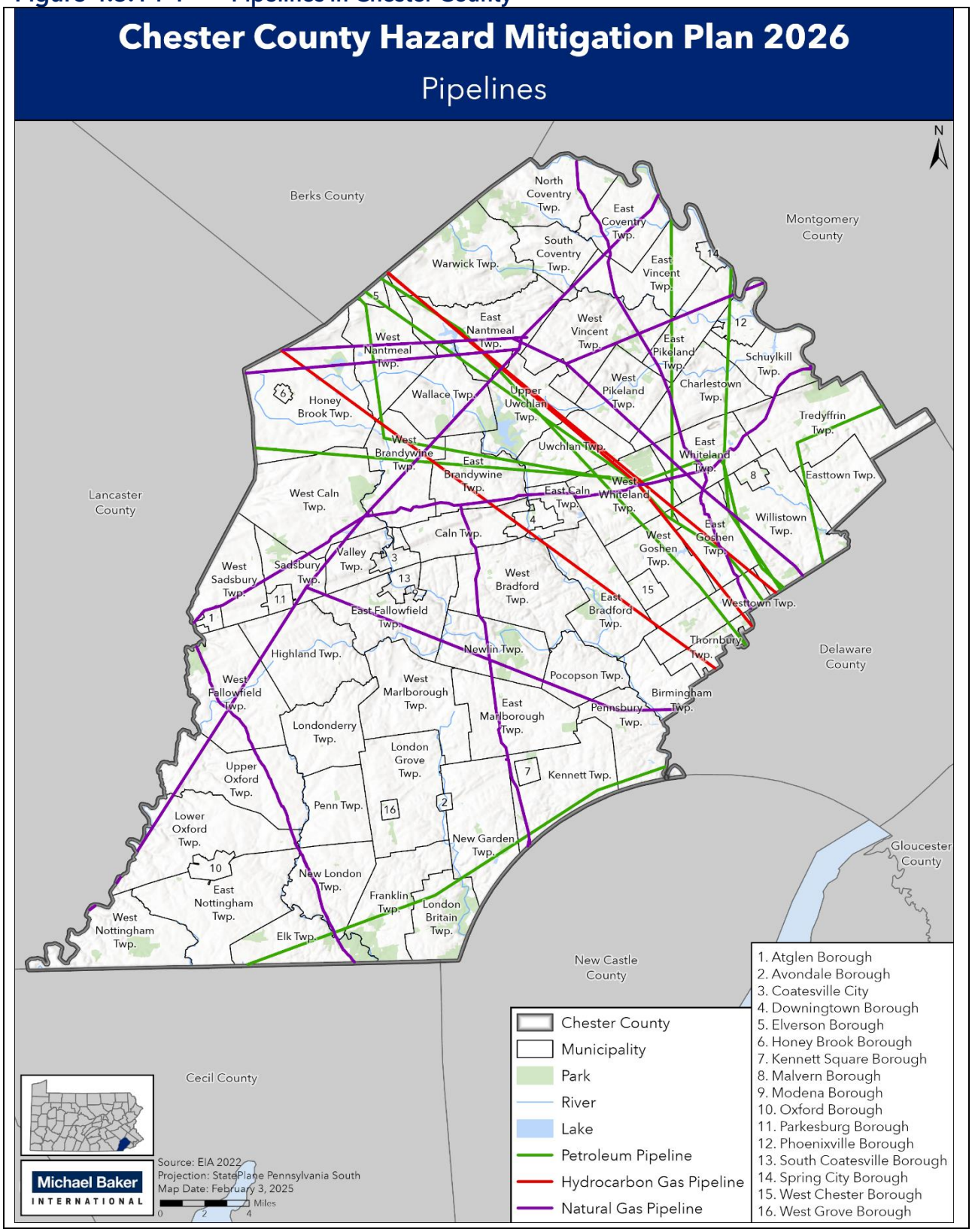
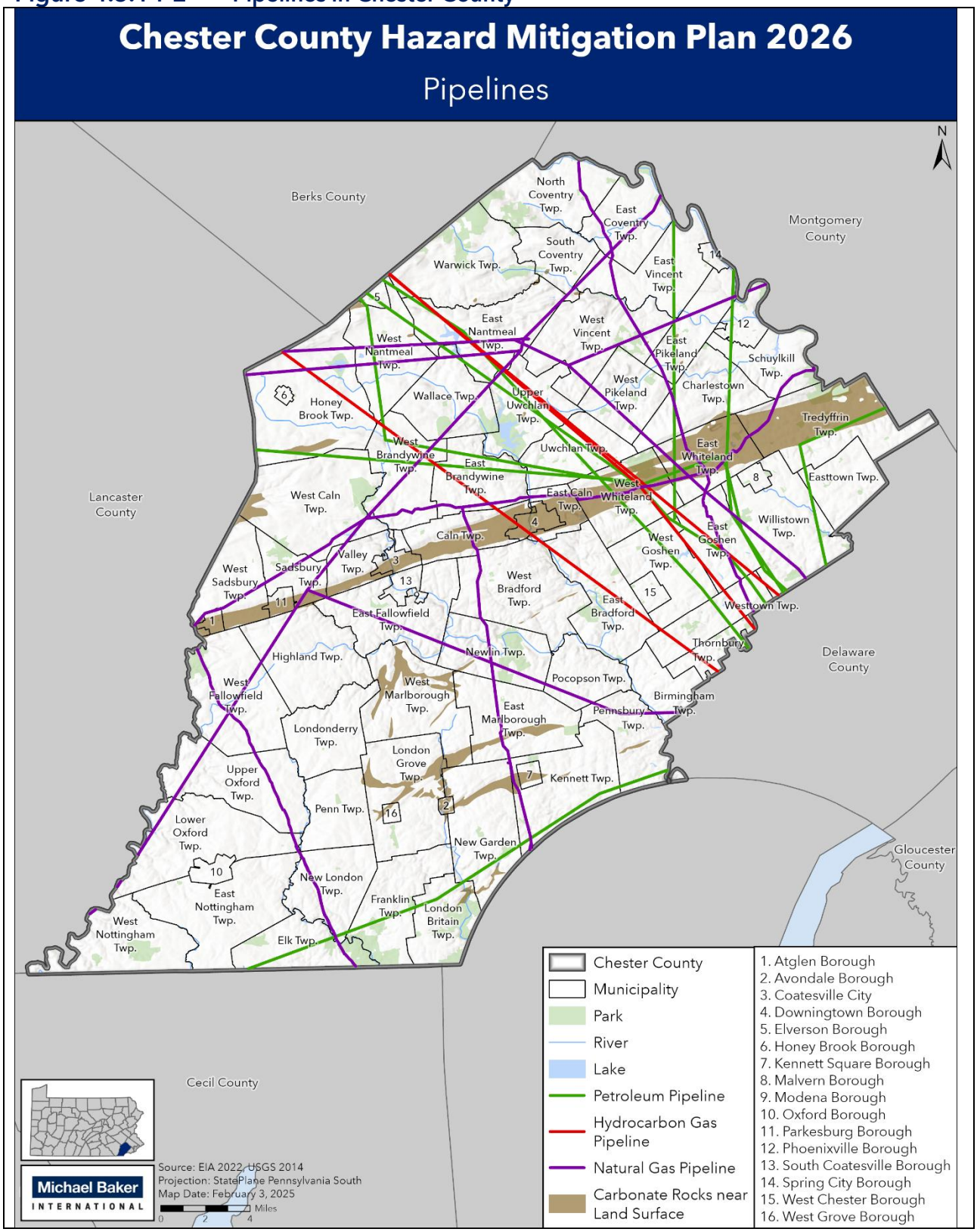


Figure 4.3.14-2 Pipelines in Chester County



4.3.14.2. Range of Magnitude

The Pipeline and Hazardous Materials Safety Administration (PHMSA) classifies pipeline incidents into the following categories: Gas Distribution, Gas Gathering, Gas Transmission, and Liquefied Natural Gas (LNG). Pipeline incidents within Chester County can range from minor leaks to a large explosion that could lead to loss of life and damage to property, the environment, and the economy. The severity of an incident varies depending on the type of material released, and distance and related response time for emergency response teams. Areas closest to the release sites are generally at the greatest risk; however, depending on the material, a release can travel great distances or persist over a long period of time, resulting in far-reaching effects on people and the environment.

Understanding pipeline threats and hazards begins with understanding the physical and chemical properties of the products in the pipeline. Natural gas is a clean-burning fuel that consists mostly of methane (94%) and ethane (2%). Some relevant characteristics of natural gas are summarized below:

- Although natural gas is nontoxic, it can cause asphyxiation if released in an enclosed area.
- Natural gas is combustible and natural gas fires produce large amounts of radiant heat.
- If an ignition source exists, natural gas releases can result in a sudden fire or explosion near the point of release. Once the release ends, however, the hazard declines very quickly as the gas disperses.
- If natural gas migrates into a building and accumulates inside, the hazard can persist for longer.

Liquid petroleum pipelines can carry many different crude oil and refined petroleum products with widely varying physical and chemical properties. Many of these products can spread over land and water, flowing into valleys, ravines, and waterways. Relevant characteristics of some liquid petroleum products are summarized below:

- Most crude oils are heavier and less toxic than refined petroleum products, and do not penetrate porous surfaces such as soil and sand. Because these products do not evaporate and tend to adhere to surfaces, however, they remain in the environment longer than refined products. Oil spills may take weeks, months, or even years to clean up.
- Most refined petroleum products are highly fluid, spread quickly over land or water surfaces, and penetrate porous surfaces. These products are usually flammable, and their volatile components can burn the eyes and skin and irritate the nose, eyes, and mouth. Because these products have a high evaporation rate and generally do not adhere to surfaces, they are easier to clean up. Refined petroleum products also produce vapors that are heavier than air. These vapors will collect in low areas.
- Highly volatile liquids are lighter than air and will form a vapor cloud when released to the atmosphere.

- Anhydrous ammonia is a highly volatile liquid that is particularly toxic and corrosive. It is typically transported under pressure as liquefied gas and rapidly expands when released.

In some cases, natural hazard events can cause pipeline failures and/or complicate emergency response activities. When a pipeline failure occurs during a natural disaster, access to the pipeline may be restricted, waterlines for fire suppression may be compromised, and response personnel and resources may be limited. In addition, the potential threat of a pipeline failure can be amplified by natural hazard events that are accompanied by winds, thunderstorms, or floods. These conditions can spread contamination more quickly and exacerbate the threat to local water supplies, air quality, soil, and agriculture. Other natural hazard events that can lead to pipeline failure include earthquakes, land subsidence, avalanches, lightning, fires, and severe winter storms (FEMA, 1997).

Several exacerbating or mitigating circumstances can affect the severity of a pipeline failure. Exacerbating circumstances can include weather conditions, the micro-meteorological effects of buildings and terrain, and lack of code compliance or maintenance. Non-compliance with applicable codes (e.g., building or fire codes) and maintenance failures (e.g., fire protection and containment features) can substantially increase the damage to pipelines and surrounding buildings. Mitigating circumstances include precautionary measures taken in advance to reduce the impact of a release on the surrounding environment. After a release, primary and secondary containment or shielding by sheltering-in-place can help protect people and property.

The worst-case scenario would be a large, uncontrolled release of toxic gas or liquid from a pipeline or pump station within a densely populated area. Physical property damage to private wells and public water systems is likely from this type of event, the potential for injury and death to people up to 0.25 miles from the scene is significant. This type of event would likely overwhelm the medical care capacity within the county, and possibly the region. Businesses nearby could close, and households could potentially be displaced.

Many factors determine the magnitude of the hazard posed by pipeline failures, including the chemicals released, the failure mode of the pipeline, the operating conditions of the pipeline at the time of the incident, and the characteristics of the surrounding area. Impacts to life and property can result from inhalation or ingestion of toxins, exposure to a fire or explosion, or exposure to contaminated soils or drinking water (FEMA, 2015). These impacts may include:

- Serious injuries or fatalities;
- Damage to buildings and infrastructure;
- Disruptions and closures to critical infrastructure and services, including transportation routes and emergency medical services;
- Residential, commercial, and industrial energy supply losses;
- Disruption of local businesses and regional economies; and
- Displacement of residential communities or businesses.

The potential impacts of gas and liquid pipelines on community lifelines are as follows:

Table 4.3.14-1 Most Likely Lifelines Impacted by Pipeline Incidents

LIFELINES	NOTES
	Fire departments and other emergency responders may be called into response and recovery efforts if leaks or other issues result in explosions and fires.
	Environmental contamination from pipelines can impact agricultural operations and water supplies. Supply chains may also be impacted if there are disruptions to transportation infrastructure.
	Environmental impacts from pipelines could adversely impact communities, leading to more strain on the local healthcare system.
	Pipelines play an important role in energy production and distribution. Issues with pipelines may lead to additional challenges with energy production and availability.

4.3.14.3. Past Occurrence

Pipeline incidents have occurred in Chester County. For most incidents, municipal police departments and county emergency dispatchers are contacted for emergency response. The county's Hazardous Materials Response Team is contacted for technical advice about addressing the hazardous material. Between 2005 and 2024, a total of 268 pipeline incidents occurred in Pennsylvania, resulting in 20 fatalities, 39 injuries, and $227,451,860 in damages in the state of Pennsylvania (PHMSA, 2025).

One significant incident took place in West Whiteland and Uwchlan Townships in July 2017, where several households complained about access to their private well water being interrupted or being cloudy. Sunoco Pipeline LP suspended installation of its contentious Mariner East 2 underground pipeline near Exton. Some families had to stay in hotels for the rest of the week, and several families were provided with bottled water. Local officials suspected that non-toxic bentonite clay used as a lubricant during the horizontal-drilling process may have migrated into private wells (Maykuth, 2017).

In June 2018, Sunoco pipeline spilled 33,500 gallons of gas into Darby Creek. Sunoco installed a new 12-inch line that would temporarily carry gas liquids, which was the same line that leaked gasoline in a creek near Philadelphia International Airport. The company said the stretch of

pipeline that was converted runs about 25 miles between Wallace and Middletown Townships (Hurdle, 2018).

Another significant incident occurred in West Goshen Township on August 5, 2019, when there was an explosion at a pump station. Pipeline experts state vapor buildup likely led to the explosion at a Sunoco Pipeline pump station. Independent pipeline experts say the explosion appeared to have been caused by relighting a pilot in a flare for burning off excess gases at a time when that vapor had accumulated. In a report developed for the township, responders concluded that Sunoco exceeded federal safety requirements in the plans for the pumping station. Local residents reported that the explosion shook their house (Hurdle, 2019).

During the construction of the Mariner East 2 pipeline in 2020, a plume of around 8,000 gallons of drilling fluid and mud ran into Marsh Creek Lake, north of Downingtown. Sunoco's parent company, Energy Transfer LP, was criminally charged in 2021 due to this incident along with a documented history of drilling-fluid leaks, the use of unapproved additives, and failure to report incidents. These events occurred during the construction of the pipeline, not during its operation (Kummer, 2024).

While it did not directly lead to a pipeline incident, a sinkhole opened near the Mariner East pipeline in West Whiteland Township in July 2023. Similar events occurred during the pipeline construction in March 2018. The Pennsylvania Utility Commission ordered a temporary shutdown of the pipeline in 2018 due to the potential catastrophic effects of a leak. The sinkhole discovered in July 2023 was backfilled and repaired. Residents in the county continue to be concerned about the pipeline, sinkholes, and potential leaks and damage (Phillips, 2023).

Pennsylvania has a long history of oil and gas well drilling and transportation and, though relatively infrequent, many accidents and incidents have occurred related to the extraction and transportation of these natural resources. No comprehensive list of oil and gas-related incidents exists at the county level. The hazards associated with each incident vary widely and encompass damages including serious injury, explosion, fire, and water contamination.

Other prior year incident information for Pennsylvania can be found on the Pennsylvania Emergency Management Association website. The Pennsylvania Hazardous Material Emergency Planning and Response Act 1990-165 2021 Annual Report, the latest available, states there was one "Natural Gas Release" incident and 3 "Pipeline Breaks" in Chester County in 2021 (PEMA, 2021).

Chester County Planning Commission compiles news articles related to pipeline activities in the county and region at https://www.chescoplanning.org/pic/news.cfm. Articles include updates to repair work, planned construction, fines or violations, and opportunities for public involvement.

4.3.14.4. Future Occurrence

While many pipeline break incidents have occurred in Pennsylvania in the past, they are generally considered difficult to predict, especially within the boundaries of a county. An

occurrence is largely dependent upon the accidental or intentional actions of a person or group. It is difficult to predict when and where environmental hazards related to gas pipelines will arise as they are often related to equipment failure and human error. Adequate monitoring through the DEP will reduce the likelihood of potential impacts to the community and to the environment. Overall, the probability of future environmental hazards events is *likely* as defined by the Risk Factor Methodology (See **Section 4.4**).

4.3.14.5. Vulnerability Assessment

The public survey for this HMP revealed widespread concern about a lack of knowledge about how to respond during a pipeline incident. Multiple respondents expressed uncertainty about the appropriate actions to take, with some fearing they might make the wrong decision, such as sheltering in place when evacuation is necessary. This feedback underscores the urgent need for targeted public education on pipeline safety. Clear, scenario-specific guidance can empower residents to respond appropriately and confidently, ultimately reducing the potential for injury or loss during such emergencies.

Table 4.3.14-2 lists the total structures vulnerable to a liquid or gas pipeline incident, defined by those located within 0.5 miles of a pipeline. East Goshen Township (5,078 structures), West Goshen Township (3,909), West Whiteland Township (3,792), and Uwchlan Township (3,668) have the highest numbers of structures at risk. Elverson Borough and East Goshen Township have the largest shares of structures at risk, 93% and 90% respectively. There are 14 municipalities with at least 50% of their structures at risk, and 12 municipalities with no structures at risk.

Table 4.3.14-2 Structures Vulnerable to Pipelines

MUNICIPALITY	TOTAL STRUCTURES	STRUCTURES IN PIPELINE HAZARD AREA	PERCENT STRUCTURES IN PIPELINE HAZARD AREA
Atglen Borough	577	197	34%
Avondale Borough	405	0	0%
Birmingham Township	1,624	131	8%
Caln Township	4,701	1,494	32%
Charlestown Township	2,266	797	35%
Coatesville City	2,732	0	0%
Downingtown Borough	2,291	986	43%
East Bradford Township	3,658	1,223	33%
East Brandywine Township	3,683	2,891	78%
East Caln Township	1,269	852	67%
East Coventry Township	3,563	1,398	39%
East Fallowfield Township	3,944	1,142	29%
East Goshen Township	5,665	5,078	90%
East Marlborough Township	3,571	522	15%

Table 4.3.14-2 Structures Vulnerable to Pipelines

MUNICIPALITY	TOTAL STRUCTURES	STRUCTURES IN PIPELINE HAZARD AREA	PERCENT STRUCTURES IN PIPELINE HAZARD AREA
East Nantmeal Township	1,508	962	64%
East Nottingham Township	4,885	0	0%
East Pikeland Township	3,552	1,755	49%
Easttown Township	3,727	1,283	34%
East Vincent Township	4,029	3,197	79%
East Whiteland Township	4,401	360	8%
Elk Township	1,367	576	42%
Elverson Borough	584	544	93%
Franklin Township	2,456	448	18%
Highland Township	1,307	194	15%
Honey Brook Borough	732	0	0%
Honey Brook Township	4,909	1,982	40%
Kennett Township	1,751	247	14%
Kennett Square Borough	3,867	1,008	26%
London Britain Township	1,782	367	21%
Londonderry Township	4,078	0	0%
London Grove Township	1,692	0	0%
Lower Oxford Township	2,579	252	10%
Malvern Borough	1,066	4	0%
Modena Borough	201	0	0%
New Garden Township	5,451	1,186	22%
Newlin Township	2,921	599	21%
New London Township	1,193	500	42%
North Coventry Township	4,288	1,051	25%
Oxford Borough	1,704	0	0%
Parkesburg Borough	1,371	94	7%
Penn Township	2,901	1	0%
Pennsbury Township	1,712	629	37%
Phoenixville Borough	4,731	1,425	30%
Pocopson Township	1,757	384	22%
Sadsbury Township	1,987	1,485	75%
Schuylkill Township	4,096	946	23%
South Coatesville Borough	506	0	0%
South Coventry Township	1,653	165	10%
Spring City Borough	1,199	0	0%

Table 4.3.14-2 Structures Vulnerable to Pipelines

MUNICIPALITY	TOTAL STRUCTURES	STRUCTURES IN PIPELINE HAZARD AREA	PERCENT STRUCTURES IN PIPELINE HAZARD AREA
Thornbury Township	1,060	541	51%
Tredyffrin Township	9,617	2,504	26%
Upper Oxford Township	2,109	765	36%
Upper Uwchlan Township	3,909	2,039	52%
Uwchlan Township	5,805	3,668	63%
Valley Township	2,926	340	12%
Wallace Township	2,065	566	27%
Warwick Township	2,192	79	4%
West Bradford Township	5,801	687	12%
West Brandywine Township	4,141	3,079	74%
West Caln Township	6,070	1,469	24%
West Chester Borough	3,147	58	2%
West Fallowfield Township	2,226	641	29%
West Goshen Township	8,075	3,909	48%
West Grove Borough	964	0	0%
West Marlborough Township	983	0	0%
West Nantmeal Township	1,832	1,408	77%
West Nottingham Township	2,014	21	1%
West Pikeland Township	2,050	641	31%
West Sadsbury Township	1,915	365	19%
West Vincent Township	3,127	1,532	49%
West Whiteland Township	5,656	3,792	67%
Westtown Township	3,838	2,320	60%
Willistown Township	5,275	1,947	37%
TOTAL	214,689	70,726	33%

Table 4.3.14-3 lists the structures in each municipality vulnerable to pipelines generalized by land use. The most vulnerable structure to the hazard is residential with 58,008 structures located near a pipeline. East Goshen has the most residential structures at risk with 4,317. West Whiteland Township has the most apartments at risk with 246. East Vincent Township has the most commercial structures at risk with 653. Honey Brook Township has the most farm-related structures at risk with 353.

Table 4.3.14-3 Structures Vulnerable to Pipeline Incidents by Land Use

MUNICIAPLITY	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
Atglen Borough	1	17	5	4	3	166	0	1	197
Avondale Borough	0	0	0	0	0	0	0	0	0
Birmingham Township	0	1	0	8	0	121	1	0	131
Caln Township	8	89	50	13	5	1,325	4	0	1,494
Charlestown Township	0	24	26	119	22	602	1	3	797
Coatesville City	0	0	0	0	0	0	0	0	0
Downingtown Borough	33	81	84	0	1	786	1	0	986
East Bradford Township	0	22	49	53	0	1,088	0	11	1,223
East Brandywine Township	6	98	48	106	16	2,613	1	3	2,891
East Caln Township	18	133	32	0	7	659	1	2	852
East Coventry Township	4	171	14	73	8	1,125	3	0	1,398
East Fallowfield Township	5	40	35	94	0	967	0	1	1,142
East Goshen Township	105	532	55	51	12	4,317	4	2	5,078
East Marlborough Township	2	27	8	89	0	396	0	0	522
East Nantmeal Township	1	42	27	189	0	701	2	0	962
East Nottingham Township	0	0	0	0	0	0	0	0	0
East Pikeland Township	10	113	23	72	45	1,484	6	2	1,755
Easttown Township	0	40	40	164	0	1,032	4	3	1,283
East Vincent Township	75	653	99	2	83	2,276	7	2	3,197
East Whiteland Township	0	13	11	3	0	333	0	0	360
Elk Township	1	4	0	144	0	422	5	0	576
Elverson Borough	2	30	24	8	13	467	0	0	544
Franklin Township	10	14	6	35	0	380	0	3	448
Highland Township	0	3	6	62	0	123	0	0	194

Table 4.3.14-3 Structures Vulnerable to Pipeline Incidents by Land Use

MUNICIAPLITY	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
Honey Brook Borough	0	0	0	0	0	0	0	0	0
Honey Brook Township	6	346	54	353	17	1,198	8	0	1,982
Kennett Township	2	21	0	0	0	224	0	0	247
Kennett Square Borough	0	83	39	56	3	802	23	2	1,008
London Britain Township	0	0	2	29	0	336	0	0	367
Londonderry Township	0	0	0	0	0	0	0	0	0
London Grove Township	0	0	0	0	0	0	0	0	0
Lower Oxford Township	0	0	31	65	0	155	0	1	252
Malvern Borough	0	0	0	0	0	4	0	0	4
Modena Borough	0	0	0	0	0	0	0	0	0
New Garden Township	11	140	8	19	1	1,004	1	2	1,186
Newlin Township	0	0	5	73	0	521	0	0	599
New London Township	0	18	1	170	0	311	0	0	500
North Coventry Township	40	75	46	38	0	849	2	1	1,051
Oxford Borough	0	0	0	0	0	0	0	0	0
Parkesburg Borough	0	4	1	4	0	85	0	0	94
Penn Township	0	0	0	0	0	1	0	0	1
Pennsbury Township	31	14	3	54	0	526	1	0	629
Phoenixville Borough	67	71	30	4	10	1,232	4	7	1,425
Pocopson Township	0	0	0	37	0	347	0	0	384
Sadsbury Township	11	182	39	47	12	1,187	3	4	1,485
Schuylkill Township	3	151	41	12	2	736	0	1	946
South Coatesville Borough	0	0	0	0	0	0	0	0	0
South Coventry Township	0	0	6	16	0	143	0	0	165

Table 4.3.14-3 Structures Vulnerable to Pipeline Incidents by Land Use

MUNICIAPLITY	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
Spring City Borough	0	0	0	0	0	0	0	0	0
Thornbury Township	3	11	34	17	0	469	7	0	541
Tredyffrin Township	20	180	60	15	4	2,198	1	26	2,504
Upper Oxford Township	0	23	5	209	0	526	2	0	765
Upper Uwchlan Township	2	135	40	30	2	1,825	2	3	2,039
Uwchlan Township	128	216	88	8	6	3,213	4	5	3,668
Valley Township	2	34	28	0	0	276	0	0	340
Wallace Township	0	2	50	34	0	475	5	0	566
Warwick Township	4	9	0	8	0	58	0	0	79
West Bradford Township	0	2	4	18	0	663	0	0	687
West Brandywine Township	2	279	56	149	8	2,579	0	6	3,079
West Caln Township	0	189	46	99	29	1,105	1	0	1,469
West Chester Borough	0	0	1	0	0	57	0	0	58
West Fallowfield Township	0	57	11	251	53	268	1	0	641
West Goshen Township	78	234	80	0	23	3,485	3	6	3,909
West Grove Borough	0	0	0	0	0	0	0	0	0
West Marlborough Township	0	0	0	0	0	0	0	0	0
West Nantmeal Township	4	77	41	290	0	992	4	0	1,408
West Nottingham Township	0	4	0	10	0	7	0	0	21
West Pikeland Township	0	27	8	47	0	559	0	0	641
West Sadsbury Township	0	14	17	75	0	257	2	0	365
West Vincent Township	19	40	43	156	0	1,272	2	0	1,532
West Whiteland Township	246	401	117	0	32	2,984	4	8	3,792
Westtown Township	56	57	83	48	0	2,075	0	1	2,320

Table 4.3.14-3 Structures Vulnerable to Pipeline Incidents by Land Use

MUNICIAPLITY	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
Willistown Township	7	40	34	240	2	1,621	3	0	1,947
TOTAL	1,023	5,283	1,794	3,970	419	58,008	123	106	70,726

Table 4.3.14-4 lists the total critical facilities vulnerable to a liquid or gas pipeline incident, defined by those located within 0.5 miles of a pipeline. Municipalities that have the most critical facilities at risk are East Vincent Township and West Whiteland Township, both with 69 critical facilities at risk. They are the only municipalities with over 50 critical facilities at risk. The municipalities with the highest percentage of total critical facilities within 0.5 miles of a liquid or gas pipeline are Elverson Borough (100% of total critical facilities) and East Goshen Township (97%). There are 17 municipalities where at least 50% of their critical facilities are at risk, and 17 municipalities with no critical facilities at risk.

Table 4.3.14-4 Critical Facilities Vulnerable to Pipeline Incidents

MUNICIPALITY	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN PIPELINE HAZARD AREA	PERCENT CRITICAL FACILITIES IN PIPELINE HAZARD AREA
Atglen Borough	8	4	50%
Avondale Borough	5	0	0%
Birmingham Township	11	0	0%
Caln Township	57	21	37%
Charlestown Township	29	13	45%
Coatesville City	27	0	0%
Downingtown Borough	41	22	54%
East Bradford Township	43	10	23%
East Brandywine Township	49	42	86%
East Caln Township	28	12	43%
East Coventry Township	34	11	32%
East Fallowfield Township	26	2	8%
East Goshen Township	32	31	97%
East Marlborough Township	25	5	20%
East Nantmeal Township	16	10	63%
East Nottingham Township	36	0	0%
East Pikeland Township	23	13	57%
Easttown Township	28	6	21%
East Vincent Township	81	69	85%
East Whiteland Township	35	1	3%
Elk Township	12	3	25%
Elverson Borough	4	4	100%
Franklin Township	17	3	18%
Highland Township	15	2	13%
Honey Brook Borough	5	0	0%
Honey Brook Township	31	11	35%
Kennett Township	14	0	0%
Kennett Square Borough	44	17	39%
London Britain Township	13	4	31%
Londonderry Township	38	0	0%
London Grove Township	9	0	0%

Table 4.3.14-4 Critical Facilities Vulnerable to Pipeline Incidents

MUNICIPALITY	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN PIPELINE HAZARD AREA	PERCENT CRITICAL FACILITIES IN PIPELINE HAZARD AREA
Lower Oxford Township	36	5	14%
Malvern Borough	10	0	0%
Modena Borough	5	0	0%
New Garden Township	44	10	23%
Newlin Township	15	3	20%
New London Township	18	6	33%
North Coventry Township	37	17	46%
Oxford Borough	17	0	0%
Parkesburg Borough	15	2	13%
Penn Township	25	1	4%
Pennsbury Township	25	10	40%
Phoenixville Borough	32	6	19%
Pocopson Township	27	3	11%
Sadsbury Township	18	12	67%
Schuylkill Township	36	6	17%
South Coatesville Borough	6	0	0%
South Coventry Township	18	1	6%
Spring City Borough	6	0	0%
Thornbury Township	10	5	50%
Tredyffrin Township	139	39	28%
Upper Oxford Township	18	3	17%
Upper Uwchlan Township	27	19	70%
Uwchlan Township	42	33	79%
Valley Township	33	3	9%
Wallace Township	19	5	26%
Warwick Township	13	2	15%
West Bradford Township	33	4	12%
West Brandywine Township	30	15	50%
West Caln Township	20	7	35%
West Chester Borough	26	0	0%
West Fallowfield Township	21	3	14%
West Goshen Township	78	36	46%
West Grove Borough	6	0	0%
West Marlborough Township	21	0	0%
West Nantmeal Township	21	15	71%
West Nottingham Township	12	0	0%
West Pikeland Township	22	4	18%
West Sadsbury Township	16	5	31%
West Vincent Township	25	14	56%
West Whiteland Township	86	69	80%

Table 4.3.14-4 Critical Facilities Vulnerable to Pipeline Incidents

MUNICIPALITY	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN PIPELINE HAZARD AREA	PERCENT CRITICAL FACILITIES IN PIPELINE HAZARD AREA
Westtown Township	28	17	61%
Willistown Township	55	19	35%
TOTAL	2,027	715	35%

Table 4.3.14-5 shows the populations vulnerable to a liquid or gas pipeline incident, defined by those located within 0.5 miles of a pipeline. Municipalities that have the most population at risk are East Goshen Township (16,219 people), West Whiteland Township (13,421), Uwchlan Township (12,589), West Goshen Township (12,106), and East Vincent Township (11,585). They are the only municipalities with over 7,500 people at risk. The municipalities with the highest percentage of population within 0.5 miles of a liquid or gas pipeline are Elverson Borough (96% of total population), East Goshen Township (88%), East Vincent Township (83%), and West Brandywine Township (80%). There are 13 municipalities where at least 50% of their population is at risk, and 13 municipalities with no population at risk.

Table 4.3.14-5 Population Vulnerable to Pipeline Incidents

MUNICIPALITY	TOTAL ESTIMATED 2020 POPULATION	TOTAL POPULATION IN PIPELINE HAZARD AREA	PERCENT POPULATION IN PIPELINE HAZARD AREA
Atglen Borough	1,313	437	33%
Avondale Borough	1,274	0	0%
Birmingham Township	4,082	386	9%
Caln Township	14,432	3,805	26%
Charlestown Township	6,001	2,040	34%
Coatesville City	13,350	0	0%
Downingtown Borough	7,892	3,291	42%
East Bradford Township	10,339	4,104	40%
East Brandywine Township	9,738	7,469	77%
East Caln Township	5,384	4,009	74%
East Coventry Township	7,068	2,010	28%
East Fallowfield Township	7,626	1,692	22%
East Goshen Township	18,410	16,219	88%
East Marlborough Township	7,306	718	10%
East Nantmeal Township	1,832	1,338	73%
East Nottingham Township	8,982	8	0%
East Pikeland Township	8,260	3,291	40%
Easttown Township	7,433	2,331	31%
East Vincent Township	13,917	11,585	83%
East Whiteland Township	10,984	1,257	11%
Elk Township	1,698	756	45%
Elverson Borough	1,330	1,273	96%
Franklin Township	4,433	993	22%
Highland Township	1,259	347	28%
Honey Brook Borough	1,892	0	0%
Honey Brook Township	8,274	2,754	33%
Kennett Township	5,936	911	15%
Kennett Square Borough	8,289	2,130	26%
London Britain Township	3,179	568	18%
Londonderry Township	8,797	0	0%
London Grove Township	2,476	0	0%
Lower Oxford Township	5,436	379	7%
Malvern Borough	3,419	0	0%
Modena Borough	541	0	0%
New Garden Township	11,363	2,062	18%
Newlin Township	5,810	1,034	18%
New London Township	1,358	595	44%

Table 4.3.14-5 Population Vulnerable to Pipeline Incidents

MUNICIPALITY	TOTAL ESTIMATED 2020 POPULATION	TOTAL POPULATION IN PIPELINE HAZARD AREA	PERCENT POPULATION IN PIPELINE HAZARD AREA
North Coventry Township	8,441	2,486	29%
Oxford Borough	5,736	0	0%
Parkesburg Borough	3,862	265	7%
Penn Township	5,644	0	0%
Pennsbury Township	3,876	1,178	30%
Phoenixville Borough	18,602	5,879	32%
Pocopson Township	4,455	740	17%
Sadsbury Township	4,125	2,632	64%
Schuylkill Township	8,780	1,752	20%
South Coatesville Borough	1,601	0	0%
South Coventry Township	2,796	124	4%
Spring City Borough	3,494	0	0%
Thornbury Township	3,177	1,047	33%
Tredyffrin Township	31,927	7,202	23%
Upper Oxford Township	2,560	949	37%
Upper Uwchlan Township	12,275	6,230	51%
Uwchlan Township	19,161	12,589	66%
Valley Township	7,985	1,399	18%
Wallace Township	3,711	706	19%
Warwick Township	2,590	144	6%
West Bradford Township	14,316	2,792	20%
West Brandywine Township	7,331	5,857	80%
West Caln Township	8,910	2,021	23%
West Chester Borough	18,671	65	0%
West Fallowfield Township	2,459	501	20%
West Goshen Township	23,040	12,106	53%
West Grove Borough	2,770	0	0%
West Marlborough Township	819	0	0%
West Nantmeal Township	2,251	1,504	67%
West Nottingham Township	2,748	31	1%
West Pikeland Township	4,024	1,123	28%
West Sadsbury Township	2,436	406	17%
West Vincent Township	6,668	2,987	45%
West Whiteland Township	19,632	13,421	68%
Westtown Township	11,154	6,997	63%
Willistown Township	11,273	4,950	44%
TOTAL	534,413	179,875	34%

4.3.14.6. Equity in Vulnerable Communities

Equity considerations in gas and liquid pipelines emphasize ensuring that mitigation and preparedness actions address the unique needs of vulnerable populations. Communities near pipelines are at higher risk of leaks, spills, or explosions, yet they may lack the resources or infrastructure needed for effective emergency response. Pipelines are often in or near low-income and minority communities, indigenous lands, and rural areas. Pipelines also are often times located in existing industrial areas, compounding potential impacts. Health impacts associated with pipelines include respiratory illnesses, cancers, and neurological impacts. Those with pre-existing health conditions or older homes may be more at risk due to associated contaminated air or water. In addition, West Fallowfield Township and Honey Brook Township have the highest concentration of people without health insurance. Preparedness efforts must include accessible emergency response plans, clear communication in multiple languages, and training programs tailored to local communities. Additionally, prioritizing regular maintenance, with a focus on areas where vulnerable populations live, is essential to mitigate harmful effects.

4.3.15. Environmental Hazards – Hazardous Materials Release

4.3.15.1. Location and Extent



Hazardous material releases pose threats to the natural environment, the built environment, and public safety through the diffusion of harmful substances, materials, or products. Hazardous materials can include toxic chemicals, infectious substances, bio-hazardous waste, and any materials that are explosive, corrosive, flammable, or radioactive. Hazardous material releases can occur wherever hazardous materials are manufactured, used, stored, or transported. Such releases can occur along transportation routes or at fixed-site facilities. Hazardous material releases can result in human and wildlife injury, property damage, and contamination of air, water, and soil.

Fixed-site facilities that use, manufacture, or store hazardous materials in Chester County pose significant risk and must comply with both Title III of the federal Superfund Amendments and Reauthorization Act (SARA), also known as the Emergency Planning and Community Right-to-Know Act, and the Commonwealth's reporting requirements under the Hazardous Materials Emergency Planning and Response Act (1990-165), as amended. These statutes require that all owners or operators of facilities that manufacture, produce, use, import, export, store, supply, or distribute any extremely hazardous substance, as defined by the EPA, at or above the threshold planning quantity, shall report to the county where the facility is located and the Commonwealth. These facilities are subject to the requirement of assisting the Local Emergency Planning Committee (LEPC) in the development of an Off-site Emergency Response Plan (EPA, 2020). The right-to-know reporting requirements keep communities abreast of the presence and release of chemicals at individual facilities. The EPA also tracks key information about chemicals handled by industrial facilities through its Toxics Release Inventory (TRI) database. Facilities which employ ten or more full-time employees, and which manufacture or process 25,000 pounds or more, or otherwise use 10,000 pounds or more, of any SARA Section 313 listed toxic chemical in the course of a calendar year are required to report TRI information to the EPA and PEMA. In 2023, there were 1,047 tracked facilities on EPA's TRI in Pennsylvania, 31 of which are located in Chester County as shown in Figure 4.3.15-1 and listed in Table 4.3.15-1.

Figure 4.3.15-1 Location of Toxic Release Inventory (TRI) Facilities in Chester County, 2025

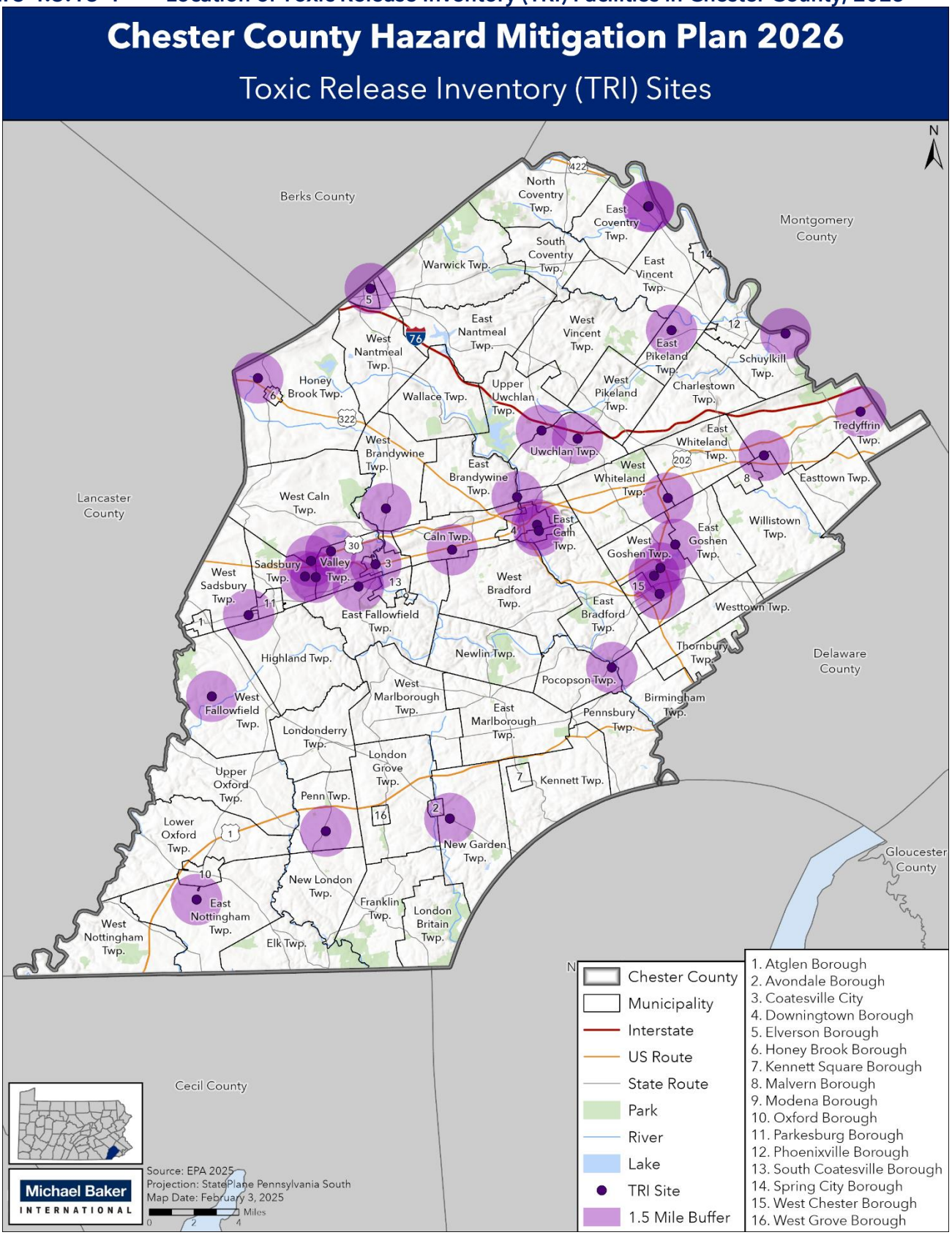


Table 4.3.15-1 lists the TRI facilities in Chester County by municipality. Of the 73 municipalities in Chester County, 16 contain a TRI facility. Coatesville and West Chester have the most TRI sites in the county with six TRI sites each.

Table 4.3.15-1 TRI Facilities in Chester County (EPA, 2025)

MUNICIPALITY	TRI FACILITY	ADDRESS
Atglen	Action Manufacturing Co	500 Bailey Crossroads Rd
Avondale	HMA Concrete LLC Dba Heritage Concrete Avondale Facility	8840 Gap Newport Pike
Coatesville	Cigas Machine Shop Inc.	200 Waverly Blvd
	Cleveland-Cliffs Plate LLC Coatesville Facility	139 Modena Rd
	Nathan Trotter & Co. Inc.	241 Stewart Huston Dr
	Stein LLC	14 Ims Dr
	The Rock Kamps LLC	500 Independence Way
	Wire & Cable Specialties Inc	440 Highlands Blvd
Downingtown	AGC Chemicals Americas Inc	255 S Bailey Rd
	Brandywine Machine Co Inc	300 Creek Rd
	Chemstation Philadelphia	415 Boot Road Suite B
	Fenzi Agt Usa LLC	498 Acorn Ln
Elverson	Whitford Corp	47 Park Ave
Exton	Dft Inc.	140 Sheree Blvd
	Dsm Biomedical	735 Pennsylvania Dr
Honey Brook	R-V Industries Inc.	584 Poplar Rd
Kimberton	Henry Co	336 Cold Stream Rd
Oxford	Hoover Treated Wood Products Inc.	385 Waterway Rd
Paoli	Force Industries Division	28 Industrial Blvd
Parker Ford	Ep Henry	16 Anderson Road
	Taylor Industries Inc.	35 Anderson Road
Parkesburg	Victory Brewing Co LLC	3127 Lower Valley Rd
Phoenixville	McAvoy Vitrified Brick Co.	75 McAvoy Ln
Wayne	Johnson Matthey Inc	434 436 456 Devon Park Dr
West Chester	Arkema West Chester Plant	610 S Bolmar St
	Johnson Matthey	1401 King Rd
	Lenape Forged Products Corp	1334 Lenape Rd
	Metallurgical Products Co	810 Lincoln Ave
	Tin Technology & Refining	905 Fernhill Rd
	Zeks Compressed Air Solutions	1302 Goshen Pkwy
West Grove	Delaware Valley Custom Marble Inc	4 Briar Dr

The Cleveland-Cliffs Plate LLC facility in Coatesville manufactures steel plates, such as carbon, high-strength low alloy (HSLA), commercial alloy, military alloy and flame-cut steel plate for several industries: aircraft and aerospace, construction, distribution, energy, heavy equipment, and military (Cleveland-Cliffs Inc, 2025). In 2023, this company was responsible for roughly 50% of Chester County releases with a total on-site toxic release of 115,773.836 pounds (EPA, 2025).

While not a TRI facility as listed by the EPA, East Whiteland Township expressed concerns about the Bishop Tube Toxic Site, the location of a former metal processing plant. The site is located off Route 30 in Malvern Borough. The plant is no longer active, but the soil contains chemicals that may be released during any future development, which may be likely.

In addition to fixed-site hazardous materials releases, there are increasingly large numbers of chemicals, oils, radioactive materials, and other hazardous substances spilled as a result of highway, rail, and waterway accidents, storage tank leakage, pipeline break, and/or other accidents. On occasion, these events become a major disaster and force people to evacuate and/or lose their homes and businesses. According to the U.S. DOT's Office of Operations and the U.S. Census Bureau, it is estimated that 11% of all freight transported by trucks is hazardous material.

A number of major highways can be used in Chester County for the transport of hazardous materials, including I-76 (Pennsylvania Turnpike), US-1, US-30, US-202, US322, US-422, PA-3, PA-10, PA-272, PA-282, PA-372, and PA-401. Chester County is home to 3,706.46 miles of roadways, including 26.03 miles of turnpike, 1,016.99 miles of state and federal highways, and 2,649.72 miles of secondary and tertiary roads (PennDOT, 2024). Additionally, many of these roads cross rivers and streams and travel through downtown and residential areas, increasing the potential to pollute surface water and groundwater and cause harm to life and property.

Several railroad accidents have occurred in Pennsylvania involving hazardous materials. Potential also exists for hazardous material release incidents to occur along pipelines. Large spills can result from collisions or derailments of train cars. Pipelines that transport hazardous liquids and flammable substances can corrode, be damaged during excavation, incorrectly operated, or damaged by other natural or human-made forces, leading to a hazardous materials release incident. Additional hazardous materials are contained at the military installations within Pennsylvania. Nuclear facilities are another type of fixed facility that poses a risk of hazardous material release. For more information about nuclear incidents, reference **Section 4.3.16**.

4.3.15.2. Range of Magnitude

Hazardous material releases can contaminate air, water, and soils, possibly resulting in death and/or injuries. Dispersion can take place rapidly when transported by water and wind. While often accidental, releases can occur as a result of human carelessness, intentional acts, or natural hazards. When caused by natural hazards, these incidents are known as secondary events. Hazardous materials can include toxic chemicals, radioactive materials, infectious substances, and hazardous waste. Such releases can affect nearby populations and contaminate critical or sensitive environmental areas.

With hazardous material release, whether accidental or intentional, there are several potentially exacerbating or mitigating circumstances that will affect its severity or impact. Exacerbating conditions, characteristics that can enhance or magnify the effects of a hazardous material release include:

- Weather conditions: Affects how the hazard occurs and develops.

- Micro-meteorological effects of buildings and terrain: Alters dispersion of hazardous materials.
- Non-compliance with applicable codes (e.g. building or fire codes) and maintenance failures (e.g. fire protection and containment features): Can substantially increase the damage to the facility itself and to surrounding buildings.

Mitigating conditions are precautionary measures taken in advance to reduce the impact of a release on the surrounding environment. Primary and secondary containment or shielding by sheltering-in-place protects people and property from the harmful effects of a hazardous material release.

The severity of the incident is dependent not only on the circumstances described above, but also on the type of material released and the distance and related response time for emergency response teams. The areas within closest proximity to the releases are generally at greatest risk, yet depending on the agent, a release can travel great distances or remain present in the environment for a long period of time (e.g., centuries to millennia for radioactive materials), resulting in extensive impacts on people and the environment.

The environmental impacts of hazardous material releases include:

- Hydrologic effects – surface and groundwater contamination.
- Other effects on water quality, such as changes in water temperature.
- Damage to streams, lakes, ponds, estuaries, and wetland ecosystems.
- Air quality effects – pollutants, smoke, and dust.
- Loss of quality in landscape.
- Reduced soil quality.
- Damage to plant communities – loss of biodiversity; damage to vegetation.
- Damage to animal species – animal fatalities; degradation of wildlife and aquatic habitat; pollution of drinking water for wildlife; loss of biodiversity; disease.

The worst-case scenario hazardous material release event would be a large, uncontrolled release of toxic gas within a major urban area. In Chester County, this could take the form of an accident involving a major rupture of a tanker hauling toxic or flammable gas in or near West Chester or another densely populated area. While little physical property damage is likely from this type of event, the potential for injury and death to people up to 0.25 mile from the scene is significant. This event would likely overwhelm the medical care capacity within the county, and possibly the region. The population vulnerable to such a release includes the 18,671 people in West Chester alone. In addition, an event such as this would likely close county offices, causing major disruption to government operations. The most likely scenario would be a transportation accident resulting in a rupture of a truck's fuel tank, spilling a small quantity of diesel fuel onto the roadway.

The potential impacts of hazardous materials release on community lifelines are as follows:

Table 4.3.15-2 Most Likely Lifelines Impacted by Hazardous Materials Release

LIFELINES	NOTES
	Fire departments may be called into response and recovery if leaks or other issues result in explosions and fires.
	Impacts from hazardous materials releases include environmental contamination, which can impact agricultural operations and water supplies.
	Releases can have adverse impacts on communities, leading to more strain on the local healthcare system.
	Transportation lifeline can cause release itself or resulting explosions and fires.

4.3.15.3. Past Occurrence

The county has experienced hazardous materials release accidents at facilities and along roadways. For most incidents, the County Hazmat Team's representative is contacted by the on-scene fire department for technical advice about addressing the hazardous material.

A significant incident occurred in West Nottingham Township on July 10, 2017, where several people were hospitalized after a hazmat leak. At least eight people had to be treated after a hazmat situation occurred at a home on Red Oak Drive in the Nottingham Manor section of the township. Seven responders were sent through decontamination protocol and transported to Lancaster General Hospital in addition to one resident. Chester County Hazmat crews thoroughly checked the home; no hazards were found, and neither the type of leaked hazardous material or the extent of the contamination was able to be clearly determined (Heinze, 2017).

Another notable hazardous materials release occurred on August 9, 2023. Approximately 300 to 500 gallons of Nitric Acid and Phosphoric Acid mixture spilled inside ChemStation along Boot Road in Downingtown. A small vapor cloud formed around the facility following the accident. No injuries were reported and a nearby daycare evacuated the children inside to a safe location. A shelter-in-place order was recommended for the surrounding one-mile radius (NBC Philadelphia, 2023).

Since the passage of SARA, Title III facilities which produce, use, or store hazardous chemicals must notify the public through the county emergency dispatch center and PEMA if an accidental release of a hazardous substance meets or exceeds a designated reportable quantity, and affects or has the potential to affect persons and/or the environment outside the facility. SARA Title III and Pennsylvania Act 165 also require a written follow-up report to PEMA and the county. These written follow-up reports include any known or anticipated health risks associated with the release and actions to be taken to mitigate potential future incidents. In addition, Section 204(a) (10) of Act 165 requires PEMA to staff and operate a 24-hour State Emergency Operations Center (SEOC) to provide effective emergency response coordination. Table 4.3.15-3 shows the number of hazardous material incidents in Chester County from 2018 through April 2023, as reported to PEMA's incident management system. This data is reported in the Pennsylvania State Hazard Mitigation Plan (PEMA, 2023).

Table 4.3.15-3 Hazardous Materials Incidents Reported to PEMA (2018 to April 2023)

YEAR	NUMBER OF HAZARDOUS MATERIAL INCIDENTS
2018	24
2019	25
2020	96
2021	45
2022	53
2023	7

In 2023 and 2024, 45 hazardous materials incidents were reported to the Chester County Department of Emergency Services, listed in Table 4.3.15-4. Most of the incidents were related to chemical or oil spills and propane leaks.

Table 4.3.15-4 Hazardous Materials Releases in Chester County (Chester County EMA, 2025)

DATE	INCIDENT	LOCATION (IF AVAILABLE)
1/3/2023	Odor from pipeline	
1/6/2023	Tanker overturned - Diesel Leak	
2/2/2023	Oil Spill - NRC#1359162	
2/22/2023	Chemical Spill - Dimethyl Sulfoxide	221 Gale Ln, Kennett Square, PA
3/10/2023	Precious Metals processing. Pressurized Hazardous gas vessels	1401 King Rd, West Chester, PA 19380
3/22/2023	Pipeline - Gas Odor	35 Meadow Creek Lane, Upper Uwchlan, PA, 19343

DATE	INCIDENT	LOCATION (IF AVAILABLE)
3/30/2023	Fuel Oil Spill	22 S Bacton Hill Rd, Malvern, PA
4/28/2023	Fire in insulation.	345 Scarlett Rd, New Garden, PA
5/3/2023	Unknown oil leak. NRC# 1366273	12 Sioux Lane, Honey Brook, PA 19344
5/11/2023	Heating oil spill	PA 82 and PA 322 Intersection, 5-1 Tomahawk Lane, 19344
5/12/2023	Refrigerant gas leak - NRC#1367080	176 Pennsylvania Ave, Malvern, PA, 19355
5/16/2023	Diesel fuel spill	601 Westtown Road, West Chester, PA 19382
5/25/2023	Chemical Spill	965 E Lancaster Avenue, East Caln, PA 19335
6/2/2023	Illegal chemical dumping - NRC#1368964	Fleetwood Street and N 5th Ave, Coatesville, PA 19320
6/22/2023	Unknown sheen - NRC#1370928	
7/6/2023	Unknown sheen - NRC# 1371973	300 Oakwood Lane, Devon, PA 19333
7/9/2023	Heating oil spill	1251 Ash Bridge Road, West Chester, PA 19380
7/10/2023	Toxic gas	487 Schuylkill Road, Phoenixville, PA
7/11/2023	Propane leak	720 West Strasburg Road (PA-162), West Chester, PA 19382
7/26/2023	HAZMAT team dispatch requested for an unknown material hazard.	300 East Evans Street, West Chester Borough, PA 19380
8/2/2023	Propane leak	603 Peacock Lane, Kennett Square, PA 19348
8/2/2023	Propane leak	388 N Creek Road, Landenberg, PA
8/3/2023	Fuel in storm drain	906 Colonial Court, Coatesville, PA 19320
8/7/2023	Propane leak	1126 Hollow Rd., Chester Springs, PA
9/11/2023	300-500 gallons of Nitric and Phosphoric acid	415 Boot Road, Downingtown, PA 19335
9/21/2023	HAZMAT team dispatched to an acid fire at the Metallurgical Products building caused by burning phosphorus.	810 Lincoln Avenue, West Chester, PA 19380
12/9/2023	Small exterior nitrogen leak.	17 Lee Blvd, Malvern, PA 19355
12/18/2023	Transformer oil spill. NRC#1386984	627 Contention Ln, Berwyn, PA 19312
12/26/2023	Heating oil discharge. NRC#1387664	62 Violet Drive, Honey Brook Borough, PA 19344

DATE	INCIDENT	LOCATION (IF AVAILABLE)
12/27/2023	Containers spilled of hazardous materials.	3001 Saint Peters Road, Warwick, PA
1/3/2024	Chemical spill	1401 King Road, West Chester, PA 19380
1/8/2024	A milk spill is reported running into a stream in the area of Hickory Hill and Hilltop Roads in East Nottingham Township, Chester County.	
1/10/2024	500 gallon propane tank underground on fire and part of the back of the house on fire and actively spreading.	258 N Creek Rd, Landenberg, PA
2/17/2024	Building fire with numerous hazmat.	1031 Pottstown Pike, Chester Springs, PA 19425
3/13/2024	Chemical spill	Limestone Road and Borough Line Road, Parkesburg, PA
5/4/2024	Several complaints about an irritant and request for the HAZMAT team.	100 Federal Walk, Kennett Square, PA 19348
5/13/2024	A Tractor Trailer carrying anhydrous ammonia experienced a break fire.	1495 Valley Forge Rd, Valley Forge Service Plaza
7/12/2024	Report of 70 gallons of fuel leaking from a disabled trash truck. Leak is in close proximity to a creek.	650 Pikeland Ave, East Pikeland, PA 19475
7/16/2024	Flammable liquid spill	1015 Lafayette Dr, Valley, PA
7/31/2024	Transformer oil into creek.	3 South Brandywine Ave, Coatesville, PA 19335
8/16/2024	HAZMAT team (Station 15) requested per Chief 4 for an underground propane tank leaking, unknown size propane tank.	129 Davis Rd, Malvern, PA 19355
8/28/2024	A worker working on a doorway cut into a wall at the Octoraro Elementary School located at 104 Highland Rd. During this process the worker noticed what they believe to be a large amount of asbestos that fell out of the wall.	104 Highland Road, Atglen, PA 19310
10/3/2024	NRC#1412753 - Sewer Line Struck	22 ANDREWS RD, MALVERN, PA 19355
11/21/2024	FD and Hazmat have been dispatched for the propane truck on fire up against the building which is a SARA site.	241 Woodbine Rd, Downingtown, PA 19335
12/8/2024	Propane leak	679 Little Elk Creek Rd, Oxford, PA

4.3.15.4. Future Occurrence

While many hazardous material release incidents have occurred in Chester County in the past, they are generally considered difficult to predict. An occurrence is largely dependent upon the accidental or intentional actions of a person or group. Intentional acts are addressed under **Section 4.3.18 Terrorism**.

Smaller incidents, such as fuel spills, will affect the county many times each year, most likely along corridors such as I-76 or during refilling of home heating oil tanks, and may not be reported. Although the county does not anticipate severe releases on any regular basis, the possibility of a significant release should not be discounted. The probability of future hazardous materials release events can be considered *possible* according to the Risk Factor Methodology (see Table 4.4-1).

4.3.15.5. Vulnerability Assessment

Jurisdictions that are home to one or more hazardous materials facilities should be considered vulnerable to hazardous materials releases from fixed facilities. Structures, critical facilities, and populations located near hazardous material areas are also at risk. Table 4.3.15-5 shows the total number of structures in hazardous materials hazard areas defined as a 1.5-mile radius from any TRI facility. West Goshen Township (4,054 structures), Tredyffrin Township (2,858), Uwchlan Township (2,651), Valley Township (2,562), West Chester Borough (2,471), Caln Township (2,323), and Coatesville (2,240) have the highest numbers of structures at risk. Municipalities with at least 80% of structure in hazard areas include Elverson Borough (100%), Avondale Borough (99%), Valley Township (88%), and Coatesville (82%).

Table 4.3.15-5 Structures Vulnerable to Hazardous Materials Release

MUNICIPALITY	TOTAL STRUCTURES	STRUCTURES IN HAZARDOUS MATERIAL HAZARD AREAS	PERCENT STRUCTURES IN HAZARDOUS MATERIAL HAZARD AREAS
Atglen Borough	577	0	0%
Avondale Borough	405	402	99%
Birmingham Township	1,624	318	20%
Caln Township	4,701	2,323	49%
Charlestown Township	2,266	0	0%
Coatesville City	2,732	2,240	82%
Downingtown Borough	2,291	1,574	69%
East Bradford Township	3,658	489	13%
East Brandywine Township	3,683	349	9%
East Caln Township	1,269	752	59%
East Coventry Township	3,563	1,037	29%
East Fallowfield Township	3,944	1,201	30%
East Goshen Township	5,665	1,279	23%
East Marlborough Township	3,571	0	0%
East Nantmeal Township	1,508	0	0%
East Nottingham Township	4,885	1,394	29%

Table 4.3.15-5 Structures Vulnerable to Hazardous Materials Release

MUNICIPALITY	TOTAL STRUCTURES	STRUCTURES IN HAZARDOUS MATERIAL HAZARD AREAS	PERCENT STRUCTURES IN HAZARDOUS MATERIAL HAZARD AREAS
East Pikeland Township	3,552	1,683	47%
Easttown Township	3,727	70	2%
East Vincent Township	4,029	474	12%
East Whiteland Township	4,401	0	0%
Elk Township	1,367	0	0%
Elverson Borough	584	584	100%
Franklin Township	2,456	0	0%
Highland Township	1,307	95	7%
Honey Brook Borough	732	489	67%
Honey Brook Township	4,909	554	11%
Kennett Township	1,751	0	0%
Kennett Square Borough	3,867	0	0%
London Britain Township	1,782	0	0%
Londonderry Township	4,078	234	6%
London Grove Township	1,692	0	0%
Lower Oxford Township	2,579	0	0%
Malvern Borough	1,066	456	43%
Modena Borough	201	0	0%
New Garden Township	5,451	1,097	20%
Newlin Township	2,921	39	1%
New London Township	1,193	0	0%
North Coventry Township	4,288	0	0%
Oxford Borough	1,704	788	46%
Parkesburg Borough	1,371	1,026	75%
Penn Township	2,901	1,128	39%
Pennsbury Township	1,712	0	0%
Phoenixville Borough	4,731	0	0%
Pocopson Township	1,757	592	34%
Sadsbury Township	1,987	1,365	69%
Schuylkill Township	4,096	977	24%
South Coatesville Borough	506	259	51%
South Coventry Township	1,653	0	0%
Spring City Borough	1,199	0	0%
Thornbury Township	1,060	0	0%
Tredyffrin Township	9,617	2,858	30%
Upper Oxford Township	2,109	0	0%
Upper Uwchlan Township	3,909	806	21%
Uwchlan Township	5,805	2,651	46%
Valley Township	2,926	2,562	88%
Wallace Township	2,065	0	0%
Warwick Township	2,192	36	2%

Table 4.3.15-5 Structures Vulnerable to Hazardous Materials Release

MUNICIPALITY	TOTAL STRUCTURES	STRUCTURES IN HAZARDOUS MATERIAL HAZARD AREAS	PERCENT STRUCTURES IN HAZARDOUS MATERIAL HAZARD AREAS
West Bradford Township	5,801	477	8%
West Brandywine Township	4,141	1,542	37%
West Caln Township	6,070	507	8%
West Chester Borough	3,147	2,471	79%
West Fallowfield Township	2,226	337	15%
West Goshen Township	8,075	4,054	50%
West Grove Borough	964	0	0%
West Marlborough Township	983	0	0%
West Nantmeal Township	1,832	86	5%
West Nottingham Township	2,014	0	0%
West Pikeland Township	2,050	91	4%
West Sadsbury Township	1,915	448	23%
West Vincent Township	3,127	151	5%
West Whiteland Township	5,656	840	15%
Westtown Township	3,838	0	0%
Willistown Township	5,275	1,433	27%
TOTAL	214,689	46,618	27%

Table 4.3.15-6 lists the type of structures vulnerable to hazardous materials sites in Chester County by municipality. Residential structures are the most vulnerable, accounting for 82% of all vulnerable structures (38,235 total). The next highest is commercial structures with 4,441, or 9.5%. West Goshen has the most residential structures at risk with 3,291. New Garden Township and West Goshen Township have the most commercial structures at risk (487 and 461 respectively).

Table 4.3.15-6 Structures Vulnerable to Hazardous Materials Release

MUNICIPALITY	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
Atglen Borough	0	0	0	0	0	0	0	0	0
Avondale Borough	11	42	15	0	10	322	1	1	402
Birmingham Township	0	17	1	0	0	300	0	0	318
Caln Township	60	175	78	7	8	1,990	5	0	2,323
Charlestown Township	0	0	0	0	0	0	0	0	0
Coatesville City	114	165	89	0	18	1,851	1	2	2,240
Downingtown Borough	71	185	110	2	16	1,188	0	2	1,574
East Bradford Township	0	9	3	12	0	465	0	0	489
East Brandywine Township	0	6	5	17	14	307	0	0	349
East Caln Township	5	88	39	0	14	605	1	0	752
East Coventry Township	4	226	25	49	8	721	3	1	1,037
East Fallowfield Township	7	120	22	18	0	1,033	0	1	1,201
East Goshen Township	1	83	14	38	12	1,130	0	1	1,279
East Marlborough Township	0	0	0	0	0	0	0	0	0
East Nantmeal Township	0	0	0	0	0	0	0	0	0
East Nottingham Township	0	232	38	89	17	1,018	0	0	1,394
East Pikeland Township	8	78	30	29	27	1,506	3	2	1,683

Table 4.3.15-6 Structures Vulnerable to Hazardous Materials Release

MUNICIPALITY	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
Easttown Township	0	2	16	20	0	31	0	1	70
East Vincent Township	34	107	36	21	6	270	0	0	474
East Whiteland Township	0	0	0	0	0	0	0	0	0
Elk Township	0	0	0	0	0	0	0	0	0
Elverson Borough	4	33	25	8	16	498	0	0	584
Franklin Township	0	0	0	0	0	0	0	0	0
Highland Township	0	0	0	42	0	53	0	0	95
Honey Brook Borough	10	32	21	6	0	419	0	1	489
Honey Brook Township	6	77	13	103	14	331	10	0	554
Kennett Township	0	0	0	0	0	0	0	0	0
Kennett Square Borough	0	0	0	0	0	0	0	0	0
London Britain Township	0	0	0	0	0	0	0	0	0
Londonderry Township	0	14	1	3	0	216	0	0	234
London Grove Township	0	0	0	0	0	0	0	0	0
Lower Oxford Township	0	0	0	0	0	0	0	0	0
Malvern Borough	12	59	14	0	0	370	1	0	456
Modena Borough	0	0	0	0	0	0	0	0	0
New Garden Township	11	487	30	17	15	535	2	0	1,097

Table 4.3.15-6 Structures Vulnerable to Hazardous Materials Release

MUNICIPALITY	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
Newlin Township	0	16	2	2	0	19	0	0	39
New London Township	0	0	0	0	0	0	0	0	0
North Coventry Township	0	0	0	0	0	0	0	0	0
Oxford Borough	37	70	31	4	0	643	0	3	788
Parkesburg Borough	12	36	35	0	0	940	3	0	1,026
Penn Township	7	193	52	50	6	820	0	0	1,128
Pennsbury Township	0	0	0	0	0	0	0	0	0
Phoenixville Borough	0	0	0	0	0	0	0	0	0
Pocopson Township	0	17	7	15	6	545	0	2	592
Sadsbury Township	16	175	37	10	12	1,110	3	2	1,365
Schuylkill Township	3	52	24	2	14	853	0	29	977
South Coatesville Borough	11	18	15	0	15	199	0	1	259
South Coventry Township	0	0	0	0	0	0	0	0	0
Spring City Borough	0	0	0	0	0	0	0	0	0
Thornbury Township	0	0	0	0	0	0	0	0	0
Tredyffrin Township	34	197	45	11	8	2,560	1	2	2,858
Upper Oxford Township	0	0	0	0	0	0	0	0	0
Upper Uwchlan Township	2	111	23	3	0	664	0	3	806

Table 4.3.15-6 Structures Vulnerable to Hazardous Materials Release

MUNICIPALITY	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
Uwchlan Township	110	212	57	24	14	2,232	2	0	2,651
Valley Township	17	155	106	10	46	2,219	8	1	2,562
Wallace Township	0	0	0	0	0	0	0	0	0
Warwick Township	0	6	0	3	0	27	0	0	36
West Bradford Township	0	0	0	10	0	467	0	0	477
West Brandywine Township	0	34	6	83	5	1,414	0	0	1,542
West Caln Township	1	24	19	30	0	432	1	0	507
West Chester Borough	152	258	140	0	30	1,881	10	0	2,471
West Fallowfield Township	0	6	6	148	53	122	2	0	337
West Goshen Township	57	461	161	0	70	3,291	9	5	4,054
West Grove Borough	0	0	0	0	0	0	0	0	0
West Marlborough Township	0	0	0	0	0	0	0	0	0
West Nantmeal Township	1	10	2	38	0	34	1	0	86
West Nottingham Township	0	0	0	0	0	0	0	0	0
West Pikeland Township	0	0	0	0	0	91	0	0	91
West Sadsbury Township	2	15	8	47	9	366	1	0	448
West Vincent Township	0	7	2	17	0	125	0	0	151
West Whiteland Township	24	39	40	0	9	728	0	0	840

Table 4.3.15-6 Structures Vulnerable to Hazardous Materials Release

MUNICIPALITY	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
Westtown Township	0	0	0	0	0	0	0	0	0
Willistown Township	8	92	29	0	7	1,294	3	0	1,433
TOTAL	852	4,441	1,472	988	499	38,235	71	60	46,618

Table 4.3.15-7 shows the total number of critical facilities in hazardous materials areas by municipality. Note that the critical facility analysis for hazardous material hazard areas does not include TRI facilities classified as a critical facility as these sites are those that define the hazard area in this analysis. West Goshen Township and Tredyffrin Township have the highest number of critical facilities at risk, 63 and 61, respectively. Avondale Borough, Elverson Borough, and Honey Brook Borough all have 100% of critical facilities in hazard areas. There are 15 municipalities with at least 50% of critical facilities in hazard areas.

Table 4.3.15-7 Critical Facilities Vulnerable to Hazardous Materials Release

MUNICIPALITY	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN HAZARDOUS MATERIAL HAZARD AREA	PERCENT CRITICAL FACILITIES IN HAZARDOUS MATERIAL HAZARD AREA
Atglen Borough	8	0	0%
Avondale Borough	5	5	100%
Birmingham Township	11	4	36%
Caln Township	57	25	44%
Charlestown Township	29	0	0%
Coatesville City	27	23	85%
Downingtown Borough	41	38	93%
East Bradford Township	43	2	5%
East Brandywine Township	49	4	8%
East Caln Township	28	15	54%
East Coventry Township	34	14	41%
East Fallowfield Township	26	5	19%
East Goshen Township	32	10	31%
East Marlborough Township	25	0	0%
East Nantmeal Township	16	0	0%
East Nottingham Township	36	9	25%
East Pikeland Township	23	10	43%
Easttown Township	28	2	7%
East Vincent Township	81	14	17%
East Whiteland Township	35	0	0%
Elk Township	12	0	0%
Elverson Borough	4	4	100%
Franklin Township	17	0	0%
Highland Township	15	0	0%
Honey Brook Borough	5	5	100%
Honey Brook Township	31	6	19%
Kennett Township	14	0	0%
Kennett Square Borough	44	0	0%
London Britain Township	13	0	0%
Londonderry Township	38	0	0%

Table 4.3.15-7 Critical Facilities Vulnerable to Hazardous Materials Release

MUNICIPALITY	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN HAZARDOUS MATERIAL HAZARD AREA	PERCENT CRITICAL FACILITIES IN HAZARDOUS MATERIAL HAZARD AREA
London Grove Township	9	0	0%
Lower Oxford Township	36	0	0%
Malvern Borough	10	4	40%
Modena Borough	5	0	0%
New Garden Township	44	9	20%
Newlin Township	15	1	7%
New London Township	18	0	0%
North Coventry Township	37	0	0%
Oxford Borough	17	9	53%
Parkesburg Borough	15	9	60%
Penn Township	25	15	60%
Pennsbury Township	25	0	0%
Phoenixville Borough	32	0	0%
Pocopson Township	27	8	30%
Sadsbury Township	18	10	56%
Schuylkill Township	36	5	14%
South Coatesville Borough	6	3	50%
South Coventry Township	18	0	0%
Spring City Borough	6	0	0%
Thornbury Township	10	0	0%
Tredyffrin Township	139	61	44%
Upper Oxford Township	18	0	0%
Upper Uwchlan Township	27	10	37%
Uwchlan Township	42	27	64%
Valley Township	33	30	91%
Wallace Township	19	0	0%
Warwick Township	13	1	8%
West Bradford Township	33	3	9%
West Brandywine Township	30	5	17%
West Caln Township	20	4	20%
West Chester Borough	26	24	92%
West Fallowfield Township	21	4	19%
West Goshen Township	78	63	81%
West Grove Borough	6	0	0%
West Marlborough Township	21	0	0%
West Nantmeal Township	21	4	19%
West Nottingham Township	12	0	0%

Table 4.3.15-7 Critical Facilities Vulnerable to Hazardous Materials Release

MUNICIPALITY	TOTAL CRITICAL FACILITIES	CRITICAL FACILITIES IN HAZARDOUS MATERIAL HAZARD AREA	PERCENT CRITICAL FACILITIES IN HAZARDOUS MATERIAL HAZARD AREA
West Pikeland Township	22	0	0%
West Sadsbury Township	16	4	25%
West Vincent Township	25	0	0%
West Whiteland Township	86	14	16%
Westtown Township	28	0	0%
Willistown Township	55	11	20%
TOTAL	2,027	533	26%

Table 4.3.15-8 shows the vulnerability of the county's population to hazardous material hazard areas. Over 25% of the county's population lives in hazardous material hazard areas, with most of these residents concentrated in West Chester Borough (15,932 people), Coatesville (11,785), West Goshen Township (11,444), Uwchlan Township (10,705), and Tredyffrin Township (9,171). Twenty-six municipalities have no population within 1.5 miles of a TRI facility. Elverson Borough and Avondale Borough are the only municipalities with 100% of their population in risk areas.

Table 4.3.15-8 Population Vulnerable to Hazardous Materials Release

MUNICIPALITY	TOTAL ESTIMATED 2020 POPULATION	TOTAL POPULATION IN HAZARDOUS MATERIAL HAZARD AREA	PERCENT POPULATION IN HAZARDOUS MATERIAL HAZARD AREA
Atglen Borough	1,313	0	0%
Avondale Borough	1,274	1,274	100%
Birmingham Township	4,082	537	13%
Caln Township	14,432	6,740	47%
Charlestown Township	6,001	0	0%
Coatesville City	13,350	11,785	88%
Downingtown Borough	7,892	5,777	73%
East Bradford Township	10,339	1,544	15%
East Brandywine Township	9,738	657	7%
East Caln Township	5,384	3,688	68%
East Coventry Township	7,068	1,515	21%
East Fallowfield Township	7,626	2,656	35%
East Goshen Township	18,410	3,266	18%
East Marlborough Township	7,306	0	0%
East Nantmeal Township	1,832	0	0%
East Nottingham Township	8,982	2,643	29%
East Pikeland Township	8,260	4,116	50%
Easttown Township	7,433	23	0%
East Vincent Township	13,917	2,900	21%
East Whiteland Township	10,984	0	0%
Elk Township	1,698	0	0%
Elverson Borough	1,330	1,330	100%
Franklin Township	4,433	0	0%
Highland Township	1,259	131	10%
Honey Brook Borough	1,892	1,277	67%
Honey Brook Township	8,274	670	8%
Kennett Township	5,936	0	0%
Kennett Square Borough	8,289	0	0%
London Britain Township	3,179	0	0%
Londonderry Township	8,797	519	6%
London Grove Township	2,476	0	0%
Lower Oxford Township	5,436	0	0%
Malvern Borough	3,419	1,374	40%
Modena Borough	541	0	0%
New Garden Township	11,363	1,721	15%
Newlin Township	5,810	111	2%
New London Township	1,358	0	0%

Table 4.3.15-8 Population Vulnerable to Hazardous Materials Release

MUNICIPALITY	TOTAL ESTIMATED 2020 POPULATION	TOTAL POPULATION IN HAZARDOUS MATERIAL HAZARD AREA	PERCENT POPULATION IN HAZARDOUS MATERIAL HAZARD AREA
North Coventry Township	8,441	0	0%
Oxford Borough	5,736	2,769	48%
Parkesburg Borough	3,862	2,846	74%
Penn Township	5,644	2,688	48%
Pennsbury Township	3,876	0	0%
Phoenixville Borough	18,602	0	0%
Pocopson Township	4,455	1,460	33%
Sadsbury Township	4,125	3,360	81%
Schuylkill Township	8,780	2,050	23%
South Coatesville Borough	1,601	912	57%
South Coventry Township	2,796	0	0%
Spring City Borough	3,494	0	0%
Thornbury Township	3,177	0	0%
Tredyffrin Township	31,927	9,171	29%
Upper Oxford Township	2,560	0	0%
Upper Uwchlan Township	12,275	3,390	28%
Uwchlan Township	19,161	10,705	56%
Valley Township	7,985	6,878	86%
Wallace Township	3,711	0	0%
Warwick Township	2,590	6	0%
West Bradford Township	14,316	1,104	8%
West Brandywine Township	7,331	2,618	36%
West Caln Township	8,910	804	9%
West Chester Borough	18,671	15,932	85%
West Fallowfield Township	2,459	276	11%
West Goshen Township	23,040	11,444	50%
West Grove Borough	2,770	0	0%
West Marlborough Township	819	0	0%
West Nantmeal Township	2,251	61	3%
West Nottingham Township	2,748	0	0%
West Pikeland Township	4,024	100	2%
West Sadsbury Township	2,436	440	18%
West Vincent Township	6,668	57	1%
West Whiteland Township	19,632	2,213	11%
Westtown Township	11,154	0	0%
Willistown Township	11,273	2,858	25%

Table 4.3.15-8 Population Vulnerable to Hazardous Materials Release

MUNICIPALITY	TOTAL ESTIMATED 2020 POPULATION	TOTAL POPULATION IN HAZARDOUS MATERIAL HAZARD AREA	PERCENT POPULATION IN HAZARDOUS MATERIAL HAZARD AREA
TOTAL	534,413	140,396	26%

4.3.15.6. Equity in Vulnerable Communities

Marginalized communities, particularly low-income and minority populations, are often located near industrial facilities, waste sites, and transport routes for hazardous materials. These areas are more likely to experience spills, leaks, or accidents involving toxic substances making them more susceptible. Children, the elderly, and people with preexisting health conditions are particularly vulnerable to the effects of hazardous materials. Municipalities with high concentrations of these groups should plan accordingly. This includes East Goshen Township, Kennett Township, West Brandywine Township, and Willistown Township, where over one-third of the population is aged 65 or older in certain census tracts.

4.3.16. Nuclear Incidents



4.3.16.1. Location and Extent

Nuclear incidents generally refer to events involving the release of significant levels of radioactivity or exposure of workers or the general public to radiation. The primary concern following such an incident or accident is the extent of radiation, inhalation, and ingestion of radioactive isotopes which can cause acute health effects (e.g. death, burns, severe impairment), chronic health effects (e.g. cancer), and psychological effects (US EPA, 2025c).

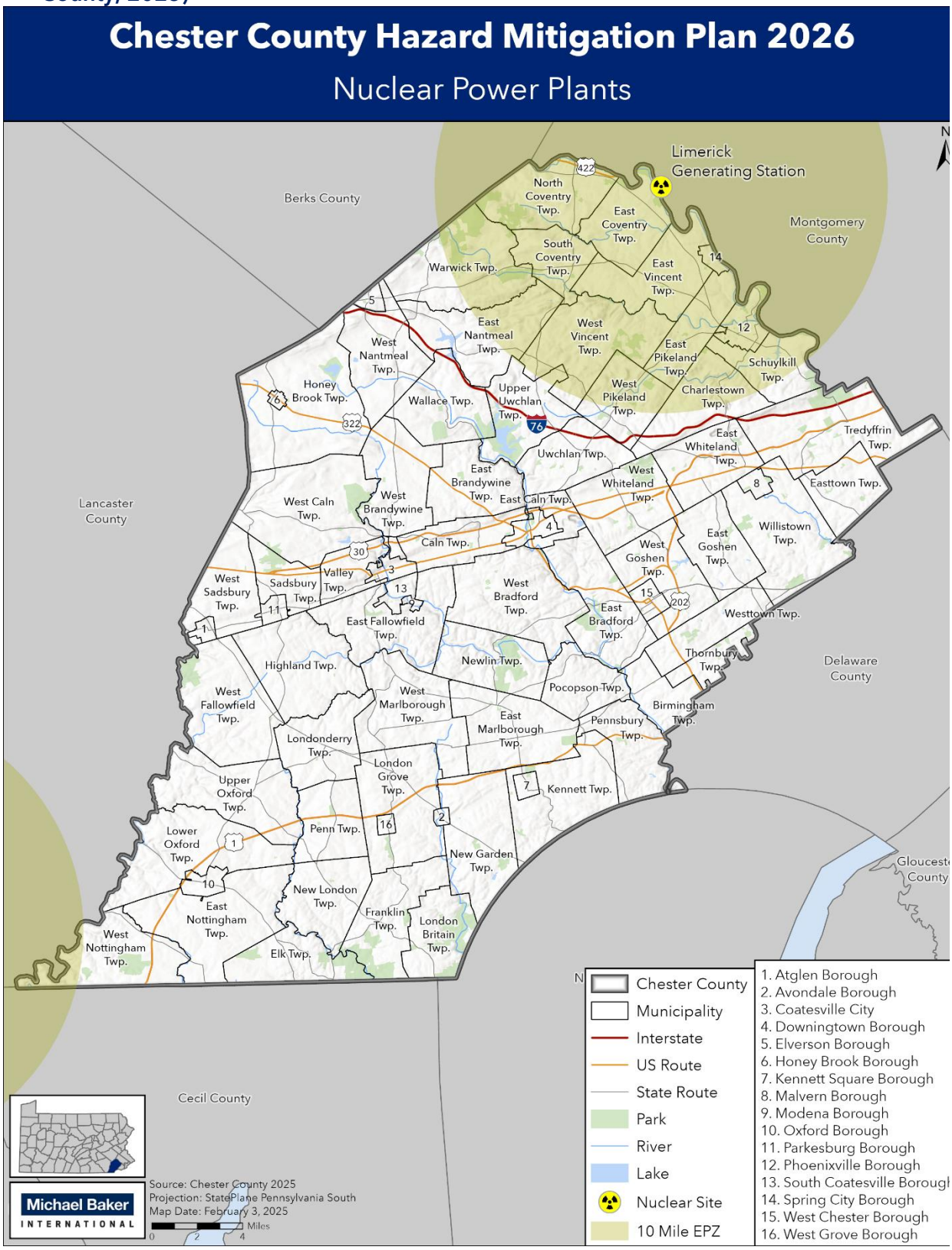
The Nuclear Regulatory Commission encourages the use of Probabilistic Risk Assessments (PRA) to quantitatively estimate the potential risk to public health and safety considering the design, operations and maintenance practices at nuclear power plants. PRAs typically focus on accidents that can severely damage the core and that may challenge containment (USNRC, 2020). FEMA, PEMA and county governments have formulated Radiological Emergency Response Plans that include a Plume Exposure Pathway Emergency Planning Zone (EPZ) with a radius of about ten miles from each nuclear power facility and an Ingestion Exposure Pathway EPZ with a radius of about fifty miles from each facility. The exact size and configuration of the EPZ may vary in relation to local emergency response capabilities, topography, road networks, and political boundaries (USNRC, 2024a).

The state of Pennsylvania contains five nuclear power generation stations. None of these lie within Chester County's borders. However, the county is located within the ten-mile plume Exposure Pathway EPZ for two nuclear facilities: the Limerick Generating Station and Peach Bottom Atomic Power Station, shown in Figure 4.3.16-1.

- Limerick Generating Station is located just outside of county borders in Pottstown. Limerick consists of two boiling water reactors with capacity to produce electricity for 1.7 million homes (Constellation, 2024).
- Peach Bottom Atomic Power Station is located thirteen miles from Nottingham, across the Susquehanna River. Peach Bottom consists of two boiling water reactors operated by Constellation Energy Generation, LLC.

According to PEMA, there are approximately 59 people at risk in the Plume Exposure EPZ for Peach Bottom and 77,300 people for Limerick. The entire county is at risk in the Ingestion Exposure EPZ for both Limerick and Peach Bottom.

Figure 4.3.16-1 Areas of Chester County within Plume Exposure EPZs (Chester County, 2025)



4.3.16.2. Range of Magnitude

The magnitude of a nuclear incident differs for those within the Plume Exposure Pathway EPZ and those within the Ingestion Exposure Pathway EPZ. The Plume Exposure Pathway encompasses whole-body external exposure to gamma radiation from a radioactive plume and deposited materials, in addition to inhalation exposure as the radioactive plume passes. The duration of primary exposures could range in length from hours to days. The Ingestion Exposure Pathway refers to exposure primarily from ingestion of water or foods such as milk and fresh vegetables that have been contaminated with radiation (USNRC, 2024a).

The following municipalities are located in the Plume Exposure Pathway EPZ for Limerick:

- Charlestown Township
- East Coventry Township
- East Nantmeal Township
- East Pikeland Township
- East Vincent Township
- North Coventry Township
- Phoenixville Borough
- Schuylkill Township
- South Coventry Township
- Spring City Borough
- Upper Uwchlan Township
- Warwick Township
- West Pikeland Township
- West Vincent Township

West Nottingham Township is the only municipality in Chester County within the Plume Exposure EPZ for Peach Bottom. The entire county lies in the Ingestion Exposure Pathway EPZ of both Limerick and Peach Bottom. Chester County can expect some radioactive contamination in the case of a nuclear incident at either Limerick Generating Station or Peach Bottom Atomic Power Station.

Nuclear accidents themselves are classified into three categories (USNRC, 2021a):

- Criticality accidents: Involves loss of control of nuclear assemblies or power reactors.
- Loss-of-coolant accidents: Occurs whenever a reactor coolant system experiences a break or opening large enough so that the coolant inventory in the system cannot be maintained by the normally operating make-up system.
- Loss-of-containment accidents: Involves the release of radioactivity from materials such as tritium, fission products, plutonium, and natural, depleted, or enriched uranium. Points of release have been containment vessels at fixed facilities or damaged packages during transportation.

Nuclear facilities must notify the appropriate authorities in the event of an accident. The USNRC uses four classification levels for nuclear incidents (USNRC, 2021b):

- Unusual Event: Under this category, events are in process or have occurred which indicate potential degradation in the level of safety of the plant. No release of radioactive material requiring offsite response or monitoring is expected unless further degradation occurs.
- Alert: If an alert is declared, events are in process or have occurred which involve an actual or potential substantial degradation in the level of safety of the plant. Any releases of radioactive material from the plant are expected to be limited to a small fraction of the EPA Protective Action Guides (PAGs).
- Site Area Emergency: A site area emergency involves events in process or which have occurred that result in actual or likely major failures of plant functions needed for protection of the public. Any releases of radioactive material are not expected to exceed the EPA PAGs except near the site boundary.
- General Emergency: A general emergency involves actual or imminent substantial core damage or melting of reactor fuel with the potential for loss of containment integrity. Radioactive releases during a general emergency can reasonably be expected to exceed the EPA PAGs for more than the immediate site area.

The accident at the Three Mile Island Generating Station on March 28, 1979 remains the nation's only nuclear incident at the General Emergency level and remains the worst nuclear incident on record in the Commonwealth and the nation. During this incident, equipment malfunctions, design-related problems, and worker errors led to a partial meltdown of the TMI Unit 2 reactor core at TMI (USNRC, 2024b).

Potential environmental impacts include the long-term effects of radioactive contamination in the environment and, particularly in Pennsylvania, in agricultural products. Spills and releases of radiologically active materials from accidents can result in the contamination of soil and water (CDC, 2024g). Areas underlain by limestone and some types of glacial sediments are particularly susceptible to contamination.

After a nuclear incident, another significant impact is the effect of radiation on the health of the population near the nuclear facility. The duration of primary exposure could range in length from hours to months depending on the proximity to the point of radioactive release. External radiation, inhalation, and ingestion of radioactive isotopes can cause acute health effects (e.g. death, severe health impairment), chronic health effects (e.g. cancers), and psychological effects (EPA, 2025d).

The nuclear industry has adopted pre-determined, site-specific Emergency Action Levels (EALs). The EALs provide the framework and guidance to observe, address, and classify the severity of site-specific events and conditions that are communicated to off-site emergency response organizations (USNRC, 2022). There are additional EALs that specifically deal with issues of security, such as threats of airborne attack, hostile action within the facility, or facility attack. These EALs ensure that appropriate notifications for the security threat are made in a timely manner. Each facility is also equipped with a public alerting system, which includes a number of sirens to alert the public located in the Plume Exposure Pathway EPZ. This alerting system is activated by the counties of each specific EPZ. Emergency notifications and instructions are communicated to the public via the Emergency Alert System as activated by the Commonwealth of Pennsylvania Emergency Operations Center. State officials also have the capability to send emergency messages as text messages to mobile devices.

PEMA's Nuclear Evacuation Plan is meant to effectively target response to a nuclear incident. For evacuation, the Commonwealth uses a keyhole approach where only sub areas that are directly impacted by a nuclear incident have to evacuate or shelter. This method allows for focused resources and attempts to minimize unnecessary strain on emergency services.

The worst-case scenario for Chester County would be if a general emergency occurred at either Limerick Generating Station or Peach Bottom Atomic Power Station that leaked enough radiation to create longer-term damage in the form of contaminated water, soil, and food supplies in the county.

The potential impacts of nuclear incidents on community lifelines are as follows:

Table 4.3.16-1 Most Likely Lifelines Impacted by Nuclear Incidents

LIFELINE	NOTES
	Community safety due to potential harm from radioactivity.

Table 4.3.16-1 Most Likely Lifelines Impacted by Nuclear Incidents

LIFELINE	NOTES
	Potential long-term effects of radioactive contamination for water resources and agricultural operations.
	The immediate impacts on public health and the potential long-term health impacts including cancers and psychological impacts will increase the amount of resources needed at local healthcare facilities.

4.3.16.3. Past Occurrence

There have been no failures at the Limerick Generating Station or Peach Bottom Atomic Power Station that have resulted in injuries or fatalities. No large-scale nuclear events have occurred in Chester County.

That said, there have been many notable events at the Peach Bottom Atomic Power Station, including several unusual event, an alert, numerous violations, and plant shutdowns to address issues identified by the USNRC or inspectors. A summary of issues between 1983 and 1992 can be found at https://www.tmia.com/old-website/reactors/peachbottom/pb-a.html. A more comprehensive source for events outside this timeframe could not be found.

Nuclear incidents rarely occur, but the incident at Three Mile Island (TMI) is the worst fixed-nuclear facility accident in U.S. history. The resulting contamination and state of the reactor core led to the development of a 14-year cleanup and scientific effort. The *President's Commission on the Accident at Three Mile Island* examined the costs of the accident, concluding, "The accident at Three Mile Island on March 28, 1979, generated considerable economic disturbance. Some of the impacts were short term, occurring during the first days of the accident. Many of the impacts were experienced by the local community; others will be felt at the regional and national levels." The report concluded: "It appears clear that the major costs of the TMI Unit 2 accident are associated with the emergency management replacement power and the plant refurbishment or replacement. The minimum cost estimate of nearly $1 billion supports the argument that considerable additional resources can be cost effective if spent to guard against future accidents." (US DHS, 1979).

Despite the severity of the damage, no injuries due to radiation exposure occurred. However, numerous studies were conducted to determine the measurable health effects related to radiation and/or stress. More than a dozen epidemiological and stress related studies conducted to date have found no discernible direct health effects to the population in the vicinity of the plant, but there was evidence of psychological stress in those closest to the site that persisted over time (USNRC, 2024b; Cleary and Houts, 1984).

The issue of radiation effects resulting from the accident at Three Mile Island will continue to be debated. Administrative standards have been incorporated into plans used by public health

officials and emergency planners for the purpose of making protective action decisions pertaining to sheltering and evacuation.

The accident at Three Mile Island had a profound effect on the residents, emergency management community, government officials and the nuclear industry, not only in Pennsylvania, but nationwide. There were minimal requirements for off-site emergency planning for nuclear power stations prior to this accident. Afterwards, comprehensive, coordinated, and exercised plans were developed for the state, surrounding counties, school districts, special facilities (hospitals, nursing homes and detention facilities) and municipalities to ensure the safety of the population (PA DEP, 2014). Costs associated with an event at one of the Commonwealth's nuclear facilities, be it real or perceived, are significant. The mitigation efforts put in place immediately following the 1979 event continue until today. The Commonwealth Nuclear/Radiological Plan which is a successor of the original "Annex E" is a result of the Commonwealth's efforts to address the many components of mitigation planning. The comprehensive planning involved with the five nuclear facilities is an ongoing effort. Plans are reviewed and amended on an annual basis. Recent amendments to various planning documents and station procedures include the efforts to enhance station security measures and the means to bolster communications and response in the event of terrorist activities.

The most recent nuclear incident to occur worldwide was that which involved the Fukushima Daiichi nuclear reactor in Okuma, Fukushima, Japan. This incident occurred on March 11, 2011. An earthquake in the area resulted in a series of equipment failures, nuclear meltdowns, and release of radioactive materials. These failures and releases were largely attributed to flooding from the water that penetrated the structures following the tsunami that was generated by the earthquake. The flooding caused the failure of multiple generators meant to keep the systems operating safely after the automatic shutdown. No deaths have been directly attributed to the incidents at the reactor at this time. However, there were 2,313 disaster-related deaths among evacuees from Fukushima prefecture. The main causes of these deaths were due to physical or mental illnesses that arose from living in shelters, the trauma of being moved into shelters, and delayed medical care due to the destruction caused by the earthquake and tsunami. Note that there were no deaths caused by radiation. Disaster-related deaths are in addition to the 19,500 that were killed by the earthquake or tsunami. The World Health Organization completed a report that indicated there were only small proportional increases in the occurrence of certain cancers following the radiation exposure from the plant (WNA, 2020).

Following this incident, the United States Nuclear Regulatory Commission developed a set of recommendations based on the lessons learned from the Fukushima incident. These recommendations are meant to enhance reactor safety for US-based nuclear reactors against a variety of factors. Recommendations included the categories of regulatory framework, ensuring protection of the facilities and equipment, enhancing mitigation, strengthening emergency preparedness, and improving the efficiency of USNRC programs. One of the specific recommendations involved the re-evaluation and upgrade of seismic and flooding protection of structures, systems, and components for each reactor. As more information comes out, and

more lessons learned are learned, it should only serve to reinforce the protections in place against any type of incident involving nuclear power stations.

4.3.16.4. Future Occurrence

Pennsylvania is home to the only nuclear power plant *General Emergency* in the nation. Since the Three Mile Island incident, nuclear power has become significantly safer and is one of the most heavily regulated industries in the nation. Despite the knowledge gained since then, there is still the potential for a similar accident to occur again at one of the five nuclear generating facilities in the Commonwealth.

Across the United States, several *Unusual Event* and *Alert* classification level events occur each year at the 100+ nuclear facilities that warrant notification of local emergency managers. Of these, *Alert* emergencies occur less frequently. For example, in 1997, there were forty notifications of *Unusual Events* and three *Alert* events nationwide. Based on historical events, *Site Area Emergency* and *General Emergency* incidents are very rare. Therefore, the future occurrence of nuclear incidents that affect Chester County can be considered *unlikely* as defined by the Risk Factor methodology probability criteria (see Table 4.4-1).

4.3.16.5. Vulnerability Assessment

Every municipality in Chester County is within the Ingestion Exposure Pathway EPZ of both the Limerick Generating Station and Peach Bottom Atomic Power Station. Fourteen municipalities are located within the 10-mile Plume Exposure Pathway EPZ of the Limerick Generating Station, listed in the table below. West Nottingham Township is the only municipality in the Plume Exposure Pathway EPZ for the Peach Bottom Atomic Power Station.

Vulnerability was calculated by identifying all census tracts with centers located within 10 miles of a nuclear power station, as defined in the 10-mile Plume Exposure EPZ. In the Peach Bottom 10-mile Plume Exposure EPZ, there are approximately 33,502 structures, 77,300 people, and 289 critical facilities. In the Limerick 10-mile Plume Exposure EPZ, there are approximately 91 structures, 59 people, and two critical facilities.

Table 4.3.16-2 Municipalities within the Limerick Generating Station Plume Exposure EPZ

MUNICIPALITIES	
Charlestown Township	South Coventry Township
East Coventry Township	Spring City Borough
East Nantmeal Township	Upper Uwchlan Township
East Pikeland Township	Uwchlan Township
East Vincent Township	Warwick Township
North Coventry Township	West Pikeland Township
Phoenixville Borough	West Vincent Township
Schuylkill Township	

As stated above, the county's primary vulnerability to nuclear incidents comes in the form of food, soil, and water contamination. Based on the 2022 Census of Agriculture, 1,558 farms were

operating in Chester County, with a total of 143,442 acres of farmland. Chester County's farms had a total market value of products sold of over $736,075,000 (USDA, 2022).

Water contamination is also a concern in nuclear incidents. There are several public water suppliers that operate in Chester County or provide water to municipalities. Suppliers include Aqua Pennsylvania, Atglen Borough Water Department, Chester Water Authority, Downingtown Municipal Water Authority, Honey Brook Borough Water Authority, Kennett Square Borough Water Department, North Coventry Water Authority, Oxford Borough Water Department, Pennsylvania American Water Company, and Phoenixville Borough Water Department. These water suppliers, coupled with the county's 23,410 domestic drinking water wells, are all vulnerable to the effects of a nuclear incident.

The loss experienced by each jurisdiction in the case of a nuclear incident will depend on the magnitude of the event. The example of the Three Mile Island incident gives an indication of local and regional economic loss, however. The President's Commission on the Three Mile Island Incident calculated the economic impact of the accident, looking at direct and indirect losses and other potential growth impacts. Direct impacts to the manufacturing sector were estimated at $6.3 million. These losses occurred within a few days after the accident and quickly subsided thereafter with no evidence of permanent layoffs. Food processors also incurred expenses with some farms purchasing equipment to detect radiation levels and converting dairy production to powdered milk.

The utility itself incurred significant costs in the area of emergency management, plant refurbishment, and replacement power. Emergency management costs ran in the hundreds of millions of dollars and replacement power for both units at a cost of $24 million a month. The unaffected TMI Unit 1 was shut down for 6.5 years. During this time, more than $100 million in plant upgrades and refurbishment took place. Replacement power costs today are estimated at nearly twice the 1979 dollars. Cost of the accident cleanup and placing the facility in monitored storage cost approximately $1 billion.

The impact on tourism was estimated at approximately $6.5 million, and wages lost in this sector estimated from $2.8 million to $3.8 million. Losses in the agricultural sector appeared to be minimal due to off-growing season. The Pennsylvania Department of Agriculture indicated that losses were significantly less than $1 million.

4.3.16.6. Equity in Vulnerable Communities

Regarding equity and nuclear incidents, marginalized communities often face disproportionate risks due to their proximity to nuclear facilities, limited access to emergency services, and reduced capacity for evacuation and recovery. Additionally, financial constraints may limit some individuals' ability to evacuate and subsequently recover from nuclear incidents. West Chester Borough and the City of Coatesville have the highest concentration of households without a vehicle and are areas with concentrated poverty. The City of Coatesville also has the highest concentration of individuals with disabilities, while West Chester Borough and New Garden Township should consider populations that may experience challenges with English proficiency. These communities may experience higher exposure to radiation, face barriers to timely

medical care, and struggle with long-term recovery issues. Equity considerations involve education on awareness and evacuation, as well as distribution of financial assistance in the aftermath of an incident.

4.3.17. Substance Use Disorder

4.3.17.1. Location and Extent



Substance use disorder occurs when an individual becomes physically dependent on opioids, a class of drugs that reduce pain. Opioid is used as a broad term and includes opiates, which are drugs naturally extracted from certain types of poppy plants and narcotics. Opioids can also be synthetically made to emulate opium. Synthetic opioids include fentanyl as well as prescription pain killers, oxycodone (OxyContin), hydrocodone (Vicodin), codeine, morphine, and others.

According to the Drug Enforcement Administration (DEA) opioids come in various forms: tablets, capsules, skin patches, powder, chunks in various colors from white to shades of brown and black, liquid form for oral use and injection, syrups, suppositories, and lollipops. The Centers for Disease Control and Prevention (CDC) defines the following as the three most common types of opioids:

- Prescription Opioids: Opioid medication prescribed by doctors for pain treatment. Prescription opioids can be synthetic, like oxycodone (OxyContin) or hydrocodone (Vicodin), or natural, like morphine.
- Fentanyl: A powerful synthetic opioid that is 50 to 100 times more powerful than morphine and is used for treating severe pain. Illegally made and distributed fentanyl is becoming more prevalent.
- Heroin: An illegal natural opioid processed from morphine and is also becoming more commonly used in the United States.

Opioids are highly addictive. They block the body's ability to feel pain and can create a sense of euphoria. Additionally, individuals often build a tolerance to opioids, which can lead to misuse and overdose. Addiction to these drugs impacts the entire Commonwealth, and it is listed as the number one public health and safety crisis (Office of the Attorney General, n.d.). Pennsylvania is typically among the hardest hit states from total drug overdose deaths each year, ranking 4th in 2020 behind California, Florida, and New York (CDC, 2022). The CDC estimates that nearly 42 out of every 100,000 Pennsylvania residents died from drug overdoses in 2021, which ranked 10th in the nation. This data was broken down by different drug classes, and it was found that the death rate for opioids was 36 per 100,000 while the rate for stimulants, such as cocaine or methamphetamine, was 21 per 100,000. These ranked 11th and 12th in the nation and were each higher than the national average (CDC, 2022). In Pennsylvania, overdoses caused by opioids have become the leading cause of accidental death, surpassing automobile accidents (CDC, 2017).

Xylazine, a powerful animal sedative, has become a growing problem for Pennsylvania in recent years. There were 90 reported overdose deaths due to the drug in 2017, but that number

jumped to 575 in 2021. This represents an increase of over 600% in just five years. Philadelphia reported that 90% of opioid samples tested contained xylazine (Governor Josh Shapiro, 2023).

People under the age of 35 have been particularly vulnerable to opioid abuse. According to a joint intelligence report prepared by the DEA Philadelphia Division and the University of Pittsburgh, between 2015 and 2016 in Pennsylvania, fentanyl use increased 380% among 15- to 24-year-olds while heroin use increased 970% in the 25- to 34-year age range. The report also documented a higher percentage of drug-related deaths attributed to opioid use in Pennsylvania's rural communities at 42%, compared to 34% in urban communities (DEA Philadelphia Division, 2017).

4.3.17.2. Range of Magnitude

Substance use disorder can lead to overdose, which can be fatal. The most dangerous side effect of an opioid overdose is depressed respiratory rate. The lack of oxygen to the brain causes permanent brain damage, leading to organ failure, and eventually, death. Signs and symptoms include respiratory depression, drowsiness, disorientation, pinpoint pupils, and clammy skin.

Substance use disorder can also be passed from mother to child in the womb. This condition, known as neonatal abstinence syndrome (NAS), increased five-fold from 2000 to 2012, according to the National Institute of Drug Abuse (NIDA), resulting in an estimated 22,000 babies in the United States born with this condition (NIDA, 2019). Between 2010 and 2017, the number of babies diagnosed with NAS increased by 82%. Data from 2020 suggests that 59 children are diagnosed with NAS in the United States every day (CDC, 2024h).

First responders – paramedics, police officers, and fire fighters, are also affected by Pennsylvania's substance use disorder crisis. In addition to the crisis consuming time and resources, first responders also face exposure risk, particularly to synthetic fentanyl. According to the DEA, it takes two to three milligrams of fentanyl to induce respiratory depression, arrest, and possibly death. Since fentanyl is indistinguishable from several other narcotics and powdered substances, first responders must take extra precaution when dealing with calls related to drug abuse (DEA, 2019).

The potential impacts of substance abuse on community lifelines are as follows:

Table 4.3.17-1 Most Likely Lifelines Impacted by Substance Abuse

LIFELINES	NOTES
Safety and Security	Government services are needed to aid individuals with substance use disorder and police officers and other first responders may be at risk of exposure to certain substances.
Health and Medical	Substance use has negative impacts on public health and may require medical treatment and mental health services. This can impact health and medical lifelines.

4.3.17.3. Past Occurrence

The CDC found that opioids are the main cause of drug-related overdoses and deaths, being responsible for nearly 75% of nationwide drug-related deaths in 2017. Of the more than 4,600 drug-related deaths in Pennsylvania in 2016, nearly 84 % were attributed to two or more drugs. Therefore, drug-related overdoses and death statistics account for all drug types, however, as noted above, many drug-related deaths involve opioids.

Compared to statewide death rates, Chester County consistently ranked below the Commonwealth's age-adjusted, opioid-related death rates between 2014 and 2020 (PA DOH, 2024a). Overdose Free PA collects county information across the state to track trends in opioid related issues. The following table lists opioid-related deaths from 2015 to 2023.

Table 4.3.17-2 Number of Reported Accidental Overdose Deaths in Pennsylvania from 2015 to 2023 (OverdoseFreePA, 2023)

YEAR	NUMBER OF DEATHS PENNSYLVANIA	NUMBER OF DEATHS CHESTER COUNTY
2015	3,119	74
2016	4,540	98
2017	5,425	144
2018	4,451	112
2019	4,479	97
2020	5,176	107
2021	5,356	101
2022	5,158	111
2023	4,717	17*

*Figure from most recently available county-wide data spanning January 1, 2023 through March 10, 2023

Though the substance use disorder crisis is complex and unprecedented, it is widely acknowledged that the opioid crisis began in the late 1990s when pharmaceutical companies introduced opioid-based pain medication, such as OxyContin, Percocet, and Vicodin. As these drugs become more frequently prescribed, misuse and overdose increased and it became clear that prescription opioids were highly addictive (NIDA, 2020).

4.3.17.4. Future Occurrence

Pennsylvania has seen a rise in opioid-related deaths over the last several years as seen in table 4.1.23-1. Despite this, Pennsylvania saw a decrease in overdose-related deaths between 2022 and 2023 (Open Data PA, 2024b).

However, future occurrences of substance use disorder, opioid misuse, overdose, and fatalities are unclear as the state moves forward with overdose prevention initiatives. In January 2018, Governor Tom Wolf declared Pennsylvania's substance use disorder epidemic a disaster emergency. This declaration dedicated resources with the goal of enhancing coordination and data collection between state and local responders, improving tools for families and first responders, and expanding treatment access. The declaration also aimed to improve access to

naloxone, a lifesaving drug that reverses the effects of a drug-overdose. In addition, a new Opioid Coordination Group was housed within PEMA (PA DOH, 2018).

Overall, the probability of future opioid overdose and death is *highly likely* as defined by the Risk Factor Methodology (see **Section 4.4**).

4.3.17.5. Vulnerability Assessment

County facilities are not at risk to the opioid crisis, but there are some occupation-specific risks that may make some employees more vulnerable. Employees working in direct patient care are vulnerable to fentanyl exposure. Since fentanyl can be ingested orally, inhaled through the nose or mouth, or absorbed through the skin or eyes, any substance suspected to contain fentanyl should be handled with extreme caution. Exposure to a small amount of fentanyl can lead to respiratory depression or death. Fentanyl-related substances have been found in powders, pills, capsules, liquids, and on blotter paper. The DEA recommends that all first responders carry a Personal Protective Equipment (PPE) kit that includes: nitrile gloves, N-95 dust masks, sturdy eye protection, paper coveralls and shoe protection, and naloxone injectors. The DEA also suggests using extreme caution when using police dogs, as they are at serious risks to health complications from inhaling fentanyl and fentanyl-related substances (DEA, 2016).

Additionally, absenteeism from jobs associated with substance use disorder in high-risk areas could lead to economic loss through lost productivity and increased medical costs.

In general, jurisdictions that are more densely populated are more vulnerable to substance use disorder-related threats as access to the drugs increases. Jurisdictional losses in the substance use disorder crisis stem from lost wages, productivity, and resources rather than losses to buildings or land. Locally, many Pennsylvania counties have seen an increase in time and resources devoted to the opioid epidemic as overdose and response increases. In Chester County, the Overdose Prevention Task Force has operated since 2015 in partnership with the county's Department of Drug & Alcohol Service, District Attorney's Office, Health Department, and others to increase awareness on issues relating to substance use disorder. The task force coordinates naloxone distribution and continuing medical education events for healthcare providers throughout the county.

Impacts including total costs to jurisdictions are only beginning to be understood, researched, and tracked. There is no comprehensive database currently tracking monetary losses at the local level. However, the American Enterprise Institute (AEI), using national data from the CDC and White House Council of Economic Advisors, calculated a total cost of $1,799 per capita for the opioid epidemic for Pennsylvania. Using this per capita estimate in combination with county population estimates, losses can be estimated for Chester County. It is important to note that this methodology assumes equal per capita opioid misuse and fatalities across all counties: however, based on reported drug overdoses and drug related deaths, it is known that some counties, including those in the southwestern region, are more vulnerable and more likely to experience higher per capita costs while counties in central and north central Pennsylvania tends to be less vulnerable and likely to have lesser costs per capita. Another important caveat regarding this methodology is that a portion of the costs will have been state losses rather than

county or jurisdictional, but the ratio of state to local cost burden is unknown at this time. It is estimated that Chester County has had a total cost of $989,061,416.

4.3.17.6. Equity in Vulnerable Communities

Marginalized communities are of concern when it comes to equity and substance use. The Pennsylvania Department of Health reports that drug overdose rates are higher among Black, Indigenous, and People of Color (BIPOC) than rates among white and non-Hispanic individuals (PA DOH, 2024b). Oftentimes these communities frequently encounter obstacles to accessing substance use treatment and prevention services.

4.3.18. Terrorism



4.3.18.1. Location and Extent

The term "terrorism" refers to intentional, criminal, or malicious acts, but the functional definition of terrorism can be interpreted in many ways. Officially, terrorism is defined in the Code of Federal Regulations as "the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives" (28 CFR §0.85).

The Federal Bureau of Investigation (FBI) characterizes terrorism as either domestic or international, depending on the origin, base, and objectives of the terrorist organization. However, the origin of the terrorist or person causing the hazard is far less relevant to mitigation planning than the hazard itself and its consequences.

Terrorism refers to the use of weapons of mass destruction (WMD), including: biological, chemical, radiological, and nuclear weapons; arson, incendiary, explosive, and armed attacks; industrial sabotage and agriterrorism; intentional hazardous materials releases; and cyberterrorism.

Terrorism is a threat everywhere, but there are a number of important considerations in evaluating terrorism hazards, such as the existence of facilities, landmarks, or other buildings of international, national, or regional importance. High-risk targets for acts of terrorism include military and civilian government facilities, international airports, large cities, and high-profile landmarks. Terrorists might also target large public gatherings, water and food supplies, utilities, and corporate centers. Furthermore, terrorists are capable of spreading fear by sending explosives or chemical and biological agents through the mail (FEMA, 2009). Additionally, terrorists can also use threats to create fear, convince citizens of the powerlessness of their government, and/or to get publicity for their causes. Nonetheless, terrorism can take many forms and terrorists have a wide range of personal, political, or cultural agendas.

The probability of terrorism cannot be quantified with as great a level of accuracy as that of many natural hazards. Furthermore, these incidents generally occur at a specific location, such as a government building, rather than encompassing an area such as a floodplain.

An important consideration in evaluating terrorism hazards is the existence of facilities, landmarks, or other buildings of international, national, or regional importance. While Chester County has many notable landmarks from a local historical perspective, no sites within the county are considered significant landmarks in terms of national or international importance. The county does have critical infrastructure that, if attacked, could have significant effects on the local or regional level. Critical infrastructure can include financial centers, government buildings, media outlets, transportation authorities, power companies, utility companies, and telecommunications networks. Several major transportation routes and gas transmission pipelines traverse Chester County, making intentional hazard material release a potential threat to citizens and the environment. This hazard is addressed in **Section 4.3.15**. In addition, several

bridges and railways (discussed in **Section 4.3.19**) connect Chester County to the Philadelphia metropolitan area, making them potential targets. A complete list of critical facilities is included in **Appendix E.**

No location within Chester County is immune from being a potential terrorist target. Acts of terrorism can occur anywhere, at any time of day. A few types of terrorist activities that are particularly relevant to Chester County: cyber terrorism (see **Section 4.3.12**), conventional/improvised bomb threat, and armed attacks. A cyber-attack can take the form of data breaches, crippling computer viruses, or even damage to physical technology infrastructure. A bomb threat can be verbal or written to ignite an explosive device to cause property damage, death or injuries to victims, and/or to incite fear. An armed attack is using a weapon to cause property damage, death, injuries, and/or incite fear.

4.3.18.2. Range of Magnitude

Terrorist attacks can take many forms. The FBI identifies the following as some of the common tactics of terrorism (FBI, 2023):

- Agroterrorism
- Arson/incendiary attack
- Armed attack
- Assassination
- Biological agent
- Chemical agent
- Cyberterrorism
- Conventional bomb
- Hijackings
- Intentional hazardous materials release
- Kidnapping
- Nuclear bomb
- Radiological agent

The severity of terrorist incidents depends upon the method of attack, the proximity of the attack to people, animals, or other assets and the duration of exposure to the incident or attack device. For example, chemical agents are poisonous gases, liquids, or solids that have toxic effects on people, animals, or plants. Many chemical agents can cause serious injuries or death. In this case, severity of injuries depends on the type and amount of the chemical agent used and the duration of exposure.

Biological agents are organisms or toxins that have illness-producing effects on people, livestock, and crops. Some biological agents cannot be easily detected and may take time to develop. Therefore, it can be difficult to know if a biological attack has occurred until victims display symptoms. In other cases, the effects are immediate. Those affected by a biological agent require the immediate attention of medical personnel. Some agents are contagious, which may result in the need for victims to be quarantined.

An evolving type of terrorist threat is Complex Coordinated Terrorist Attacks (CCTAs). CCTAs are acts of terrorism that involve synchronized and independent team(s) at multiple locations, sequentially or in close succession, initiated with little or no warning, and employing one or more weapon systems which could include firearms, explosives, fire as a weapon, and other

nontraditional attack methodologies that are intended to result in large numbers of casualties (FEMA, 2018). The dynamic nature of CCTAs makes the timing and location of threats difficult to predict, representing a shift from traditional symbolic and highly planned attacks. CCTAs could occur anywhere, at any time, with the potential for mass casualties and infrastructure damage.

Depending on the type of terrorist attack, there may be significant loss of life for humans and animals as well as economic losses. Additionally, the impact of the attack itself may be exacerbated by the fact that human services agencies like community support programs, health and medical services, public assistance programs, and social services can experience physical damage to facilities, supplies, and equipment and disruption of emergency communications. There may also be ancillary effects of terrorism such as urban fires or, in the case of a radiological device, radioactive fallout that can multiply the impact of a terrorist event.

The worst-case scenario for a terrorism event in Chester County would involve an active shooter incident or the use of explosive devices with radiological material at a public event in a well-populated area. This type of event would cause casualties and fatalities across all demographics, and depending on the time of recovery, would cause severe economic losses. In addition to the physical injuries, there will be high emotional and behavioral impacts on the population that was near the attack, as well as residents of Chester County who were not near the attack. Further, any event that results in mass casualties or fatalities could overwhelm the capabilities of Chester County government services, emergency services, healthcare facilities, and hospitals.

The potential impacts of terrorism on community lifelines are as follows:

Table 4.3.18-1 Most Likely Lifelines Impacted by Terrorism

LIFELINES	NOTES
	Community safety is often threatened, and police, fire, and other government services are either targeted or needed to respond to terroristic threats or actions.
	Water resources and the food supply chain may be targeted by biological terrorism.
	Energy infrastructure may be a potential target for terrorism.
	Hazardous materials facilities may be a potential target for terrorism.

4.3.18.3. Past Occurrence

There has been a high consciousness of terrorist activity in the press with few catastrophic events. The most significant terrorist attack on United States soil occurred on September 11, 2001; Flight 93, the fourth hijacked aircraft in the attack, crashed in Somerset County, Pennsylvania.

Chester County has never suffered an international terrorist attack. However, Chester County has experienced domestic terrorism incidents. Table 4.3.18-2 lists the number of domestic terrorism incidents by type reported by Chester County DES between 2015 and 2018, and Table 4.3.18-3 lists incidents in 2023. Data is not available for 2020 through 2022 due to a cyberattack on the county. Chester County is largely rural in nature and for most of its history, residents have not experienced any major civil disorders. The majority of incidents that have occurred were in more urban areas.

Table 4.3.18-2 Terrorist Activity Recorded in Chester County (2015 to 2018)

EVENT TYPE	2015	2016	2017	2018
Bomb Threat	10	4	6	10
Explosive Found	1		1	1
Possible Explosive Found			1	1
Suspicious Package	1	2		1
Officer Injury	1			
Threat Received			1	
Barricaded Subject	1		1	
Hostage Situation			1	
Poisoning	1			
Terrorist Activity		2	1	
School Incident / Lock Down		1		1
Prison Disturbance			1	
Large Fight				2
ERT Team Activation				1
TOTAL	15	9	13	17

Table 4.3.18-3 Terrorist Activity Recorded in Chester County in 2023 (Chester County DES, 2025)

DATE	DETAILS	LOCATION
1/6/2023	Grenade Found	N/A
1/30/2023	Grenade Found	N/A
9/2/2023	Explosive found	233 Kimbel Dr Phoenixville, PA 19460
9/23/2023	Explosive found	106 Columbia Dr Coatesville, PA 19320

4.3.18.4. Future Occurrence

An important consideration in estimating the likelihood of a terrorist incident is the existence of facilities, landmarks, or other buildings of national or regional importance.

As stated, there are no sites within Chester County which are considered significant landmarks in terms of national or international importance.

Based on historical events, Chester County can expect to experience suspected terrorist incidents or threats each year. Although previous events have not resulted in what are considered significant terrorist attacks, the severity of a future incident cannot be predicted with a sufficient level of certainty. Prediction of terrorist attacks is almost impossible because terrorism is a result of human factors. As long as fringe groups maintain radically different ideas than that of the government or general population, terrorism is a possibility. Overall, the likelihood of a terrorist attack is considered *unlikely* as defined by the Risk Factor Methodology (See **Section 4.4**).

The National Terrorism Advisory System (NTAS) communicates information about terrorist threats by providing timely, detailed information to the public, government agencies, first responders, public sector organizations, airports, and other transportation hubs. Information can be distributed through two mediums: Bulletins or Alerts. NTAS Bulletins are used to disseminate critical information regarding terrorism that may not relate to a specific threat (US DHS, 2022).

When a threat arises, the Secretary of Homeland Security announces an NTAS Alert and shares the news with the public. The alert may include specific information about the nature of the threat, including the geographic region, mode of transportation, or critical infrastructure potentially affected as well as steps that individuals and communities can take to protect themselves and help prevent, mitigate, or respond to the threat. The alert indicates whether the threat is elevated or imminent. Elevated threats are those that include no specific information about the timing or location. Imminent threats are threats believed to be impending or occurring very soon. DHS will issue an NTAS advisory through their website, news media, and its social media channels such as Facebook and Twitter (US DHS, 2022).

4.3.18.5. Vulnerability Assessment

The probability of Chester County becoming a terrorist target should remain relatively low; however, because of its proximity to other more vulnerable areas, its vulnerability and potential for secondary impacts is increased. Chester County may experience some serious issues caused by an influx of people from the larger metropolitan areas to the east in situations of terrorism and/or nuclear threats to these areas. This influx of population in these critical situations would stress the facilities of Chester County, its municipalities, and first responders. First responders' safety may be at risk during on-scene operations, which could lead to a higher than normal call volume/demand. First responders may have to perform additional duties such as traffic control and responding to traffic incidents.

Since the probability of terrorism occurring cannot be quantified in the same way as that of many natural hazards, it is not possible to assess vulnerability in terms of likelihood of occurrence. Instead, vulnerability is assessed in terms of specific assets. By identifying potentially at-risk terrorist targets in Chester County, planning efforts can be put in place to reduce the risk of attack. All communities in Chester County are vulnerable on some level,

directly or indirectly, to a terrorist attack. However, communities where the previously mentioned potential targets are located should be considered more vulnerable. FEMA's Integrating Manmade Hazards into Mitigation Planning (2003) encourages site-specific assessments that should be based on the relative importance of a particular site to the surrounding community or population, threats that are known to exist, and vulnerabilities including:

Inherent Vulnerability

- Visibility: How aware is the public of the existence of the facility?
- Utility: How valuable might the place be in meeting the objectives of a potential terrorist?
- Accessibility: How accessible is the place to the public?
- Asset Mobility: Is the asset's location fixed or mobile?
- Presence of Hazardous Materials: Are flammable, explosive, biological, chemical and/or radiological materials present on site? If so, are they well secured?
- Potential for Collateral Damage: What are the potential consequences for the surrounding area if the asset is attacked or damaged?
- Occupancy: What is the potential for mass casualties based on the maximum number of individuals on site at a given time?

Tactical Vulnerability

Site Perimeter

- Site Planning and Landscape Design: Is the facility designed with security in mind, both site-specific and with regard to adjacent land uses?
- Parking Security: Are vehicle access and parking managed in a way that separates vehicles and structures?

Building Envelope

- Structural Engineering: Is the building's envelope designed to be blast-resistant? Does it provide collective protection against chemical, biological, and radiological contaminants?

Facility Interior

- Architectural and Interior Space Planning: Does security screening cover all public and private areas?
- Mechanical Engineering: Are utilities and Heating, Ventilating and Air Conditioning (HVAC) systems protected and/or backed up with redundant systems?
- Electrical Engineering: Are emergency power and telecommunications available? Are alarm systems operational? Is lighting sufficient?
- Fire Protection Engineering: Are the building's water supply and fire suppression systems adequate, code-compliant, and protected? Are on-site personnel trained

appropriately? Are local first responders aware of the nature of the operations at the facility?

- Electronic and Organized Security: Are systems and personnel in place to monitor and protect the facility?

To reduce their vulnerability to terrorism hazards, Chester County belongs to the Southeastern Pennsylvania (SEPA) Regional Task Force (RTF), a group of five counties that collaborate to prevent, protect against, prepare for, respond to, recover from, and mitigate terrorism and other hazards on a regional level. Like the other regional task forces in Pennsylvania, SEPA-RTF is funded by the Pennsylvania Emergency Management Agency (PEMA) using DHS's Homeland Security Grant Program's State Homeland Security Program (SHSP). The counties of SEPA-RTF, including Chester County, use this funding to conduct emergency planning, training, and exercise activities, and to purchase equipment to reduce the region's vulnerability to terrorism.

4.3.18.6. Equity in Vulnerable Communities

Regarding equity considerations for terrorism preparedness, several vulnerable communities require special attention. Emergency response plans should include and consider the needs of diverse populations, including non-English speakers, individuals with disabilities, and those with limited access to technological resources like smartphones or internet connections. The City of Coatesville and Spring City Borough have census tracts where more than 20 % of the population has a disability while Honey Brook Township, West Fallowfield Township, Oxford Borough, Penn Township, Lower Oxford Township, and the City of Coatesville have high concentrations of residents without smartphones.

4.3.19. Transportation Incidents

4.3.19.1. Location and Extent



For this risk assessment, a transportation incident is defined as an incident involving highway, air, or rail travel. These incidents are collectively the costliest of all hazards in the Commonwealth in terms of lost lives, injuries, and economic losses, but they are also exceedingly common. Pennsylvania has the fifth largest state highway system in the United States. Within Chester County, there are over 3,700 total linear miles of roadway, including 1,016 of PennDOT miles and 2,649 of local municipal linear miles (PennDOT, 2023). Accidents involving hazardous materials are considered under **Section 4.3.15** of this report. The analysis in this profile includes the location of all public airports, passenger and freight rail lines, and highways where major accidents are likely to occur.

Key routes throughout the county include I-76 (PA Turnpike), US-1, US-202, and US-322. These are the routes with the highest overall traffic volume and higher speed roadways. This combination of volume and speed can make them the location of more traffic accidents. There is potential for major incidents on any of these roads. Furthermore, several respondents to the Hazard Identification Survey highlighted Route 30 as a significant transportation concern in Chester County. Respondents called out the stretch from Exton to Parkesburg as being in particularly poor condition, with potholes and deteriorating pavement posing safety risks and increasing the likelihood of accidents. Others pointed to the need for increased capacity or alternative routes to alleviate congestion. Some respondents expressed frustration with traffic signal timing along key intersections like Lincoln Highway, Pennsylvania Avenue, and Boot Road. These comments reflect community desire for infrastructure improvements and more reliable transportation options, including SEPTA service beyond Thorndale to serve western parts of the county. Figure 4.3.19-1 illustrates the major transportation systems in the county while Figure 4.3.19-2 shows the traffic volume on key roadways.

Chester County also has multiple rail lines that carry passengers and freight. The two passenger lines are a SEPTA and an Amtrak line. The SEPTA line is a Regional Rail line that passes through the county starting at Thorndale and takes passengers into Philadelphia. The Amtrak line is part of the Keystone Corridor, which is part of Amtrak's Northeast Corridor System. This line runs from Harrisburg to Philadelphia, and connects passengers to Lancaster, Philadelphia, and New York. The Amtrak line runs through Chester County at Parkesburg, Coatesville, Downingtown, Exton, and Paoli (CCBC, 2025). The freight line is run by the East Penn Railroad, and runs through Chester County at Chadds Ford, Kennett Square, Avondale, West Grove, and Oxford (East Penn Railroad, 2022). At any point along these rail lines, a transportation incident could occur.

Chester County has three public airports and several private airfields and heliports. The three public airports include Chester County G.O. Carlson Airport, New Garden Airport, and Brandywine Regional Airport. Numerous major air traffic routes for the northern United States also pass over Chester County, but most aviation accidents in the US happen during takeoff and

landing. Air transportation incidents are rare; nationwide, in 2023, there were only 40 air carrier accidents, with 26 serious injuries and no fatalities.

Figure 4.3.19-1 Chester County Transportation Systems, 2025

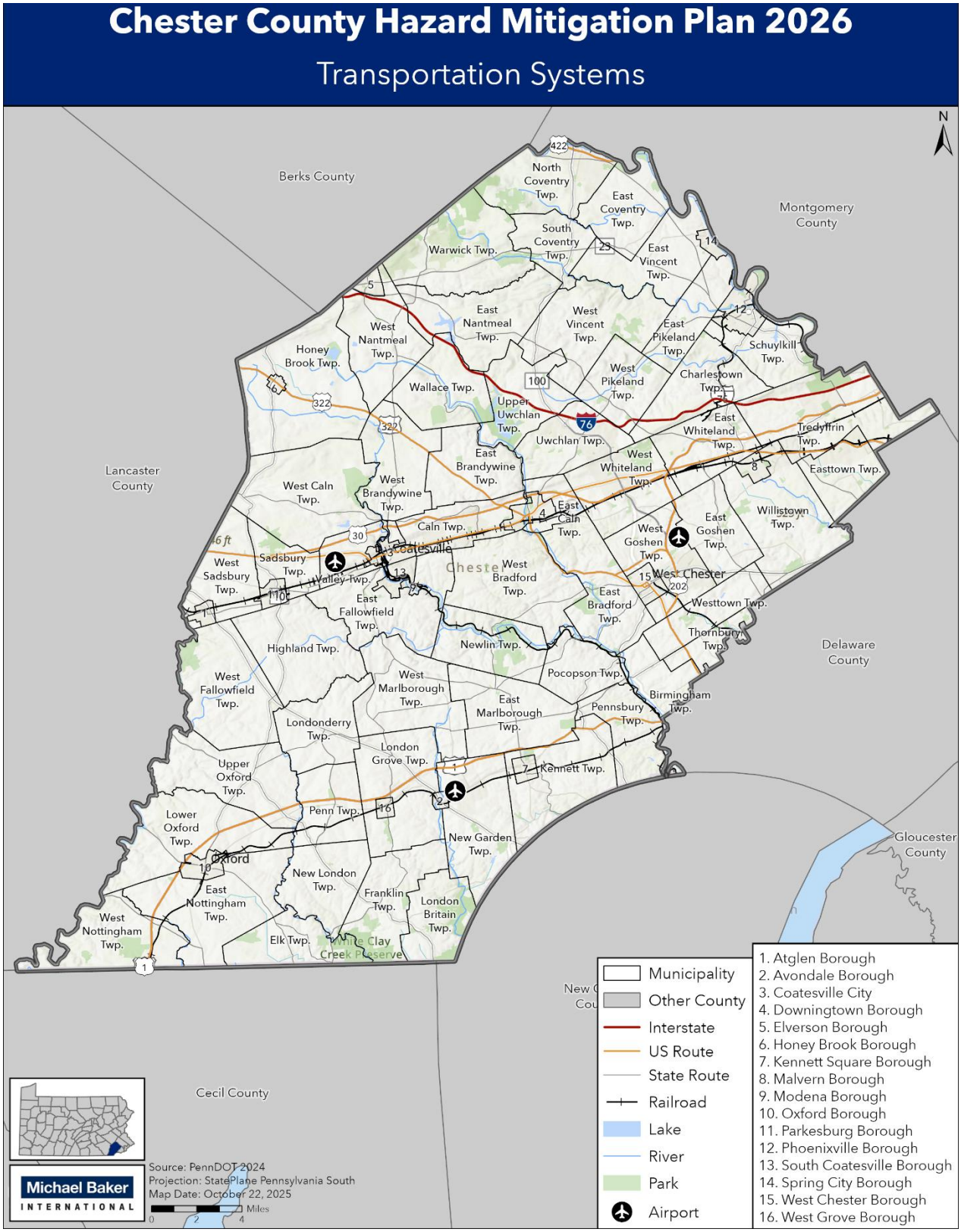
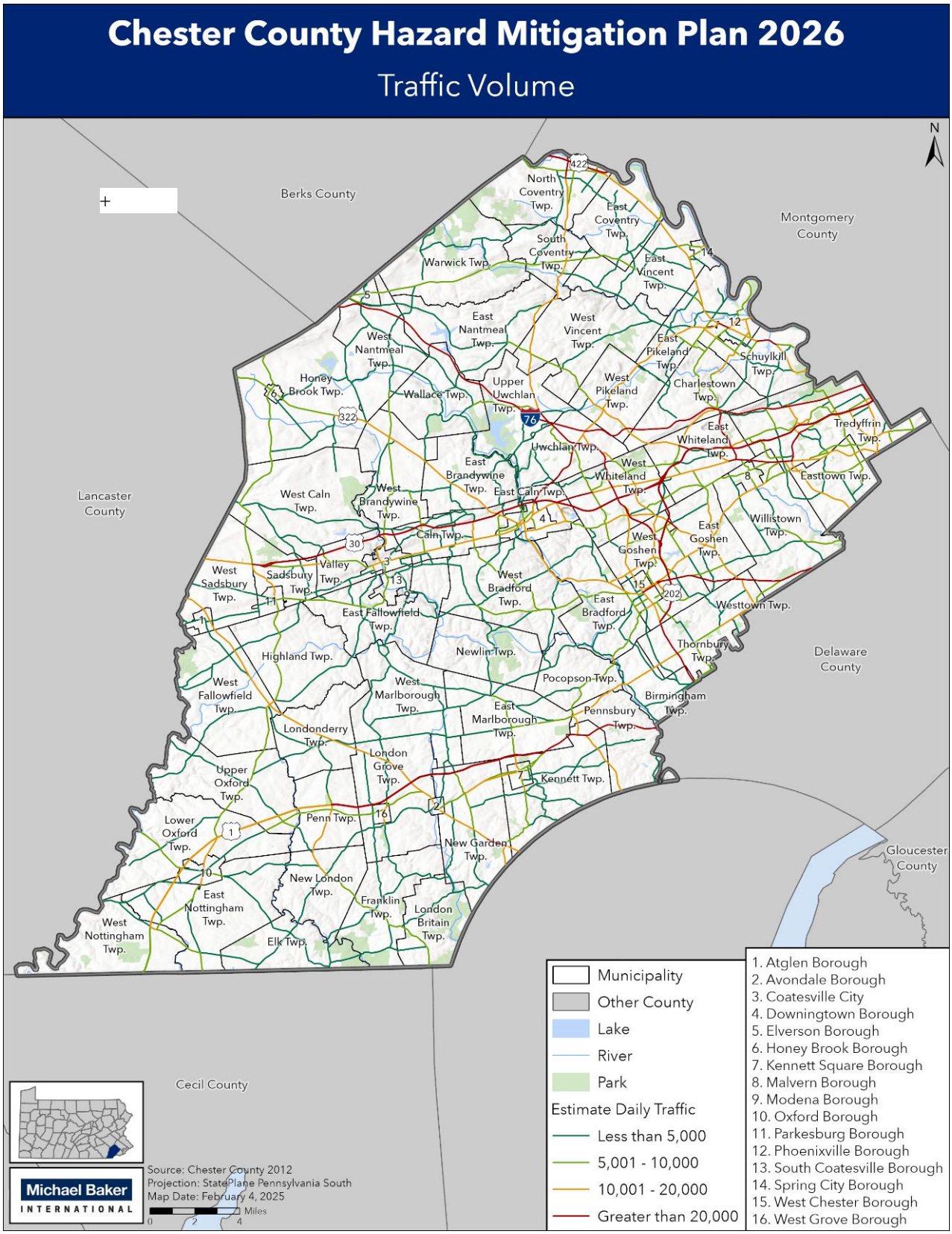


Figure 4.3.19-2 Chester County Traffic Volume on Key Roadways, 2024



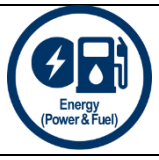
4.3.19.2. Range of Magnitude

At a minimum, transportation incidents can result in damage to roadway infrastructure (like guard rails), the vehicle(s) involved, and minor injuries to passengers and drivers. At worst, significant transportation incidents can result in death or serious injury and property damage, coupled with business interruptions and hours of congestion. They can also result in environmental damage if the vehicle(s) involved are transporting hazardous materials, whether by truck or rail. The expected impacts of transportation incidents are amplified by the fact that there is often little warning beforehand.

The worst-case scenario for a transportation incident impacting Chester County would be a road accident which results in a hazardous material spill in a densely populated area. Such an event would constitute an immediate health hazard to the population and require an evacuation. It could disrupt businesses, snarl commutes, and potentially cause long-term environmental damage.

The potential impacts of transportation incidents on community lifelines are as follows:

Table 4.3.19-1 Most Likely Lifelines Impacted by Transportation Incidents

LIFELINE	NOTES
	Direct harm to community safety, including drivers, bicyclists, and pedestrians. Depending on the location and magnitude of the incident, this can also disrupt law enforcement operations and fire and emergency services' ability to navigate to where they are needed.
	Medical personnel might be needed due to the significant risk of injury and death that transportation incidents represent. Large-scale traffic accidents causing downstream congestion can hinder patient movement and prevent people from getting to medical care, often on short notice.
	Potential negative consequences of incidents occurring while transporting these materials.
	Potential for disruption to telecommunication service if the transportation incident involves damage to communication infrastructure. This is often a short-term impact.
	Potential for disrupted power around a transportation incident if it involves damage to power lines or other utility infrastructure. This is often a short-term impact.

4.3.19.3. Past Occurrence

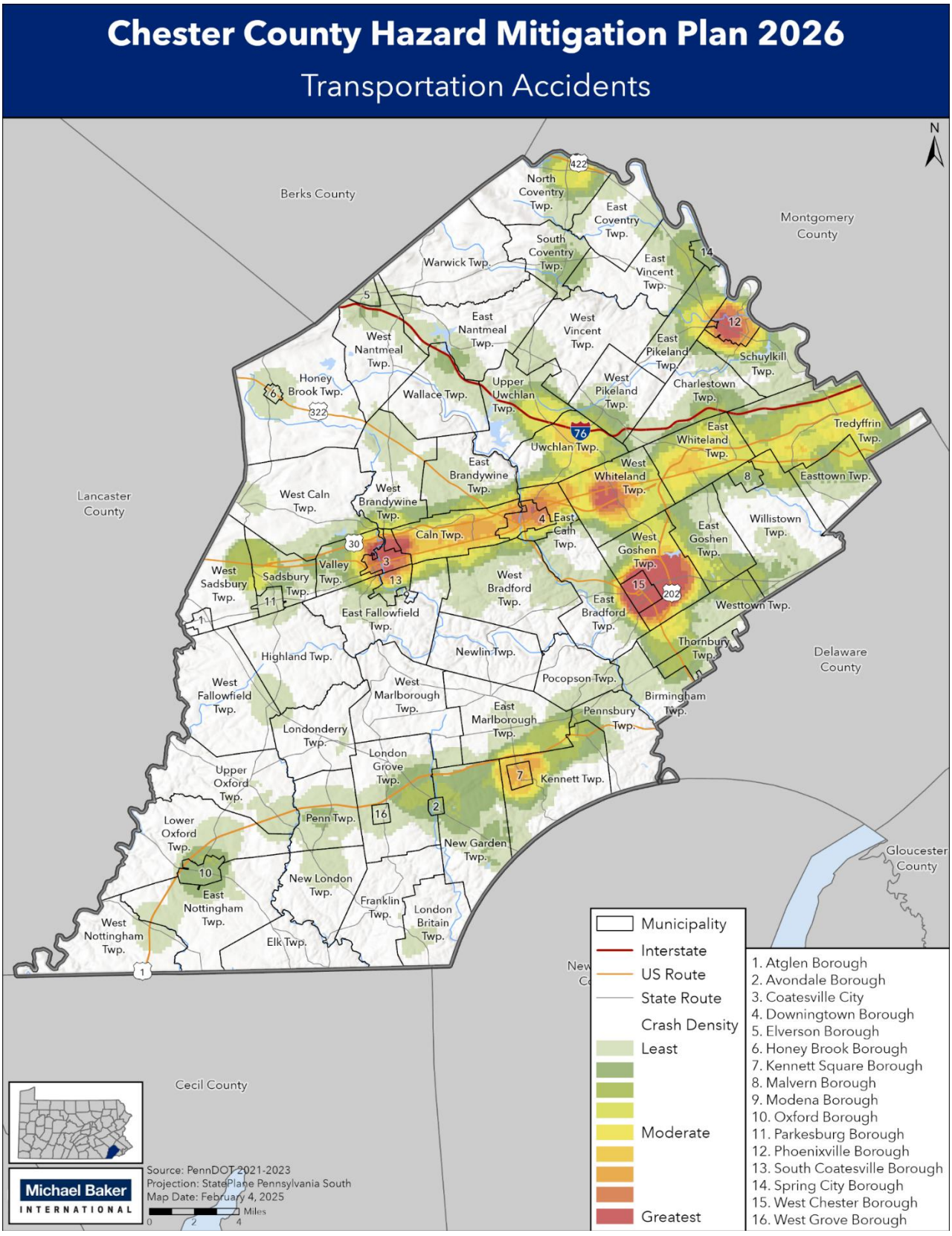
Vehicle crashes continue to be a risk throughout the county. PennDOT statistics for reportable vehicle crashes in Chester County are shown in Table 4.3.19-2. In 2024, Chester County was one of ten counties responsible for 54% of all traffic crashes in Pennsylvania (PennDOT, 2025).

Table 4.3.19-2 Reportable Traffic Crash Data, 2010 to 2024 (PennDOT, 2025).

YEAR	REPORTABLE CRASHES	# FATAL CRASHES	# INJURY CRASHES	# PDO CRASHES
2010	4,256	29	1,787	2,440
2011	4,541	35	1,824	2,682
2012	4,310	29	1,824	2,457
2013	4,517	33	1,748	2,736
2014	4,676	33	1,899	2,744
2015	4,938	33	1,903	3,002
2016	4,889	24	1,834	3,031
2017	4,777	33	1,810	2,934
2018	4,924	42	1,854	3,028
2019	4,717	27	1,731	2,959
2020	3,488	30	1,322	2,136
2021	4,057	34	1,565	2,458
2022	4,373	27	1,585	2,761
2023	4,141	30	1,574	2,537
2024	4,362	24	1.669	2,669
PDO = Property Damage Only				

Figure 4.3.19-3 shows the density of transportation crashes throughout Chester County. Red and yellow areas show roadways where the most crashes occurred between 2021 and 2023. In Chester County, most accidents occur along Routes I-76, US-30, and US-202. Crashes are also densely concentrated around the more populated communities in the northern portion of the county. Municipalities in the north central area along I-76 and US-30, such as Coatesville City, South Coatesville Borough, Caln Township, Downingtown Borough, East Caln Township, and West Whiteland Township have areas with dense incidents of transportation crashes.

Figure 4.3.19-3 Chester County Transportation Crash Density, 2021 to 2023



There is no comprehensive database tracking rail incidents, but there have been some recent events in Chester County. In January 2022, an individual was killed after being struck by an Amtrak train in Sadsbury Township (Samuel, 2022). In August 2022, an East Penn Railroad train derailed in Chester County, resulting in several rail cars in resident's backyard (Hughes, 2022). In July 2025, a SEPTA Regional Rail car caught fire at Paoli Train Station along the Paoli/Thorndale line. Only crew members were on board, with one individual being transported to a local hospital due to smoke inhalation. Two rail cars were rendered inoperable (Ignudo, 2025).

Table 4.3.19-3 below shows the two air transportation incidents, both small aircraft crashes, included in Chester County EMA records since the last plan update.

Table 4.3.19-3 Transportation Incidents Recorded in Chester County (Chester County EMA, 2025).

DATE	TYPE	INCIDENT	LOCATION
3/22/2023	Transportation Emergency	Small aircraft crash – property damage only	N/A
2/5/2024	Transportation Emergency	Small aircraft crash. 1 fatality.	573 Old Wilmington Road, West Caln, PA

4.3.19.4. Future Occurrence

While transportation incidents cannot be accurately predicted, areas with incident-prone characteristics, such as poor visibility and unprotected left turns, and areas with known crashes and speeding issues can be identified and documented. Future aviation incidents are expected to continue to be rare. However, the number of transportation related incidents is expected to increase with growing populations and increased traffic volumes. The population of Chester County increased by 8.2% between 2010 and 2023. Further, the county has an average commute time of 27.4 minutes with 66.9% of residents driving alone to work (U.S. Census Bureau, 2023, 5-Year ACS). These factors can indicate more individuals on the road, and for longer, increasing the risk of roadway vehicular incidents. Along with this, the transportation and warehousing industry account for 2.8% of overall employment in the county (U.S. Census Bureau, 2023, 5-Year ACS). Any growth of the transportation and warehousing economic sector will put greater demand on the county's roadways and will likely result in the continued occurrence of transportation incidents. If this growth is dependent on and results in an increase in rail transportation, rail incidents could increase in turn.

Changes to Pennsylvania's climate will also have an impact on future occurrences of transportation incidents due to changes impacting the condition of the infrastructure both long-term and in severe weather events. Changes in precipitation, extreme weather events, and heat pose risks to transportation infrastructure, affecting performance, safety, and reliability. Flooding can weaken roadways and tunnels and potentially lead to landslides that affect highways, railways, and bridges. Rising temperatures can damage roadways, rail infrastructure, and make it more difficult for airplanes to take off (EPA, 2025a).

The future occurrence of transportation incidents can be considered *likely*, according to the Risk Factor Methodology (see Table 4.4-1).

4.3.19.5. Vulnerability Assessment

A transportation-related incident can occur on any stretch of road in Chester County. However, severe accidents are more likely on the county's highways, which experience heavier traffic volumes including heavy freight vehicles. The combination of high traffic volume, severe winter weather in the county, and large numbers of hazardous materials haulers can increase the severity of traffic accidents occurring. Accidents may also occur on any rail line or air flight path, though the greatest danger for an aviation accident is just after takeoff and just before landing. This is why vulnerability is defined as distance from an airport, not flight paths.

Because of the widespread transportation network in Chester County, many structures are exposed to the threat of transportation incidents. Tables 4.3.19-4, 4.3.19-5, and 4.3.19-6 show the structures, critical facilities, and populations vulnerable to transportation incidents on roads, railroads, and near airports in Chester County.

Overall, 52% of all structures in Chester County are located within 0.5 miles of a major highway and 19% are within 0.5 miles of an active rail line. The communities most at risk are those with a high volume of structures within 0.5 miles of both a major highway and an active railroad. There are five municipalities with 90% or more of their structures near a major highway and greater than 80% of structures near an active rail line: Atglen Borough, Avondale Borough, Coatesville City, Parkesburg Borough, and West Grove Borough. However, it is important to note that it is rare that a transportation incident would result in the full loss of all structures in the most vulnerable zones. The magnitude of vulnerability may depend on the proximity to a roadway or rail line, whether there are barriers in place like berms or man-made barriers, and the speed and weather conditions during the incident.

As for critical facilities, Kennett Township and West Grove Borough are the most vulnerable with 100% of their critical facilities location within 0.5 miles of a major highway and an active rail line. Similarly, Coatesville City and West Grove Borough both have a large percentage of people living within 0.5 miles of a major highway and active rail line. In Coatesville City, 94% of people are located within 0.5 miles of a major highway and 92% are located within 0.5 miles of an active rail line. In West Grove Borough, 99% of people are located within 0.5 miles of a major highway and 81% are located within 0.5 miles of an active rail line.

Avondale Borough, New Garden Township, and Valley Township are the only municipalities with structures and some population within 0.5 miles of an airport. New Garden and Valley Townships are the only ones with critical facilities within 0.5 miles of an airport.

Chester County is collaborating with the Delaware Valley Regional Planning Commission on a Regional Safety Action Plan under its Safe Streets and Roads for All Program. This program envisions a future with zero roadway fatalities. Participating communities will take strides to lower the human impact of roadway incidents. The county's Complete Streets Policy, adopted in 2021, also encourages street design that facilitates safe, convenient and comfortable travel

for all users (CCPC, 2021a). This kind of policy, coupled with other smart growth policies, can support risk reduction and therefore vulnerability to transportation incidents.

Table 4.3.19-4 Structures Vulnerable to Transportation Incidents, 2025

MUNICIPALITY	TOTAL STRUCTURES	STRUCTURES WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT STRUCTURES WITHIN 0.5 MILES OF MAJOR HIGHWAY	STRUCTURES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT STRUCTURES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	STRUCTURES WITHIN 0.5 MILES OF AIRPORT	PERCENT STRUCTURES WITHIN 0.5 MILES OF AIRPORT
Atglen Borough	577	547	95%	480	83%	0	0%
Avondale Borough	405	378	93%	363	90%	46	11%
Birmingham Township	1,624	575	35%	143	9%	0	0%
Caln Township	4,701	4,264	91%	1,924	41%	0	0%
Charlestown Township	2,266	1,013	45%	450	20%	0	0%
Coatesville City	2,732	2,632	96%	2,353	86%	0	0%
Downingtown Borough	2,291	2,226	97%	1,662	73%	0	0%
East Bradford Township	3,658	2,180	60%	236	6%	0	0%
East Brandywine Township	3,683	1,672	45%	0	0%	0	0%
East Caln Township	1,269	966	76%	220	17%	0	0%
East Coventry Township	3,563	1,067	30%	62	2%	0	0%
East Fallowfield Township	3,944	1,117	28%	275	7%	0	0%
East Goshen Township	5,665	3,115	55%	0	0%	0	0%
East Marlborough Township	3,571	2,574	72%	0	0%	0	0%
East Nantmeal	1,508	730	48%	0	0%	0	0%

Table 4.3.19-4 Structures Vulnerable to Transportation Incidents, 2025

MUNICIPALITY	TOTAL STRUCTURES	STRUCTURES WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT STRUCTURES WITHIN 0.5 MILES OF MAJOR HIGHWAY	STRUCTURES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT STRUCTURES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	STRUCTURES WITHIN 0.5 MILES OF AIRPORT	PERCENT STRUCTURES WITHIN 0.5 MILES OF AIRPORT
Township							
East Nottingham Township	4,885	1,177	24%	1,081	22%	0	0%
East Pikeland Township	3,552	1,915	54%	120	3%	0	0%
Easttown Township	3,727	1,846	50%	30	1%	0	0%
East Vincent Township	4,029	3,002	75%	1,883	47%	0	0%
East Whiteland Township	4,401	2,621	60%	1,478	34%	0	0%
Elk Township	1,367	938	69%	0	0%	0	0%
Elverson Borough	584	582	100%	0	0%	0	0%
Franklin Township	2,456	1,207	49%	0	0%	0	0%
Highland Township	1,307	372	28%	0	0%	0	0%
Honey Brook Borough	732	732	100%	0	0%	0	0%
Honey Brook Township	4,909	2,227	45%	0	0%	0	0%
Kennett Township	1,751	1,497	85%	1,327	76%	0	0%
Kennett Square Borough	3,867	1,783	46%	943	24%	0	0%

Table 4.3.19-4 Structures Vulnerable to Transportation Incidents, 2025

MUNICIPALITY	TOTAL STRUCTURES	STRUCTURES WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT STRUCTURES WITHIN 0.5 MILES OF MAJOR HIGHWAY	STRUCTURES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT STRUCTURES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	STRUCTURES WITHIN 0.5 MILES OF AIRPORT	PERCENT STRUCTURES WITHIN 0.5 MILES OF AIRPORT
London Britain Township	1,782	368	21%	0	0%	0	0%
Londonderry Township	4,078	1,894	46%	811	20%	0	0%
London Grove Township	1,692	1,093	65%	0	0%	0	0%
Lower Oxford Township	2,579	872	34%	478	19%	0	0%
Malvern Borough	1,066	217	20%	955	90%	0	0%
Modena Borough	201	0	0%	200	100%	0	0%
New Garden Township	5,451	1,364	25%	846	16%	188	3%
Newlin Township	2,921	817	28%	0	0%	0	0%
New London Township	1,193	522	44%	502	42%	0	0%
North Coventry Township	4,288	1,977	46%	232	5%	0	0%
Oxford Borough	1,704	1,499	88%	1,245	73%	0	0%
Parkesburg Borough	1,371	1,333	97%	1,115	81%	0	0%
Penn Township	2,901	1,922	66%	1,167	40%	0	0%
Pennsbury Township	1,712	1,085	63%	579	34%	0	0%
Phoenixville	4,731	4,414	93%	2,531	53%	0	0%

Table 4.3.19-4 Structures Vulnerable to Transportation Incidents, 2025

MUNICIPALITY	TOTAL STRUCTURES	STRUCTURES WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT STRUCTURES WITHIN 0.5 MILES OF MAJOR HIGHWAY	STRUCTURES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT STRUCTURES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	STRUCTURES WITHIN 0.5 MILES OF AIRPORT	PERCENT STRUCTURES WITHIN 0.5 MILES OF AIRPORT
Borough							
Pocopson Township	1,757	1,016	58%	446	25%	0	0%
Sadsbury Township	1,987	1,568	79%	691	35%	0	0%
Schuylkill Township	4,096	2,115	52%	1,377	34%	0	0%
South Coatesville Borough	506	30	6%	383	76%	0	0%
South Coventry Township	1,653	992	60%	0	0%	0	0%
Spring City Borough	1,199	147	12%	291	24%	0	0%
Thornbury Township	1,060	627	59%	152	14%	0	0%
Tredyffrin Township	9,617	5,464	57%	4,529	47%	0	0%
Upper Oxford Township	2,109	1,338	63%	9	0%	0	0%
Upper Uwchlan Township	3,909	1,665	43%	0	0%	0	0%
Uwchlan Township	5,805	2,371	41%	0	0%	0	0%
Valley Township	2,926	2,778	95%	1,303	45%	64	2%
Wallace Township	2,065	952	46%	0	0%	0	0%

Table 4.3.19-4 Structures Vulnerable to Transportation Incidents, 2025

MUNICIPALITY	TOTAL STRUCTURES	STRUCTURES WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT STRUCTURES WITHIN 0.5 MILES OF MAJOR HIGHWAY	STRUCTURES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT STRUCTURES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	STRUCTURES WITHIN 0.5 MILES OF AIRPORT	PERCENT STRUCTURES WITHIN 0.5 MILES OF AIRPORT
Warwick Township	2,192	967	44%	0	0%	0	0%
West Bradford Township	5,801	711	12%	64	1%	0	0%
West Brandywine Township	4,141	1,918	46%	0	0%	0	0%
West Caln Township	6,070	2,274	37%	0	0%	0	0%
West Chester Borough	3,147	2,954	94%	1,212	39%	0	0%
West Fallowfield Township	2,226	914	41%	0	0%	0	0%
West Goshen Township	8,075	4,908	61%	396	5%	0	0%
West Grove Borough	964	920	95%	844	88%	0	0%
West Marlborough Township	983	657	67%	0	0%	0	0%
West Nantmeal Township	1,832	810	44%	0	0%	0	0%
West Nottingham Township	2,014	792	39%	409	20%	0	0%
West Pikeland Township	2,050	1,142	56%	0	0%	0	0%

Table 4.3.19-4 Structures Vulnerable to Transportation Incidents, 2025

MUNICIPALITY	TOTAL STRUCTURES	STRUCTURES WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT STRUCTURES WITHIN 0.5 MILES OF MAJOR HIGHWAY	STRUCTURES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT STRUCTURES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	STRUCTURES WITHIN 0.5 MILES OF AIRPORT	PERCENT STRUCTURES WITHIN 0.5 MILES OF AIRPORT
West Sadsbury Township	1,915	863	45%	458	24%	0	0%
Westtown Township	3,127	894	29%	0	0%	0	0%
West Vincent Township	5,656	2,763	49%	960	17%	0	0%
West Whiteland Township	3,838	2,094	55%	505	13%	0	0%
Willistown Township	5,275	1,608	30%	1,035	20%	0	0%
TOTAL	214,689	112,584	52%	40,755	19%	298	0%

Table 4.3.19-5 Critical Facilities Vulnerable to Transportation Accidents, 2025.

MUNICIPALITY	TOTAL CRITICAL FACILITIES	FACILITIES WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT FACILITIES WITHIN 0.5 MILES OF MAJOR HIGHWAY	FACILITIES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT FACILITIES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	FACILITIES WITHIN 0.5 MILES OF AIRPORT	PERCENT FACILITIES WITHIN 0.5 MILES OF AIRPORT
Atglen Borough	8	8	100%	6	75%	0	0%
Avondale Borough	5	5	100%	5	100%	0	0%
Birmingham Township	11	6	55%	3	27%	0	0%
Caln Township	57	53	93%	26	46%	0	0%
Charlestown Township	29	16	55%	14	48%	0	0%
Coatesville City	27	27	100%	25	93%	0	0%
Downingtown Borough	41	35	85%	30	73%	0	0%
East Bradford Township	43	34	79%	4	9%	0	0%
East Brandywine Township	49	29	59%	0	0%	0	0%
East Caln Township	28	17	61%	11	39%	0	0%
East Coventry Township	34	16	47%	1	3%	0	0%
East Fallowfield Township	26	9	35%	5	19%	0	0%
East Goshen Township	32	16	50%	0	0%	0	0%
East Marlborough Township	25	24	96%	0	0%	0	0%

Table 4.3.19-5 Critical Facilities Vulnerable to Transportation Accidents, 2025.

MUNICIPALITY	TOTAL CRITICAL FACILITIES	FACILITIES WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT FACILITIES WITHIN 0.5 MILES OF MAJOR HIGHWAY	FACILITIES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT FACILITIES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	FACILITIES WITHIN 0.5 MILES OF AIRPORT	PERCENT FACILITIES WITHIN 0.5 MILES OF AIRPORT
East Nantmeal Township	16	10	63%	0	0%	0	0%
East Nottingham Township	36	10	28%	6	17%	0	0%
East Pikeland Township	23	13	57%	1	4%	0	0%
Easttown Township	28	12	43%	0	0%	0	0%
East Vincent Township	81	70	86%	25	31%	0	0%
East Whiteland Township	35	14	40%	12	34%	0	0%
Elk Township	12	4	33%	0	0%	0	0%
Elverson Borough	4	4	100%	0	0%	0	0%
Franklin Township	17	8	47%	0	0%	0	0%
Highland Township	15	4	27%	0	0%	0	0%
Honey Brook Borough	5	5	100%	0	0%	0	0%
Honey Brook Township	31	9	29%	0	0%	0	0%
Kennett Township	14	14	100%	14	100%	0	0%
Kennett Square Borough	44	25	57%	14	32%	0	0%

Table 4.3.19-5 Critical Facilities Vulnerable to Transportation Accidents, 2025.

MUNICIPALITY	TOTAL CRITICAL FACILITIES	FACILITIES WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT FACILITIES WITHIN 0.5 MILES OF MAJOR HIGHWAY	FACILITIES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT FACILITIES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	FACILITIES WITHIN 0.5 MILES OF AIRPORT	PERCENT FACILITIES WITHIN 0.5 MILES OF AIRPORT
London Britain Township	13	1	8%	0	0%	0	0%
Londonderry Township	38	22	58%	8	21%	0	0%
London Grove Township	9	5	56%	0	0%	0	0%
Lower Oxford Township	36	15	42%	3	8%	0	0%
Malvern Borough	10	2	20%	7	70%	0	0%
Modena Borough	5	0	0%	5	100%	0	0%
New Garden Township	44	20	45%	11	25%	2	5%
Newlin Township	15	6	40%	0	0%	0	0%
New London Township	18	9	50%	10	56%	0	0%
North Coventry Township	37	30	81%	8	22%	0	0%
Oxford Borough	17	14	82%	12	71%	0	0%
Parkesburg Borough	15	15	100%	14	93%	0	0%
Penn Township	25	18	72%	6	24%	0	0%
Pennsbury Township	25	14	56%	11	44%	0	0%
Phoenixville Borough	32	32	100%	19	59%	0	0%
Pocopson	27	21	78%	7	26%	0	0%

Table 4.3.19-5 Critical Facilities Vulnerable to Transportation Accidents, 2025.

MUNICIPALITY	TOTAL CRITICAL FACILITIES	FACILITIES WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT FACILITIES WITHIN 0.5 MILES OF MAJOR HIGHWAY	FACILITIES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT FACILITIES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	FACILITIES WITHIN 0.5 MILES OF AIRPORT	PERCENT FACILITIES WITHIN 0.5 MILES OF AIRPORT
Township							
Sadsbury Township	18	14	78%	3	17%	0	0%
Schuylkill Township	36	13	36%	8	22%	0	0%
South Coatesville Borough	6	0	0%	6	100%	0	0%
South Coventry Township	18	11	61%	0	0%	0	0%
Spring City Borough	6	0	0%	3	50%	0	0%
Thornbury Township	10	8	80%	7	70%	0	0%
Tredyffrin Township	139	112	81%	60	43%	0	0%
Upper Oxford Township	18	11	61%	0	0%	0	0%
Upper Uwchlan Township	27	24	89%	0	0%	0	0%
Uwchlan Township	42	31	74%	0	0%	0	0%
Valley Township	33	33	100%	18	55%	1	3%
Wallace Township	19	14	74%	0	0%	0	0%
Warwick Township	13	8	62%	0	0%	0	0%

Table 4.3.19-5 Critical Facilities Vulnerable to Transportation Accidents, 2025.

MUNICIPALITY	TOTAL CRITICAL FACILITIES	FACILITIES WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT FACILITIES WITHIN 0.5 MILES OF MAJOR HIGHWAY	FACILITIES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT FACILITIES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	FACILITIES WITHIN 0.5 MILES OF AIRPORT	PERCENT FACILITIES WITHIN 0.5 MILES OF AIRPORT
West Bradford Township	33	11	33%	3	9%	0	0%
West Brandywine Township	30	18	60%	0	0%	0	0%
West Caln Township	20	12	60%	0	0%	0	0%
West Chester Borough	26	24	92%	14	54%	0	0%
West Fallowfield Township	21	9	43%	0	0%	0	0%
West Goshen Township	78	59	76%	12	15%	0	0%
West Grove Borough	6	6	100%	6	100%	0	0%
West Marlborough Township	21	19	90%	0	0%	0	0%
West Nantmeal Township	21	14	67%	0	0%	0	0%
West Nottingham Township	12	7	58%	3	25%	0	0%
West Pikeland Township	22	16	73%	0	0%	0	0%
West Sadsbury Township	16	12	75%	7	44%	0	0%
Westtown Township	25	11	44%	0	0%	0	0%

Table 4.3.19-5 Critical Facilities Vulnerable to Transportation Accidents, 2025.

MUNICIPALITY	TOTAL CRITICAL FACILITIES	FACILITIES WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT FACILITIES WITHIN 0.5 MILES OF MAJOR HIGHWAY	FACILITIES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT FACILITIES WITHIN 0.5 MILES OF ACTIVE RAIL LINE	FACILITIES WITHIN 0.5 MILES OF AIRPORT	PERCENT FACILITIES WITHIN 0.5 MILES OF AIRPORT
West Vincent Township	86	76	88%	42	49%	0	0%
West Whiteland Township	28	16	57%	9	32%	0	0%
Willistown Township	55	17	31%	10	18%	0	0%
TOTAL	2,027	1,327	65%	534	26%	3	0%

Table 4.3.19-6 Population Vulnerable to Transportation Accidents, 2025.

MUNICIPALITY	ESTIMATED 2020 POPULATION	POPULATION WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT POPULATION WITHIN 0.5 MILES OF MAJOR HIGHWAY	POPULATION WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT POPULATION WITHIN 0.5 MILES OF ACTIVE RAIL LINE	POPULATION WITHIN 0.5 MILES OF AIRPORT	PERCENT POPULATION WITHIN 0.5 MILES OF AIRPORT
Atglen Borough	1,313	1,088	83%	912	69%	0	0%
Avondale Borough	1,274	1,252	98%	1,121	88%	49	4%
Birmingham Township	4,082	1,682	41%	102	2%	0	0%
Caln Township	14,432	12,587	87%	6,505	45%	0	0%
Charlestown Township	6,001	2,938	49%	1,157	19%	0	0%
Coatesville City	13,350	12,552	94%	12,278	92%	0	0%
Downingtown Borough	7,892	7,817	99%	5,525	70%	0	0%
East Bradford Township	10,339	7,846	76%	96	1%	0	0%
East Brandywine Township	9,738	3,678	38%	0	0%	0	0%
East Caln Township	5,384	4,329	80%	644	12%	0	0%
East Coventry Township	7,068	2,107	30%	65	1%	0	0%
East Fallowfield Township	7,626	1,172	15%	597	8%	0	0%
East Goshen Township	18,410	10,641	58%	0	0%	0	0%
East Marlborough Township	7,306	5,707	78%	0	0%	0	0%
East Nantmeal Township	1,832	781	43%	0	0%	0	0%
East Nottingham Township	8,982	1,768	20%	1,443	16%	0	0%
East Pikeland Township	8,260	5,109	62%	50	1%	0	0%
Easttown Township	7,433	4,220	57%	12	0%	0	0%
East Vincent Township	13,917	9,454	68%	4,680	34%	0	0%
East Whiteland Township	10,984	6,290	57%	3,411	31%	0	0%

Table 4.3.19-6 Population Vulnerable to Transportation Accidents, 2025.

MUNICIPALITY	ESTIMATED 2020 POPULATION	POPULATION WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT POPULATION WITHIN 0.5 MILES OF MAJOR HIGHWAY	POPULATION WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT POPULATION WITHIN 0.5 MILES OF ACTIVE RAIL LINE	POPULATION WITHIN 0.5 MILES OF AIRPORT	PERCENT POPULATION WITHIN 0.5 MILES OF AIRPORT
Elk Township	1,698	1,132	67%	0	0%	0	0%
Elverson Borough	1,330	1,330	100%	0	0%	0	0%
Franklin Township	4,433	2,002	45%	0	0%	0	0%
Highland Township	1,259	302	24%	0	0%	0	0%
Honey Brook Borough	1,892	1,892	100%	0	0%	0	0%
Honey Brook Township	8,274	3,233	39%	0	0%	0	0%
Kennett Township	5,936	5,137	87%	4,839	82%	0	0%
Kennett Square Borough	8,289	3,568	43%	2,134	26%	0	0%
London Britain Township	3,179	446	14%	0	0%	0	0%
Londonderry Township	8,797	3,557	40%	1,654	19%	0	0%
London Grove Township	2,476	1,232	50%	0	0%	0	0%
Lower Oxford Township	5,436	1,246	23%	1,103	20%	0	0%
Malvern Borough	3,419	901	26%	3,112	91%	0	0%
Modena Borough	541	0	0%	541	100%	0	0%
New Garden Township	11,363	2,197	19%	1,422	13%	298	3%
Newlin Township	5,810	1,551	27%	0	0%	0	0%
New London Township	1,358	726	53%	587	43%	0	0%
North Coventry Township	8,441	3,993	47%	472	6%	0	0%
Oxford Borough	5,736	5,331	93%	4,306	75%	0	0%
Parkesburg Borough	3,862	3,694	96%	3,121	81%	0	0%
Penn Township	5,644	3,346	59%	2,330	41%	0	0%
Pennsbury Township	3,876	2,965	76%	1,042	27%	0	0%

Table 4.3.19-6 Population Vulnerable to Transportation Accidents, 2025.

MUNICIPALITY	ESTIMATED 2020 POPULATION	POPULATION WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT POPULATION WITHIN 0.5 MILES OF MAJOR HIGHWAY	POPULATION WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT POPULATION WITHIN 0.5 MILES OF ACTIVE RAIL LINE	POPULATION WITHIN 0.5 MILES OF AIRPORT	PERCENT POPULATION WITHIN 0.5 MILES OF AIRPORT
Phoenixville Borough	18,602	16,894	91%	11,634	63%	0	0%
Pocopson Township	4,455	2,773	62%	771	17%	0	0%
Sadsbury Township	4,125	2,855	69%	1,245	30%	0	0%
Schuylkill Township	8,780	4,003	46%	3,524	40%	0	0%
South Coatesville Borough	1,601	38	2%	1,177	74%	0	0%
South Coventry Township	2,796	1,989	71%	0	0%	0	0%
Spring City Borough	3,494	366	10%	855	24%	0	0%
Thornbury Township	3,177	1,975	62%	227	7%	0	0%
Tredyffrin Township	31,927	20,771	65%	14,443	45%	0	0%
Upper Oxford Township	2,560	1,485	58%	0	0%	0	0%
Upper Uwchlan Township	12,275	5,502	45%	0	0%	0	0%
Uwchlan Township	19,161	9,292	48%	0	0%	0	0%
Valley Township	7,985	7,800	98%	3,686	46%	41	1%
Wallace Township	3,711	1,930	52%	0	0%	0	0%
Warwick Township	2,590	1,122	43%	0	0%	0	0%
West Bradford Township	14,316	1,924	13%	18	0%	0	0%
West Brandywine Township	7,331	3,720	51%	0	0%	0	0%
West Caln Township	8,910	3,510	39%	0	0%	0	0%
West Chester Borough	18,671	18,234	98%	7,335	39%	0	0%
West Fallowfield	2,459	1,026	42%	0	0%	0	0%

Table 4.3.19-6 Population Vulnerable to Transportation Accidents, 2025.

MUNICIPALITY	ESTIMATED 2020 POPULATION	POPULATION WITHIN 0.5 MILES OF MAJOR HIGHWAY	PERCENT POPULATION WITHIN 0.5 MILES OF MAJOR HIGHWAY	POPULATION WITHIN 0.5 MILES OF ACTIVE RAIL LINE	PERCENT POPULATION WITHIN 0.5 MILES OF ACTIVE RAIL LINE	POPULATION WITHIN 0.5 MILES OF AIRPORT	PERCENT POPULATION WITHIN 0.5 MILES OF AIRPORT
Township							
West Goshen Township	23,040	13,981	61%	665	3%	0	0%
West Grove Borough	2,770	2,735	99%	2,236	81%	0	0%
West Marlborough Township	819	365	45%	0	0%	0	0%
West Nantmeal Township	2,251	967	43%	0	0%	0	0%
West Nottingham Township	2,748	1,039	38%	492	18%	0	0%
West Pikeland Township	4,024	1,765	44%	0	0%	0	0%
West Sadsbury Township	2,436	940	39%	609	25%	0	0%
Westtown Township	6,668	2,321	35%	0	0%	0	0%
West Vincent Township	19,632	12,797	65%	4,428	23%	0	0%
West Whiteland Township	11,154	6,310	57%	1,767	16%	0	0%
Willistown Township	11,273	4,653	41%	2,246	20%	0	0%
TOTAL	534,413	307,881	58%	122,619	23%	388	0%

4.3.19.6. Equity in Vulnerable Communities

The National Safety Council, a national organization focused on promoting safety, including transportation safety, cites many research-backed issues related to equity in transportation nationwide:

- Older adults and drivers under the age of 25 have a higher fatality rate in vehicular crashes than other age groups.
- Nationally, 43% of all highway fatalities happen on rural roads.
- Pedestrian fatalities stemming from vehicular incidents are higher for low-income communities, with lower income neighborhoods seeing more than twice as many pedestrian fatalities than highest income neighborhoods.
- Lower income neighborhoods are more likely to have more dangerous roadways with characteristics that increase fatalities in crashes, like higher speeds. If hit by a vehicle traveling just 40 miles per hour, only one in ten pedestrians will survive (National Safety Council, 2023).

While these are national statistics, they provide some indication of how equity issues may manifest in Chester County when it comes to transportation incidents. Zero-car households and individuals dependent on walking or biking are more vulnerable in traffic accidents. West Chester Borough and the City of Coatesville have the highest concentration of households without a vehicle and also have areas with concentrated poverty. Chester County's more rural areas may also have disproportionate effects due to their secluded locations which could affect the access to timely and effective emergency response services.

4.3.20. Urban Fire and Explosion

4.3.20.1. Location and Extent



Urban fire and explosion involves a structure or property fire within an urban or developed area. For hazard mitigation purposes, major urban fires involving large buildings and/or multiple properties are of primary concern. Explosions are extremely rapid releases of energy that usually generate high temperatures and often lead to fires. This hazard occurs in the denser, more urbanized areas and occurs most often in residential structures (US Fire Administration, 2019). Urban fires can more easily spread from building to building in these denser areas.

Urban fires and explosions can be triggered or exacerbated by other disaster events such as floods, storms, drought, transportation incidents, hazardous materials releases, and criminal activity such as arson, and terrorism. Urban fires have the potential to cause extensive damage to residential, commercial, or public property. Damage ranges from minor smoke and/or water damage to the destruction of buildings. People are often displaced for several months to years depending on the magnitude of the event. Urban fires and explosions can also cause injuries and death.

4.3.20.2. Range of Magnitude

The effects of a major urban fire include minor to significant property damage, loss of life, and residential or business displacement. Impacts vary based on the size of the incident and the population and structure where it occurs. Although most fires are small structural fires, the cumulative effect of these small incidents can be great in terms of property damage and lives lost. Many small incidents have the potential for a fire disaster if early warning and fire department services are not available. The secondary effects of urban fire events relate to the ability of public, private, and non-profit entities to provide post-incident relief.

Human services agencies (community support programs, health and medical services, public assistance programs, social services, etc.) can be affected by urban fire and explosion events as well. Effects may consist of physical damage to facilities and equipment, disruption of emergency communications, loss of health and medical facilities and supplies, and an overwhelming load of victims who are suffering from the effects of the urban fire, including loss of their home or place of business.

A significant urban fire occurred in 2023 in downtown Oxford Borough on South Third Street, between Market and Hodgson Street. Fire damaged a total of four businesses and 13 residential buildings (Baietto, Monroe, & Brandt, 2023). This four-alarm blaze resulted in 25 families, over 90 people in total, to be displaced and a disaster declaration for Oxford Borough. The fire burned for several hours and required the assistance of firefighters



Figure 4.3.20-1 2023 Fire in downtown Oxford (6abc, 2023)



from state, county, and regional agencies such as Lancaster County, and the states of Delaware and Maryland. Although one firefighter sustained a burn to his ear, no one else was hurt from the fire event. Displaced residents were given temporary housing by the Chester County Emergency Services and the Red Cross, while monetary and household items were donated to help the fire victims. The fire cause was "undetermined" (Oxford Borough, n.d.).

There are additional economic consequences related to this hazard. Urban fires and explosions may result in lost wages due to temporary or permanent business closures, destruction and damage involving business and personal assets, loss of tax base, recovery costs, and lost investments in destroyed property.

The potential impacts of urban fire and explosion on community lifelines are as follows:

Table 4.3.20-1 Most Likely Lifelines Impacted by Urban Explosion and Fire

LIFELINES	NOTES
	Government personnel will need to respond where community safety is threatened.
	Shelter is at risk as fires and explosions have a direct impact on houses and other forms of shelter.
	Medical personnel may be needed for response and recovery.

4.3.20.3. Past Occurrence

Chester County experiences a number of urban fires every year, most of which are small and affect one to a few structures. As reported in the 2021 HMP, a total of 3,377 structural fires were reported in Chester County between January 2017 and June 2020. There were 976 structural fires reported in 2017; 1,013 fires in 2018; and 986 fires in 2019. From January to June 2020, a total of 402 fires had been reported. Details on losses, injuries, and fatalities caused by these events were not found. Chester County EMS provided more recent urban fire data, as seen in Table 4.3.24-2. Structural fires most frequently affect residential communities within Chester County. Photographs of a major fire event are provided in Figures 4.3.24-1 and 4.3.24-2.

Table 4.3.20-2 Structure Fires Recorded in Chester County Incident Log (Chester County, 2023-24)

DATE	TYPE	ADDITIONAL DETAILS	LOCATION
1/5/2023	Fire	Gas leak causing evacuation.	Not provided.
2/25/2023	Fire	Apartment Fire. Evacuation of 8 units/21 people.	421 Crest Lane, East Coventry Township, PA
4/25/2023	Fire	Apartment Fire. 7 families displaced.	616 West Schuylkill Road, Pottstown, PA, 19465
4/28/2023	Hazardous Materials	Fire in insulation.	345 Scarlett Rd, New Garden Twp.
6/5/2023	Fire	Pipeline - small earth feature.	500 Lancaster Pike, Exton, PA, 19341
9/13/2023	Fire	4th alarm apartment fire. Disaster declaration.	23 S 3rd Street, Oxford, PA, 19363
9/21/2023	Hazardous Materials	HAZMAT team dispatched to an acid fire at the Metallurgical Products building caused by burning phosphorus.	810 Lincoln Avenue, West Chester, PA 19380
12/14/2023	Fire	Apartment fire with evacuation. Shelter setup.	131 S Union Street , Kennett Square , PA , 19346
2/17/2024	Hazardous Materials	Building fire with numerous hazmat.	1031 Pottstown Pike, Chester Springs, PA, 19425
5/19/2024	Fire	House explosion due to propane issue.	1546 Limestone Road, Upper Oxford, PA, 19330
10/22/2024	Fire	Fire in hospital. Total divert.	255 Lancaster Avenue, Paoli, PA

4.3.20.4. Future Occurrence

The future occurrence of urban fire and explosion events can be considered *possible*, according to the Risk Factor Methodology (see Table 4.4-1), with minor events happening more frequently than major fires or explosions in the future. The greatest urban fire and explosion threats in Chester County are industrial fires and hazardous materials fires. While residential fires are more common, industrial fires have a potentially higher risk because of the possibility of there being flammable chemicals and a sustained fuel source at industrial sites. Areas with greater population density are also at a greater risk for fires.

4.3.20.5. Vulnerability Assessment

Areas where large buildings are located or where development is closely spaced are more vulnerable to urban fire and explosion events. In Chester County, the jurisdictions with the highest population densities (greater than 5,000 persons per square mile) include Tredyffrin and West Goshen Townships. In order to adequately assess vulnerability to urban fires and explosions, detailed information on the design specifications, specifically fire codes, used for the construction of individual buildings is required.

As of December 31, 2006, all communities in Pennsylvania are required to comply with the Uniform Construction Codes. This includes requirements to comply with both the International Fire Code and the International Wildland Urban Interface Code. The adoption and enforcement of these codes will likely decrease the overall vulnerability of structures in Chester County. However, these regulations will only affect new construction, as well as additions and renovations to existing structures. Older buildings that do not meet the criteria established in these modern fire codes will continue to remain vulnerable to urban fire and explosion events.

Communities that do not have fire departments are more vulnerable in urban fire and explosion events as it can take longer for services from another community to reach the site.

4.3.20.6. Equity in Vulnerable Communities

Municipalities with an older housing stock may be at a higher risk for urban fires and explosions. Low-income communities oftentimes live in neighborhoods where inadequate building maintenance is common or are situated near industrial areas due to historic zoning regulations. This includes West Chester Borough, the City of Coatesville, Oxford Borough, and Phoenixville Borough as they have areas with the highest percentage of population below the poverty level. Residential areas in rural areas may also be at a heightened risk due to their seclusion affecting response times. Individuals with disabilities or limited mobility may face additional challenges during a fire or explosion. Ensuring that emergency services are equipped to assist people with diverse needs is essential in responding to these events.

4.3.21. Utility Interruption

4.3.21.1. Location and Extent



Utility interruptions include any impairment of the functioning of telecommunication, gas, electric, water, or waste networks. Interruptions or outages occur because of geomagnetic storms, fuel or resources shortage, electromagnetic pulses, information technology failures, transmission facility or linear utility accident, and major energy, power, or utility failure. The focus of utility interruptions as a hazard lies in fuel, energy, or utility failure.

These kinds of interruptions rarely spontaneously occur on their own; this hazard is often secondary to other natural hazard events, particularly transportation incidents, lightning strikes, extreme heat or cold events, and coastal and winter storms. For example, severe thunderstorms or winter storms could bring down power lines and cause widespread disruptions in electricity service. Strong heat waves may result in rolling blackouts where power may not be available for an extended period. Local outages may be caused by traffic accidents or wind damage.

Utility interruptions and power failures can take place throughout the county. Respondents to the public survey for this HMP update ranked utility interruptions in the top five hazard risks that Chester County faces. Utility interruption was the most selected option, with 62.3% of respondents including in their top five most concerning hazards. Community members are particularly concerned about this hazard and the consequences and other hazards it could cause if such an interruption occurred.

According to the 2023 5-year American Community Survey, in Chester County, 35.7% of housing units use utility gas, followed by 30.5% of homes using electric heat as their heat source (U.S. Census Bureau, 2023). As a result, an interruption in either of those utilities could affect a significant number of residents. In addition, an increasing reliance on internet access and telecommunications could also impact a large number of residents at any given time.

4.3.21.2. Range of Magnitude

Most severe power failures or outages are regional events. With the loss of power, electric-powered equipment and systems will not be operational. Examples may include lighting, HVAC and ancillary support equipment, communications (i.e., public address systems, telephone, computer servers, and peripherals), ventilation systems, fire and security systems, refrigerators, sterilizers, trash compactors, office equipment, and medical equipment. This can cause food spoilage, loss of heat or air conditioning, basement flooding (sump pump failure), lack of light, loss of water (well pump failure), lack of phone service, or lack of internet service. These issues are often more of a nuisance than a hazard but can cause damage or harm depending on the population affected and the severity of the outage.

Interruptions can also be more severe for special needs populations that are dependent on electronic medical equipment. A study of power interruptions on community health found that

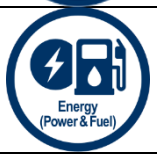
power outages are associated with increased rates of carbon monoxide poisoning, temperature-related illness, gastrointestinal illness, along with mortality to all-cause, cardiovascular, respiratory, and renal disease hospitalizations, especially for individuals relying on electricity-dependent medical equipment. Communities are especially vulnerable if medical facilities, food safety, long-term care facilities, or life-sustaining medications are compromised from utility interruptions (Casey et al, 2020).

The severity of a utility interruption can be compounded with extreme weather events, especially winter weather events. Utility interruptions can significantly hamper first responders in their efforts to provide aid in a compound disaster situation, especially with losses of telecommunications and wireless capabilities. Telecommunications interruptions will also hinder first responders' efforts. Additionally, internet outages can impact the economy, as many companies and government entities process payments and invoices electronically rather than with physical checks.

In a possible worst-case scenario in Chester County, a winter storm event could cause widespread power outages, leaving citizens without heat in the midst of subzero temperatures for several days. The power outage would also put elderly populations or others at risk of health problems due to the lack of heat and the inability to call for assistance or leave their homes. Power lines may also be difficult to repair because of the magnitude of the storm.

The potential impacts of utility interruption on the community lifelines are as follows:

Table 4.3.21-1 Most Likely Lifelines Impacted by Utility Interruption

LIFELINES	NOTES
	Government facilities may be impacted directly and the capability to administer services diminished. Impacts to certain facilities will require additional public outreach from the county and authorities (e.g., interruption in water supply).
	Water and electrical utilities in homes and potentially different aspects of the food supply chain will be impacted.
	Healthcare facilities may be impacted directly and therefore the capacity to deal with patients is diminished. Outages may impact the storage and handling of vaccines.
	Fuel usage may increase as a result of electricity no longer being available for an extended period of time.

4.3.21.3. Past Occurrence

Every year, Chester is susceptible to minor utility interruptions either through technological failure or as the result of inclement weather.

Table 4.3.21-2 list events reported to Chester County DES in 2023 and 2024. The majority are boil water advisories due to impacts on water utilities. Events that simply included downed trees and power lines are not listed in the table.

Table 4.3.21-2 Utility Interruption Events Reported to Chester County EMA 2023 to 2024 (Chester County EMA, 2025)

DATE	DETAILS
2/5/2023	Boil Water Advisory
2/8/2023	Boil Water Advisory
2/21/2023	Boil Water Advisory
3/2/2023	Boil Water Advisory
4/3/2023	Boil Water Advisory
4/19/2023	Boil Water Advisory
4/20/2023	Boil Water Advisory
5/1/2023	Boil Water Advisory
5/1/2023	Boil Water Advisory
6/1/2023	Boil Water Advisory
6/1/2023	Boil Water Advisory
6/6/2023	Boil Water Advisory
6/14/2023	Boil Water Advisory
6/15/2023	Boil Water Advisory
6/21/2023	Boil Water Advisory
6/26/2023	Boil Water Advisory
7/17/2023	Boil Water Advisory
7/25/2023	Boil Water Advisory
6/25/2024	Water outage at Paoli Hospital.
7/18/2024	IT outage affecting hospitals.

Table 4.3.21-3 provides power outages in Chester County from 2020 to 2023. The dataset, hosted by the Open Energy Data Initiative (OEDI) was compiled by integrating three data sources: Environment for the Analysis of Geo-Located Energy Information (EAGLE-I), the Electric Emergency Incident Disturbance Report (DOE-417), and the Annual Estimates of the Resident Population for Counties 2024 (CO-EST2024-POP). The table below only includes outages that last at least 12 hours.

Table 4.3.21-3 Power Outages in Chester County 2020 to 2023 (She, Adetola, and Yun, 2024)

DATE	DURATION (HOURS)	MINIMUM CUSTOMERS AFFECTED	MAXIMUM CUSTOMERS AFFECTED	MEAN CUSTOMERS AFFECTED
2/7/2020	27.5	272	5,509	1,233
4/9/2020	23.75	234	5,325	1,105
6/3/2020	129.25	204	72,581	20,578
7/6/2020	26.75	266	4,835	1,375
7/24/2020	12.25	200	6,399	797
8/4/2020	130.5	207	110,546	24,797

Table 4.3.21-3 Power Outages in Chester County 2020 to 2023 (She, Adetola, and Yun, 2024)

DATE	DURATION (HOURS)	MINIMUM CUSTOMERS AFFECTED	MAXIMUM CUSTOMERS AFFECTED	MEAN CUSTOMERS AFFECTED
8/10/2020	20.75	222	4,191	686
8/18/2020	15	647	909	679
8/22/2020	15	347	476	392
11/30/2020	12	202	3,916	1,635
12/25/2020	46.5	256	21,299	5,448
3/26/2021	27	227	4,729	1,174
4/30/2021	29.25	292	6,271	971
5/29/2021	12.75	344	1,285	524
6/8/2021	24.5	210	6,826	1,644
6/21/2021	16.5	202	4,319	772
8/19/2021	16.5	210	3,499	1,101
10/29/2021	29	202	4,259	1,489
2/18/2022	18.75	213	17,868	3,901
2/25/2022	15	200	4,302	1,386
3/8/2022	20.25	310	2,916	934
3/12/2022	15.5	300	9,191	2,193
5/7/2022	30.5	206	3,673	1,181
12/23/2022	56	200	12,455	2,041
3/4/2023	14.5	206	2,226	423
4/1/2023	22.5	353	12,847	2,898
4/29/2023	14.25	206	447	281
6/25/2023	13	206	3,076	1,326
6/26/2023	25.5	207	6,034	1,397
7/8/2023	22.5	214	1,967	678
7/29/2023	25.5	223	6,123	873
8/7/2023	12.25	4,128	50,218	30,634
8/8/2023	59.75	222	22,455	4,746
9/23/2023	35	211	3,754	844
12/18/2023	25.75	207	4,149	1,014

Outside of event tracking databases, recent reporting identifies several other occurrences in the county. In January 2024, high winds and heavy rain led to power outages across the county. Chester County DES reported 130 calls for downed power lines or wires. PECO reported 215,000 customers without power in the service region. At least 21,200 customers in Chester County lost power (Rettew, 2024). In June 2025, a thunderstorm bringing high winds and rain led to power outages across the county. PECO reported that 50,000 customers in the county were without power. Willistown Township's two sewer plants also went offline due to storm impacts. PECO worked to restore power as high temperatures, close to 100 degrees, were expected for the upcoming weekend (Rellahan, 2025).

4.3.21.4. Future Occurrence

Utility interruptions will continue to occur annually with minimal impact. Widespread utility interruption events usually occur approximately once every five years, usually as a secondary effect of an extreme weather event. These interruptions should be anticipated, and first responders should be prepared during severe weather events. Research by the National Oceanic and Atmospheric Administration (NOAA) suggests that climate change may cause more extreme storms in Pennsylvania (Frankson et. al., 2017).

The Climate Mapping for Resilience and Adaptation (CMRA) Tool predicts that average annual precipitation will increase while the number of days per year with precipitation may decrease. The number days per year that exceed the 99th percentile precipitation is projected to increase as well. It also predicts more days with extreme heat. These factors can increase the occurrence of hazards such as drought, flooding, hurricanes and tropical storms, tornados and windstorms, and wildfires. Impacts from any of these hazards can lead to utility interruption on a range of scales. Overall, the future probability of utility interruptions can be considered *likely* according to the Risk Factor Methodology (See Table 4.4-1).

Aging infrastructure may have a higher risk to utility interruptions. In many utility systems, significant portions of the equipment and facilities date from the growth periods of the 1950s and 1960s that followed World War II. As this equipment ages, it deteriorates from the constant wear and tear of service. Eventually, the equipment reaches a point at which it will either fail on its own or as a result of outside forces (storms, loads it was designed to handle but no longer can, etc.). These failures cause service interruptions and can require expensive emergency repairs. In addition, as repairs have taken place along transmission routes, there is often a mix of new and old equipment along the line; repair, not replacement, is generally the choice to resolve an issue.

The wholesale replacement of a system is not a feasible solution for utility companies. This would require the interruption of services while the replacement occurs, as well as accessing the existing system (which may lie under roads, private property, or other inconvenient places). Utility companies face the challenge of managing the issue of the aging infrastructure with increased demand, potentially due to building and vehicle electrification along with data center operation. They are tasked with reducing the effects of aging equipment while also controlling the deterioration of the existing system as much as possible yet still meeting demand. This balance will be tenuous as transmission equipment continues to age and break down. These breakdowns will likely lead to more frequent utility disruptions as time goes by.

4.3.21.5. Vulnerability Assessment

All jurisdictions are vulnerable on some level to utility interruptions. Because this hazard often occurs in conjunction with other hazards, jurisdictions that have been identified as more vulnerable to winter storms, windstorms, tornadoes, flooding, and other natural hazard events may be more vulnerable to a utility interruption. The threat is lower in areas with underground electric.

Emergency medical facilities, including retirement homes and senior centers, are particularly vulnerable to power outages. While back-up power generators are often used at these facilities, loss of electricity may result in hot or cold temperatures for which elderly populations are particularly vulnerable. **Appendix D** provides a list of where those facilities are located in Chester County. Conservation and improved technology have resulted in more efficient use of energy sources. The increasing use of alternative fuel supplies, such as kerosene heaters, wood burning stoves, coal burners, etc., has also decreased our vulnerability to future shortages. However, severe weather extremes, accidents, labor strikes, terrorism, or nationwide shortages could cause significant energy shortage problems.

4.3.21.6. Equity in Vulnerable Communities

Utility interruptions can disproportionately affect vulnerable populations, including the elderly, individuals with disabilities, and those with chronic health issues who rely on electricity for medical equipment. Adequate preparedness for these groups prioritizes these groups by ensuring that backup power systems, such as generators, are in place. Areas of East Goshen Township, Kennett Township, West Brandywine Township, and Willistown Township have a higher risk due to concentrations of their population being aged 65 or older while the City of Coatesville and Spring City Borough have census tracts where more than 20% of the population has a disability. Additionally, low-income communities often face challenges related to aging or poorly maintained infrastructure, which can increase the likelihood and duration of utility interruptions. Adequate mitigation efforts should focus on improving infrastructure resilience.

4.4. HAZARD VULNERABILITY SUMMARY

4.4.1. Methodology

Ranking hazards helps communities prioritize mitigation based on their vulnerabilities. A Risk Factor (RF) is a tool used to assess the degree of risk for identified hazards in a particular planning area. The RF aids local officials in ranking and prioritizing hazards that pose the most significant threats to the planning area using a mix of qualitative and quantitative data deemed important by the planning team and other stakeholders. The RF system relies mainly on historical data, local knowledge, consensus from the planning team, and information collected through development of the hazard profiles in **Section 4.3**. The RF approach produces numerical values to rank hazards against one another; the higher the RF value, the greater the hazard risk.

RF values are determined by assigning varying degrees of risk to five categories for each of the hazards profiled in the HMP Update: *probability, impact, spatial extent, warning time, and duration*. Each degree of risk was assigned a value from one to four. The weighting factor is shown in Table 4.4-1. To calculate the RF value for a given hazard, the assigned risk value for each category was multiplied by the weighting factor. The sum of all five categories equals the final RF value, as demonstrated in the following example equation:

Risk Factor Value = [(Probability x .30) + (Impact x .30) + (Spatial Extent x .20) + (Warning Time x .10) + (Duration x .10)]

Table 4.4-1 summarizes each of the five categories used for calculating a RF for each hazard. According to the weighting scheme applied, the highest possible RF value is 4.0.

Table 4.4-1 Summary of Risk Factor Approach Used to Rank Hazard Risk

RISK ASSESSMENT CATEGORY	DEGREE OF RISK			WEIGHT VALUE
	LEVEL	CRITERIA	INDEX	
PROBABILITY: WHAT IS THE LIKELIHOOD OF A HAZARD EVENT OCCURRING IN A GIVEN YEAR?	UNLIKELY	LESS THAN 1% ANNUAL PROBABILITY.	1	30%
	POSSIBLE	BETWEEN 1% AND 49.9% ANNUAL PROBABILITY.	2	
	LIKELY	BETWEEN 50% AND 90% ANNUAL PROBABILITY.	3	
	HIGHLY LIKELY	GREATER THAN 90% ANNUAL PROBABILITY.	4	
IMPACT: IN TERMS OF INJURIES,	MINOR	VERY FEW INJURIES, IF ANY. ONLY MINOR PROPERTY DAMAGE AND MINIMAL DISRUPTION ON QUALITY	1	30%

Table 4.4-1 Summary of Risk Factor Approach Used to Rank Hazard Risk

RISK ASSESSMENT CATEGORY	DEGREE OF RISK				WEIGHT VALUE
	LEVEL	CRITERIA		INDEX	
DAMAGE, OR DEATH, WOULD YOU ANTICIPATE IMPACTS TO BE MINOR, LIMITED, CRITICAL, OR CATASTROPHIC WHEN A SIGNIFICANT HAZARD EVENT OCCURS?		OF LIFE. TEMPORARY SHUTDOWN OF CRITICAL FACILITIES.			
	LIMITED	MINOR INJURIES ONLY. MORE THAN 10% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE DAY.		2	
	CRITICAL	MULTIPLE DEATHS AND INJURIES POSSIBLE. MORE THAN 25% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE WEEK.		3	
	CATASTROPHIC	HIGH NUMBER OF DEATHS AND INJURIES POSSIBLE. MORE THAN 50% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR 30 DAYS OR MORE.		4	
SPATIAL EXTENT: HOW LARGE OF AN AREA COULD BE IMPACTED BY A HAZARD EVENT? ARE IMPACTS LOCALIZED OR REGIONAL?	NEGLIGIBLE	LESS THAN 1% OF AREA AFFECTED.		1	20%
	SMALL	BETWEEN 1% AND 10.9% OF AREA AFFECTED.		2	
	MODERATE	BETWEEN 11% AND 25% OF AREA AFFECTED.		3	
	LARGE	GREATER THAN 25% OF AREA AFFECTED.		4	
WARNING TIME: IS THERE USUALLY SOME LEAD TIME ASSOCIATED WITH THE	> 24 HOURS	SELF-DEFINED	NOTE: LEVELS OF WARING TIME AND CRITERIA THAT DEFINE THEM MAY BE	1	10%
	12 TO 24 HOURS	SELF-DEFINED		2	
	6 TO 12 HOURS	SELF-DEFINED		3	
	< 6 HOURS	SELF-DEFINED		4	

Table 4.4-1 Summary of Risk Factor Approach Used to Rank Hazard Risk

RISK ASSESSMENT CATEGORY	DEGREE OF RISK				WEIGHT VALUE
	LEVEL	CRITERIA		INDEX	
HAZARD EVENT? HAVE WARNING MEASURES BEEN IMPLEMENTED?			ADJUSTED BASED ON HAZARD ADDRESSED.		
DURATION: HOW LONG DOES THE HAZARD EVENT USUALLY LAST?	< 6 HOURS	SELF-DEFINED	NOTE: LEVELS OF DURATION TIME AND CRITERIA THAT DEFINE THEM MAY BE ADJUSTED BASED ON HAZARD ADDRESSED.	1	10%
	< 24 HOURS	SELF-DEFINED		2	
	< 1 WEEK	SELF-DEFINED		3	
	> 1 WEEK	SELF-DEFINED		4	
CLIMATE CHANGE: HOW WILL CLIMATE CHANGE IMPACT THE OTHER 5 RATINGS FOR THE HAZARD?	NEGATIVE IMPACT	EXPECTED TO INCREASE RISKS.		⬆	N/A
	POTENTIAL NEGATIVE	POTENTIAL TO INCREASE RISKS.		⟷	
	LITTLE TO NO IMPACT	NO IMPACT OR SMALL RISK INCREASE THROUGH INDIRECT MEANS.		⟷	
	POSITIVE IMPACT	RISK EXPECTED TO DECREASE.		⬇	

4.4.2. Ranking Results

Using the methodology described in **Section 4.4.1**, Table 4.4-2 lists the Countywide RF calculated for each of the 21 potential hazards identified in the 2026 HMP Update. Hazards identified as *high* risk have risk factors greater than 2.5. Risk Factors ranging from 2.0 to 2.4 were deemed *moderate* risk hazards. Hazards with Risk Factors 1.9 and less are considered *low* risk. Based on these results, Chester County has 14 high risk hazards, six moderate risk hazards, and one low risk hazards.

The RF and rankings have remained generally consistent with those identified in the 2021 Plan Update, with a few notable updates. Extreme temperatures, urban fire and explosion, transportation incidents, and nuclear incidents are now considered high risk hazards. The probability and impact ratings increased for extreme temperatures, urban fire and explosion,

and transportation incidents, driving their ranking changes. Nuclear incidents were previously listed as a low-risk hazard; however, the potential impacts, spatial extent, and duration ratings were increased as there are several municipalities within the 10-mile Plume Exposure Pathway EPZs and every municipality in Chester County is within an Ingestion Exposure Pathway EPZ. Utility interruption and flood, flash flood, and ice jams are still the highest-risk hazards, which is reflective of feedback received from speaking with municipalities, stakeholders, and the public. Dam failure was updated from low-risk to moderate risk due to an increased impact rating, driven by this plan's more in-depth look at High-Hazard Potential Dams and the impact they can have.

A risk assessment result for the entire county does not mean that each municipality is at the same amount of risk to each hazard. Table 4.4-3 shows the different municipalities in Chester County and whether their risk is greater than (>), less than (<), or equal to (=) the risk factor assigned to the county as a whole. This table was developed based on the Risk Assessment findings and municipal input from the "Evaluation of Identified Hazards and Risk" and "Jurisdictional Hazard Risk Ranking" forms distributed to each municipality. In addition, results from each hazard's Vulnerability Assessment sections were considered. As previously stated, DARA's risk is similar to that of East Caln Township, where the WWTP is located. Some changes have been made to reflect the nature of the authority's service.

Table 4.4-2 Ranking of Hazard Types Based on Risk Factor Methodology

RISK	HAZARD NATURAL (N) OR MAN-MADE (M)	RISK ASSESSMENT CATEGORY						RF
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION	CLIMATE CHANGE	
HIGH	Utility Interruption (M)	4	3	4	4	2	↑	3.5
	Flood, Flash Flood, Ice Jam (N)	4	4	2	3	3	↑	3.4
	Pandemic and Infectious Disease (N)	2	4	4	1	4	↔	3.1
	Drought (N)	3	2	4	1	4	↑	2.8
	Transportation Incidents (M)	4	3	1	4	1	↔	2.8
	Urban Fire and Explosion (M)	4	3	1	4	1	↔	2.8
	Substance Use Disorder (M)	4	3	1	4	1	↔	2.8
	Extreme Temperature (N)	3	2	4	2	2	↑	2.7
	Tornado, Windstorm (N)	3	3	2	4	1	↔	2.7
	Winter Storm (N)	3	2	4	1	2	↔	2.6
	Nuclear Incidents (M)	1	3	3	4	4	↔	2.6
	Environmental Hazards (EH) - Hazardous Materials Release (M)	3	3	1	4	2	↔	2.6
	Wildfire (N)	2	3	2	4	2	↑	2.5
	Invasive Species (N)	4	1	3	1	3	↑	2.5
MODERATE	Hurricane, Tropical Storm, Nor'easter (N)	2	2	4	1	3	↔	2.4
	Terrorism (M)	1	3	2	4	2	↔	2.2
	Dam Failure (M)	1	3	2	4	2	↑	2.2
	Earthquake (N)	1	3	2	4	1	↔	2.1

Table 4.4-2 Ranking of Hazard Types Based on Risk Factor Methodology

RISK	HAZARD NATURAL (N) OR MAN-MADE (M)	RISK ASSESSMENT CATEGORY						RF
		PROBABILITY	IMPACT	SPATIAL EXTENT	WARNING TIME	DURATION	CLIMATE CHANGE	
	Environmental Hazards (EH) – Gas and Liquid Pipelines	2	2	1	4	3	⟺	2.1
	Radon Exposure (N)	2	3	1	1	2	⟺	2
LOW	Cyber-Terrorism (M)	2	1	1	4	1	⟺	1.6

Table 4.4-3 Jurisdictional Risk Evaluation

MUNICIPALITY	Utility Interruption (M)	Flood, Flash Flood, Ice Jam (N)	Pandemic and Infectious Disease (N)	Drought (N)	Transportation Incidents (M)	Urban Fire and Explosion (M)	Substance Use Disorder (M)	Extreme Temperature (N)	Tornado, Windstorm (N)	Winter Storm (N)	Nuclear Incidents (M)	Environmental Hazards (EH) - Hazardous Materials Release (M)	Wildfire (N)	Invasive Species (N)	Hurricane, Tropical Storm, Nor' easter (N)	Terrorism (M)	Dam Failure (M)	Earthquake (N)	Environmental Hazards (EH) – Gas and Liquid Pipelines	Radon Exposure (N)	Cyber-Terrorism (M)
Atglen Borough	=	=	=	=	>	=	=	=	=	=	=	<	<	=	=	=	>	=	=	>	=
Avondale Borough	=	=	=	=	>	=	=	=	=	=	=	>	<	=	=	=	>	=	<	=	=
Birmingham Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
Caln Township	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	>	=	=	>	=
Charlestown Township	=	=	=	=	=	=	=	=	=	=	>	<	=	=	=	=	=	=	=	=	=
Coatesville City	=	=	>	=	>	=	>	=	=	=	=	>	=	=	=	>	=	=	<	>	=
Downingtown Borough	=	=	=	=	>	=	>	=	=	=	=	>	<	=	=	>	>	=	=	=	=
East Bradford Township	=	=	=	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	=	=
East Brandywine Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	>	=	>	=	=
East Caln Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

Table 4.4-3 Jurisdictional Risk Evaluation

MUNICIPALITY	Utility Interruption (M)	Flood, Flash Flood, Ice Jam (N)	Pandemic and Infectious Disease (N)	Drought (N)	Transportation Incidents (M)	Urban Fire and Explosion (M)	Substance Use Disorder (M)	Extreme Temperature (N)	Tornado, Windstorm (N)	Winter Storm (N)	Nuclear Incidents (M)	Environmental Hazards (EH) - Hazardous Materials Release (M)	Wildfire (N)	Invasive Species (N)	Hurricane, Tropical Storm, Nor' easter (N)	Terrorism (M)	Dam Failure (M)	Earthquake (N)	Environmental Hazards (EH) – Gas and Liquid Pipelines	Radon Exposure (N)	Cyber-Terrorism (M)
East Coventry Township	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=
East Fallowfield Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
East Goshen Township	=	=	>	=	=	=	=	>	=	=	=	=	=	=	=	=	>	=	>	=	=
East Marlborough Township	=	=	=	=	=	=	=	=	=	=	=	<	=	=	=	=	>	=	=	=	=
East Nantmeal Township	=	=	>	=	=	=	=	>	=	=	>	<	=	>	=	=	>	=	=	=	=
East Nottingham Township	=	=	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	<	=	=
East Pikeland Township	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=
Easttown Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

Table 4.4-3 Jurisdictional Risk Evaluation

MUNICIPALITY	Utility Interruption (M)	Flood, Flash Flood, Ice Jam (N)	Pandemic and Infectious Disease (N)	Drought (N)	Transportation Incidents (M)	Urban Fire and Explosion (M)	Substance Use Disorder (M)	Extreme Temperature (N)	Tornado, Windstorm (N)	Winter Storm (N)	Nuclear Incidents (M)	Environmental Hazards (EH) - Hazardous Materials Release (M)	Wildfire (N)	Invasive Species (N)	Hurricane, Tropical Storm, Nor' easter (N)	Terrorism (M)	Dam Failure (M)	Earthquake (N)	Environmental Hazards (EH) – Gas and Liquid Pipelines	Radon Exposure (N)	Cyber-Terrorism (M)
East Vincent Township	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	=	=	>	=	=
East Whiteland Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
Elk Township	=	=	=	=	=	=	=	=	=	=	=	<	=	=	=	=	<	=	=	=	=
Elverson Borough	=	<	>	=	=	=	=	>	=	=	=	>	=	=	=	=	<	=	>	=	=
Franklin Township	=	=	=	=	=	=	=	=	=	=	=	<	=	=	=	=	<	=	=	=	=
Highland Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	>	=
Honey Brook Borough	=	<	>	=	=	=	=	>	=	=	=	=	<	=	=	=	<	=	<	=	=
Honey Brook Township	=	=	>	=	=	=	=	>	>	=	=	=	=	>	=	=	>	=	=	=	=
Kennett Township	=	=	>	=	>	=	=	>	=	=	=	<	<	=	=	=	=	=	=	=	=
Kennett Square Borough	=	=	=	=	=	=	=	=	=	=	=	<	=	=	=	=	<	=	=	=	=

Table 4.4-3 Jurisdictional Risk Evaluation

MUNICIPALITY	Utility Interruption (M)	Flood, Flash Flood, Ice Jam (N)	Pandemic and Infectious Disease (N)	Drought (N)	Transportation Incidents (M)	Urban Fire and Explosion (M)	Substance Use Disorder (M)	Extreme Temperature (N)	Tornado, Windstorm (N)	Winter Storm (N)	Nuclear Incidents (M)	Environmental Hazards (EH) - Hazardous Materials Release (M)	Wildfire (N)	Invasive Species (N)	Hurricane, Tropical Storm, Nor' easter (N)	Terrorism (M)	Dam Failure (M)	Earthquake (N)	Environmental Hazards (EH) – Gas and Liquid Pipelines	Radon Exposure (N)	Cyber-Terrorism (M)
London Britain Township	=	=	=	=	=	=	=	=	=	=	=	<	=	=	=	=	=	=	=	=	=
Londonderry Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	<	=	<	>	=
London Grove Township	=	=	=	=	=	=	=	=	=	=	=	<	=	=	=	=	=	=	<	=	=
Lower Oxford Township	=	=	=	=	=	=	=	=	=	=	=	<	=	=	=	=	=	=	=	=	=
Malvern Borough	=	=	=	=	>	=	=	=	=	=	=	=	<	=	=	=	=	=	=	=	=
Modena Borough	=	=	=	=	>	=	=	=	=	=	=	<	=	=	=	=	<	=	=	>	=
New Garden Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=
Newlin Township	=	=	>	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	>	=
New London Township	=	=	=	=	=	=	=	=	=	=	=	<	=	=	=	=	<	=	=	=	=

Table 4.4-3 Jurisdictional Risk Evaluation

MUNICIPALITY	Utility Interruption (M)	Flood, Flash Flood, Ice Jam (N)	Pandemic and Infectious Disease (N)	Drought (N)	Transportation Incidents (M)	Urban Fire and Explosion (M)	Substance Use Disorder (M)	Extreme Temperature (N)	Tornado, Windstorm (N)	Winter Storm (N)	Nuclear Incidents (M)	Environmental Hazards (EH) - Hazardous Materials Release (M)	Wildfire (N)	Invasive Species (N)	Hurricane, Tropical Storm, Nor' easter (N)	Terrorism (M)	Dam Failure (M)	Earthquake (N)	Environmental Hazards (EH) – Gas and Liquid Pipelines	Radon Exposure (N)	Cyber-Terrorism (M)
North Coventry Township	=	=	=	=	=	=	=	=	=	=	>	<	=	=	=	=	=	=	=	=	=
Oxford Borough	=	<	>	=	=	=	=	=	=	=	=	=	<	=	=	=	<	=	<	=	=
Parkesburg Borough	=	=	=	=	>	=	=	=	=	=	=	>	<	=	=	=	=	=	=	>	=
Penn Township	=	=	>	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	<	=	=
Pennsbury Township	=	=	=	=	=	=	=	=	=	=	=	<	=	=	=	=	=	=	=	=	=
Phoenixville Borough	=	=	>	=	>	=	>	=	=	=	>	<	=	=	=	>	<	=	=	=	=
Pocopson Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
Sadsbury Township	=	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	<	=	>	>	=
Schuylkill Township	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	>	=	=	=	=
South Coatesville Borough	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	<	>	=
South Coventry Township	=	=	=	=	=	=	=	=	=	=	>	<	=	=	=	=	=	=	=	=	=

Table 4.4-3 Jurisdictional Risk Evaluation

MUNICIPALITY	Utility Interruption (M)	Flood, Flash Flood, Ice Jam (N)	Pandemic and Infectious Disease (N)	Drought (N)	Transportation Incidents (M)	Urban Fire and Explosion (M)	Substance Use Disorder (M)	Extreme Temperature (N)	Tornado, Windstorm (N)	Winter Storm (N)	Nuclear Incidents (M)	Environmental Hazards (EH) - Hazardous Materials Release (M)	Wildfire (N)	Invasive Species (N)	Hurricane, Tropical Storm, Nor' easter (N)	Terrorism (M)	Dam Failure (M)	Earthquake (N)	Environmental Hazards (EH) – Gas and Liquid Pipelines	Radon Exposure (N)	Cyber-Terrorism (M)
Spring City Borough	=	=	=	=	=	=	=	=	=	=	>	<	<	=	=	=	<	=	<	=	=
Thornbury Township	=	=	=	=	=	=	=	=	=	=	=	<	=	=	=	=	<	=	=	=	=
Tredyffrin Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=
Upper Oxford Township	=	=	=	=	=	=	=	=	=	=	=	<	=	=	=	=	=	=	=	=	=
Upper Uwchlan Township	=	=	=	=	=	=	=	=	=	=	>	=	=	>	=	=	>	=	=	=	=
Uwchlan Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	>	=	>	=	=
Valley Township	=	=	=	=	>	=	=	=	=	=	=	>	=	=	=	=	=	=	=	>	=
Wallace Township	=	=	=	=	=	=	=	=	=	=	=	<	=	=	=	=	>	=	=	=	=
Warwick Township	=	=	>	=	=	=	=	>	=	=	>	=	=	>	=	=	=	=	=	=	=
West Bradford Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

Table 4.4-3 Jurisdictional Risk Evaluation

MUNICIPALITY	Utility Interruption (M)	Flood, Flash Flood, Ice Jam (N)	Pandemic and Infectious Disease (N)	Drought (N)	Transportation Incidents (M)	Urban Fire and Explosion (M)	Substance Use Disorder (M)	Extreme Temperature (N)	Tornado, Windstorm (N)	Winter Storm (N)	Nuclear Incidents (M)	Environmental Hazards (EH) - Hazardous Materials Release (M)	Wildfire (N)	Invasive Species (N)	Hurricane, Tropical Storm, Nor' easter (N)	Terrorism (M)	Dam Failure (M)	Earthquake (N)	Environmental Hazards (EH) – Gas and Liquid Pipelines	Radon Exposure (N)	Cyber-Terrorism (M)
West Brandywine Township	=	=	>	=	=	=	=	>	=	=	=	=	=	=	=	=	<	=	>	>	=
West Caln Township	=	=	=	=	=	=	=	=	>	=	=	=	=	=	=	=	>	=	=	>	=
West Chester Borough	=	=	>	=	>	=	>	=	=	=	=	>	<	=	=	>	<	=	=	=	=
West Fallowfield Township	=	=	>	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	>	=
West Goshen Township	=	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	>	=	=	=	=
West Grove Borough	=	<	=	=	>	=	=	=	=	=	=	<	<	=	=	=	<	=	<	=	=
West Marlborough Township	=	=	>	=	=	=	=	>	=	=	=	<	=	=	=	=	=	=	<	=	=
West Nantmeal Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	>	=	=

Table 4.4-3 Jurisdictional Risk Evaluation

MUNICIPALITY	Utility Interruption (M)	Flood, Flash Flood, Ice Jam (N)	Pandemic and Infectious Disease (N)	Drought (N)	Transportation Incidents (M)	Urban Fire and Explosion (M)	Substance Use Disorder (M)	Extreme Temperature (N)	Tornado, Windstorm (N)	Winter Storm (N)	Nuclear Incidents (M)	Environmental Hazards (EH) - Hazardous Materials Release (M)	Wildfire (N)	Invasive Species (N)	Hurricane, Tropical Storm, Nor' easter (N)	Terrorism (M)	Dam Failure (M)	Earthquake (N)	Environmental Hazards (EH) – Gas and Liquid Pipelines	Radon Exposure (N)	Cyber-Terrorism (M)
West Nottingham Township	=	=	=	=	=	=	=	=	>	=	>	<	=	>	=	=	>	=	=	=	=
West Pikeland Township	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=
West Sadsbury Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	<	=	=	>	=
West Vincent Township	=	=	=	=	=	=	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=
West Whiteland Township	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	>	=	=
Westtown Township	=	=	=	=	=	=	=	=	=	=	=	<	=	=	=	=	=	=	=	=	=
Willistown Township	=	=	>	=	=	=	=	>	=	=	=	=	=	=	=	=	=	=	=	=	=
Downingtown Area Regional Authority	=	=	<	=	<	=	<	<	<	<	=	=	=	<	>	=	=	=	=	<	=

4.4.3. Potential Loss Estimates

Potential loss estimates for hazard events help a community understand the monetary value of what might be at stake during a hazard event. Estimates are considered *potential* in that they generally represent losses that could occur in a countywide hazard scenario. In events that are localized, losses may be lower, while regional events could yield higher losses.

Potential loss estimates have four basic components, including:

- Replacement Value: Current cost of returning an asset to its pre-damaged condition, using present-day cost of labor and materials.
- Content Loss: Value of building's contents, typically measured as a percentage of the building replacement value.
- Functional Loss: The value of a building's use or function that would be lost if it were damaged or closed.
- Displacement Cost: The dollar amount required for relocation of the function (business or service) to another structure following a hazard event.

Loss estimates provided in this section fall into three broad categories: historical losses, current-condition losses, and predictive losses. Historical loss estimates come from two primary sources: the NCEI storm events database and the NFIP. Current condition losses come from geospatial analysis of the value of buildings identified as vulnerable in the vulnerability assessment sections of hazard profiles for floods, landslides, subsidence, wildfires, dam failure, environmental hazards, and transportation incidents. Finally, predictive losses were generated using Hazus-MH, version 6.1. Historical losses are limited to property damage, injuries, and fatalities, but they can provide some indication of the type and magnitude of losses possible. The current-condition losses consider replacement value and exposure value. Hazus modeling considers all four components and provides the most comprehensive description of potential losses.

4.4.3.1. Historic Losses

Historical losses were available for drought, flooding, hurricanes/tropical storms/nor'easters (coastal storms), tornadoes/windstorms, winter storms, and wildfires from NCEI and the NFIP. NCEI reports include property and crop damage estimates with their incident reports. However, as noted in the hazard profiles, many of the events had no damage reported. This does not mean that there was no damage; rather, it indicates that no damage was reported to NCEI. As a result, consider these low-end estimates of losses. The flood and flash flood events reported in NCEI list more than $53.3 million in property damage and $1 million in crop damage since 2000. There is $50,000 in damage reported to NCEI due to winter weather in the same period, although for most events, damages were not provided. Windstorm and tornado events resulted in over $905,000 in property damages and $25,000 in crop losses according to the NCEI. There were no damages, deaths, or casualties reported for extreme temperature, coastal storms, or wildfire events in the NCEI database.

The final set of historic losses relates solely to prior flood losses and comes from the NFIP's records of claims paid. Table 4.4-4 shows the total amount of claims paid in each municipality

according to FEMA and PEMA's records. There has been a total of $21.5 million in paid claims. Any municipality not included in the table has no reported losses or claims to the NFIP.

Table 4.4-4 Historic NFIP Claims by Municipality

MUNICIPALITY	LOSSES	BUILDING PAYMENTS	CONTENTS PAYMENTS	TOTAL PAYMENTS
AVONDALE, BOROUGH OF (421473)	34	$3,155,886.31	$118,899.84	$3,274,786.15
BIRMINGHAM, TOWNSHIP OF (421474)	4	$588,244.85	$28,200.00	$616,444.85
CALN, TOWNSHIP OF (422247)	11	$131,453.08	$21,676.28	$153,129.36
CHARLESTOWN, TOWNSHIP OF (421475)	3	$15,553.19	$2,094.54	$17,647.73
COATESVILLE, CITY OF (420274)	11	$87,896.06	$13,329.71	$101,225.77
DOWNINGTOWN, BOROUGH OF (420275)	194	$2,730,734.70	$207,507.61	$2,938,242.31
EAST BRADFORD TOWNSHIP OF (420276)	99	$1,205,123.87	$476,358.83	$1,681,482.70
EAST CALN, TOWNSHIP OF (421477)	8	$358,101.11	$412,353.37	$770,454.48
EAST COVENTRY, TOWNSHIP OF (421478)	13	$396,377.75	$151,141.75	$547,519.50
EAST GOSHEN, TOWNSHIP OF (420277)	2	$75,801.84	$0.00	$75,801.84
EAST PIKELAND, TOWNSHIP OF (421483)	6	$26,674.63	$291.43	$26,966.06
EAST VINCENT, TOWNSHIP OF (420278)	11	$266,919.14	$19,363.42	$286,282.56
EAST WHITELAND, TOWNSHIP OF (420279)	10	$101,708.10	$0.00	$101,708.10
KENNETT SQUARE, BOROUGH OF (420280)	5	$192,143.88	$7,281.96	$199,425.84
KENNETT, TOWNSHIP OF (422586)	15	$242,966.37	$31,000.00	$273,966.37
MODENA, BOROUGH OF (420282)	5	$41,809.04	$230,524.97	$272,334.01
NEWLIN, TOWNSHIP OF (421486)	2	$8,018.51	$1,545.00	$9,563.51
NORTH COVENTRY, TOWNSHIP OF (420283)	39	$371,200.87	$32,176.51	$403,377.38
PENNSBURY, TOWNSHIP OF (420285)	4	$158,576.28	$16,611.97	$175,188.25
PHOENIXVILLE, BOROUGH OF (420287)	5	$342,185.00	$200,000.00	$542,185.00
POCOPSON, TOWNSHIP OF (420286)	87	$1,876,208.36	$412,144.62	$2,288,352.98
SCHUYLKILL, TOWNSHIP OF (421489)	6	$256,468.04	$6,368.05	$262,836.09
THORNBURY, TOWNSHIP OF (420290)	2	$10,440.81	$0.00	$10,440.81
TREDYFFRIN, TOWNSHIP OF (420291)	44	$1,438,874.06	$303,565.23	$1,742,439.29
UPPER UWCHLAN, TWP OF (421491)	7	$112,589.49	$40,725.89	$153,315.38
UWCHLAN, TOWNSHIP OF (421492)	2	$41,123.05	$10,600.00	$51,723.05
VALLEY, TOWNSHIP OF (421206)	9	$93,135.97	$247,407.73	$340,543.70
WEST BRADFORD, TOWNSHIP OF (421495)	3	$36,194.69	$0.00	$36,194.69
WEST CHESTER, BOROUGH OF (420292)	62	$546,039.44	$2,811,144.92	$3,357,184.36
WEST GOSHEN, TOWNSHIP OF (420293)	8	$81,929.53	$5,882.75	$87,812.28

Table 4.4-4 Historic NFIP Claims by Municipality

MUNICIPALITY	LOSSES	BUILDING PAYMENTS	CONTENTS PAYMENTS	TOTAL PAYMENTS
WEST WHITELAND, TOWNSHIP OF (420295)	34	$586,041.86	$82,167.65	$668,209.51
WESTTOWN, TOWNSHIP OF (420294)	2	$1,235.97	$9,395.95	$10,631.92
WILLISTOWN, TOWNSHIP OF (422282)	2	$11,960.93	$0.00	$11,960.93
TOTAL	749	$15,589,616.78	$5,899,759.98	$21,489,376.76

4.4.3.2. Current Condition Losses

The current condition losses were derived using the total assessed value, including land and building values, of properties. Table 4.4-5 details the total assessed values by municipality and type of land. Please note, the data received from Chester County's GIS portal attributed values for buildings and land by parcels. If there was more than one structure on one parcel, then the values would be increased by the number of structures on the parcel; this may inflate the total assessed value, though this was not a common occurrence. The table shown is the full potential dollar amount of loss, though exposure and magnitude of loss will depend on the hazard and structure-specific characteristics.

Table 4.4-5 Chester County Tax Assessed Building Values

MUNICIPALITY	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
Atglen Borough	$695,690	$1,501,695	$2,058,760	$0	$285,380	$49,777,858	$0	$0	**$54,319,383**
Avondale Borough	$2,040,240	$3,963,320	$3,032,860	$0	$715,500	$36,503,095	$0	$89,640	**$46,344,655**
Birmingham Township	$0	$28,985,220	$1,364,760	$2,015,150	$0	$269,554,240	$0	$46,570	**$301,965,940**
Caln Township	$18,743,540	$30,489,777	$41,480,515	$416,940	$3,932,730	$574,849,825	$0	$150,750	**$670,064,077**
Charlestown Township	$0	$2,431,710	$6,335,860	$3,778,650	$2,844,000	$334,838,730	$0	$389,120	**$350,618,070**
Coatesville City	$12,965,943	$15,546,400	$11,013,980	$0	$3,535,350	$319,925,850	$0	$0	**$362,987,523**
Downingtown Borough	$40,451,080	$22,484,370	$27,000,790	$0	$341,180	$283,386,250	$0	$35,890	**$373,699,560**
East Bradford Township	$245,040	$1,283,740	$6,841,070	$1,887,920	$0	$567,001,739	$0	$561,880	**$577,821,389**
East Brandywine Township	$0	$3,772,600	$759,700	$1,871,110	$0	$483,393,224	$0	$0	**$489,796,634**
East Caln Township	$11,139,000	$29,948,490	$7,582,570	$0	$2,703,090	$229,823,620	$0	$92,780	**$281,289,550**
East Coventry Township	$0	$10,182,870	$8,457,970	$1,364,220	$1,961,250	$280,534,220	$0	$150,080	**$302,650,610**
East Fallowfield Township	$140,230	$3,351,140	$4,005,340	$2,653,330	$0	$370,074,688	$0	$128,180	**$380,352,908**
East Goshen Township	$96,492,580	$59,621,991	$16,874,640	$1,500,780	$15,447,440	$899,512,250	$0	$89,080	**$1,089,538,761**
East Marlborough Township	$0	$50,053,880	$9,531,960	$5,574,780	$2,886,390	$427,463,110	$0	$18,960	**$495,529,080**
East Nantmeal Township	$301,360	$3,390,740	$9,789,960	$13,301,825	$0	$119,427,600	$0	$134,080	**$146,345,565**
East Nottingham Township	$0	$9,107,460	$34,783,450	$7,205,880	$1,001,660	$351,703,820	$0	$13,510	**$403,815,780**
East Pikeland Township	$7,844,630	$19,227,705	$3,106,460	$319,070	$2,137,500	$399,485,997	$0	$178,430	**$432,299,792**

Table 4.4-5 Chester County Tax Assessed Building Values

MUNICIPALITY	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
East Vincent Township	$3,043,000	$8,044,660	$48,401,330	$2,116,410	$3,536,070	$296,741,900	$0	$627,100	**$362,510,470**
East Whiteland Township	$31,968,200	$107,022,620	$2,961,350	$0	$1,436,230	$508,054,658	$0	$653,120	**$652,096,178**
Easttown Township	$7,334,180	$4,878,540	$7,635,660	$5,830,010	$0	$788,051,129	$0	$83,110	**$813,812,629**
Elk Township	$0	$131,840	$918,050	$4,873,450	$0	$77,774,140	$0	$0	**$83,697,480**
Elverson Borough	$0	$2,735,210	$779,570	$0	$0	$82,272,650	$0	$0	**$85,787,430**
Franklin Township	$0	$936,810	$476,670	$1,867,590	$0	$202,056,970	$0	$60,280	**$205,398,320**
Highland Township	$0	$228,920	$12,502,770	$8,550,160	$0	$68,216,730	$0	$289,000	**$89,787,580**
Honey Brook Borough	$795,690	$2,210,500	$2,215,610	$564,000	$0	$61,112,940	$0	$0	**$66,898,740**
Honey Brook Township	$3,767,690	$14,745,640	$26,828,050	$13,324,730	$3,806,530	$269,897,770	$0	$37,090	**$332,407,500**
Kennett Square Borough	$0	$374,389	$3,861,260	$0	$0	$184,085,090	$0	$0	**$188,320,739**
Kennett Township	$32,369,060	$21,400,730	$10,684,120	$3,701,390	$7,101,580	$561,100,555	$0	$143,180	**$636,500,615**
London Britain Township	$109,220	$664,840	$7,579,360	$2,797,030	$0	$176,901,085	$0	$0	**$188,051,535**
London Grove Township	$0	$16,681,730	$37,281,815	$5,393,960	$0	$335,474,241	$0	$33,900	**$394,865,646**
Londonderry Township	$0	$3,290,745	$360,860	$4,015,790	$874,650	$121,172,070	$0	$27,180	**$129,741,295**
Lower Oxford Township	$0	$3,765,680	$1,278,610	$3,787,500	$1,850,000	$167,130,240	$0	$39,950	**$177,851,980**
Malvern Borough	$12,154,030	$10,207,210	$11,491,270	$0	$4,085,660	$108,127,110	$0	$2,220	**$146,067,500**
Modena Borough	$0	$0	$0	$0	$0	$25,610,450	$0	$0	**$25,610,450**

Table 4.4-5 Chester County Tax Assessed Building Values

MUNICIPALITY	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
New Garden Township	$4,136,280	$44,616,339	$29,894,656	$3,148,630	$4,413,230	$526,786,898	$0	$164,240	**$613,160,273**
New London Township	$0	$956,250	$19,744,920	$2,981,750	$0	$286,678,100	$0	$14,880	**$310,375,900**
Newlin Township	$0	$158,050	$524,970	$7,872,670	$0	$77,322,970	$0	$0	**$85,878,660**
North Coventry Township	$124,770	$2,488,430	$2,271,290	$1,844,280	$72,510	$367,033,350	$0	$81,200	**$373,915,830**
Oxford Borough	$6,854,300	$32,716,271	$50,773,030	$70,700	$400,580	$147,866,778	$0	$68,720	**$238,750,379**
Parkesburg Borough	$1,133,430	$11,603,834	$4,010,890	$0	$0	$128,061,080	$0	$0	**$144,809,234**
Penn Township	$521,790	$14,168,760	$17,404,450	$1,185,020	$0	$245,638,022	$0	$55,220	**$278,973,262**
Pennsbury Township	$0	$4,547,570	$4,968,630	$5,959,530	$0	$230,274,660	$0	$29,010	**$245,779,400**
Phoenixville Borough	$38,901,640	$50,106,710	$23,708,140	$65,970	$346,650	$648,167,255	$0	$30,710	**$761,327,075**
Pocopson Township	$0	$2,664,230	$26,720,840	$1,828,410	$1,130,350	$228,793,280	$0	$72,150	**$261,209,260**
Sadsbury Township	$1,700,750	$19,028,210	$8,110,230	$678,650	$833,380	$199,731,750	$0	$82,460	**$230,165,430**
Schuylkill Township	$444,919	$24,061,640	$69,906,790	$598,410	$2,529,780	$473,677,494	$0	$301,070	**$571,520,103**
South Coatesville Borough	$2,610,000	$931,060	$1,359,830	$0	$0	$68,819,280	$0	$256,800	**$73,976,970**
South Coventry Township	$0	$8,625,240	$2,683,700	$2,277,900	$0	$133,801,880	$0	$56,470	**$147,445,190**
Spring City Borough	$7,877,500	$5,293,870	$3,426,820	$0	$1,158,970	$134,159,730	$0	$0	**$151,916,890**
Thornbury Township	$18,981,000	$10,118,920	$28,906,100	$3,921,100	$0	$256,473,289	$0	$2,610	**$318,403,019**
Tredyffrin Township	$8,457,020	$157,657,320	$114,785,260	$1,613,150	$11,986,450	$1,464,143,373	$0	$690,870	**$1,759,333,443**

Table 4.4-5 Chester County Tax Assessed Building Values

MUNICIPALITY	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
Upper Oxford Township	$0	$709,050	$343,640	$2,400,870	$0	$119,002,320	$0	$0	**$122,455,880**
Upper Uwchlan Township	$0	$11,915,460	$19,358,830	$407,580	$135,000	$697,499,635	$0	$155,690	**$729,472,195**
Uwchlan Township	$6,642,000	$108,919,350	$75,818,070	$753,260	$18,257,570	$889,473,560	$0	$539,900	**$1,100,403,710**
Valley Township	$1,049,170	$30,466,040	$11,957,381	$451,480	$0	$338,354,911	$0	$8,390	**$382,287,372**
Wallace Township	$390,000	$945,660	$10,406,110	$4,292,700	$0	$224,707,191	$0	$188,020	**$240,929,681**
Warwick Township	$452,750	$3,515,200	$6,834,150	$9,004,580	$0	$149,954,975	$0	$0	**$169,761,655**
West Bradford Township	$150,550	$5,775,080	$11,844,980	$5,220,640	$0	$716,933,589	$0	$579,230	**$740,504,069**
West Brandywine Township	$151,300	$8,455,660	$21,754,110	$3,269,820	$0	$355,758,651	$0	$291,900	**$389,681,441**
West Caln Township	$200,000	$11,166,798	$9,887,990	$5,504,590	$825,730	$369,507,160	$0	$1,496,870	**$398,589,138**
West Chester Borough	$9,092,070	$3,532,530	$162,216,750	$0	$0	$464,576,900	$0	$0	**$639,418,250**
West Fallowfield Township	$0	$2,848,170	$4,188,730	$4,690,880	$0	$106,973,300	$0	$431,550	**$119,132,630**
West Goshen Township	$42,397,760	$200,799,613	$72,920,430	$0	$27,683,720	$1,040,718,687	$0	$63,620	**$1,384,583,830**
West Grove Borough	$335,780	$477,510	$48,780	$0	$0	$94,774,660	$0	$0	**$95,636,730**
West Marlborough Township	$0	$1,373,830	$262,530	$6,625,440	$185,950	$42,557,810	$0	$0	**$51,005,560**
West Nantmeal Township	$237,170	$2,255,990	$1,371,450	$5,875,760	$0	$108,632,245	$0	$0	**$118,372,615**

Table 4.4-5 Chester County Tax Assessed Building Values

MUNICIPALITY	APARTMENT	COMMERCIAL	EXEMPT	FARM	INDUSTRIAL	RESIDENTIAL	UNKNOWN	UTILITY	TOTAL
West Nottingham Township	$0	$553,410	$162,330	$647,510	$0	$102,239,480	$0	$6,330	**$103,609,060**
West Pikeland Township	$0	$2,159,730	$1,283,410	$2,915,130	$0	$264,679,430	$0	$93,070	**$271,130,770**
West Sadsbury Township	$135,000	$21,958,660	$4,668,350	$5,841,645	$4,790,430	$99,363,198	$0	$109,890	**$136,867,173**
West Vincent Township	$0	$9,765,940	$6,247,760	$7,129,220	$0	$328,310,300	$0	$0	**$351,453,220**
West Whiteland Township	$62,267,070	$114,462,595	$49,232,070	$0	$4,425,340	$817,898,540	$0	$508,780	**$1,048,794,395**
Westtown Township	$0	$13,579,610	$111,466,640	$592,800	$0	$443,325,450	$0	$0	**$568,964,500**
Willistown Township	$420,000	$7,091,710	$30,821,380	$33,932,165	$670,450	$724,239,560	$0	$0	**$797,175,265**
TOTAL	**$498,264,422**	**$1,445,133,472**	**$1,391,573,417**	**$232,313,915**	**$140,328,280**	**$24,147,946,585**	**$0**	**$10,454,730**	$27,866,014,821

4.4.3.3. Predictive Losses

This 2026 Plan Update employed an enhanced Hazus analysis for floods. As opposed to basic analysis using only default data, enhanced analysis incorporates both up-to-date and specific data for inclusion in the hazard models. The enhanced data incorporated into this HMP include:

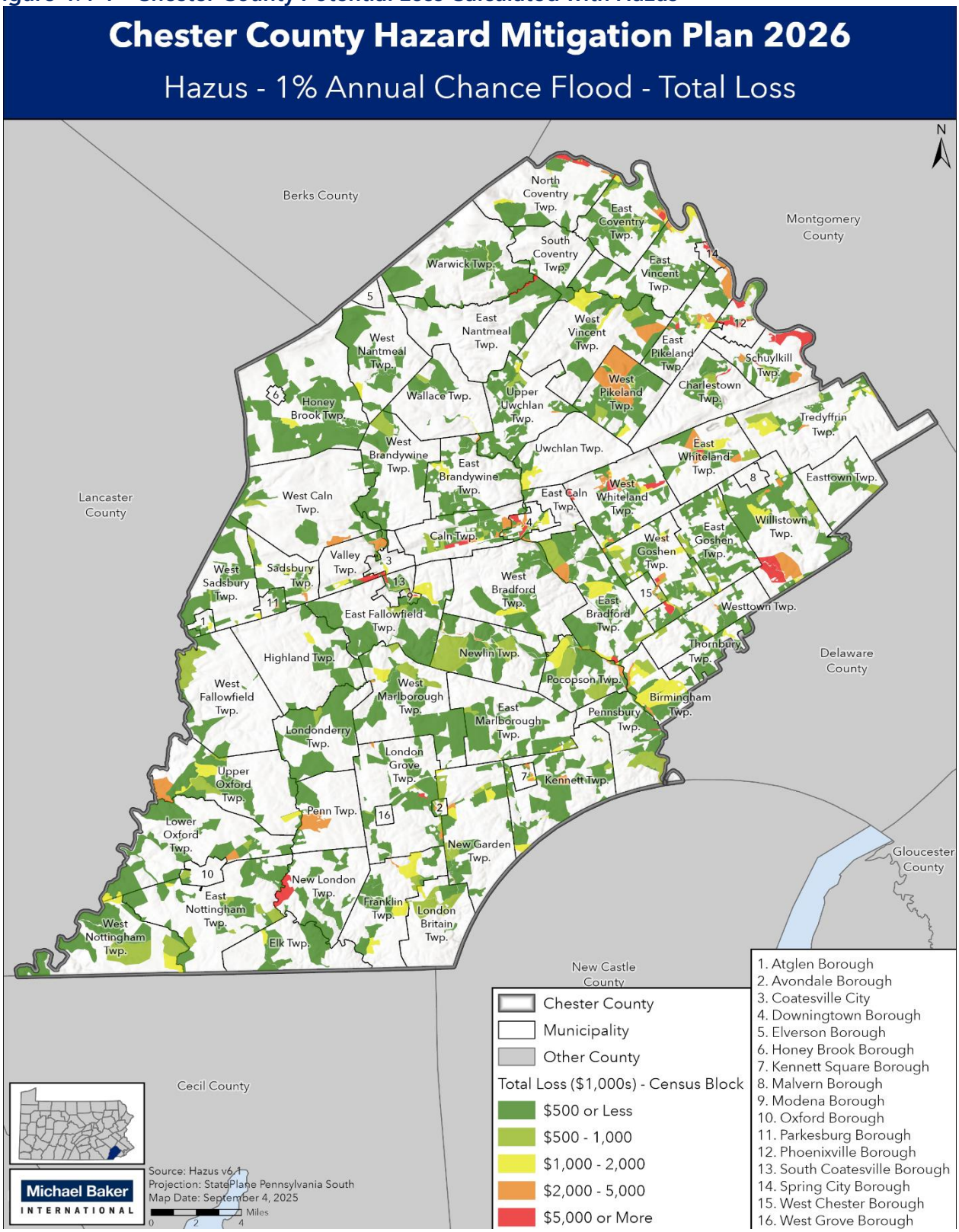
- Demographic data from the 2020 Census.
- Updated critical facilities data from the county.
- Dasymetric Census blocks to better attribute areas of population geographically within the block.
- A user-delineated 100-year depth grid derived for Chester County from the effective FIRM data.

For more details on the Hazus methodology used and additional results reports, see **Appendix F – Hazus Methodology and Results Report.**

Using these datasets in Hazus-MH Version 6.1, total economic losses from a 1-percent-annual-chance flood in Chester County are estimated at $1.6 billion. Direct building losses are about 18% of the total loss, with content losses at about 32% and inventory losses at 5%. The total building losses are evenly distributed amongst residential, commercial, industrial, and other building types. As for business interruptions, relocation costs are about 5%, income loss at 11%, rental income loss at 2%, and wage losses at 27%, with commercial property types having the highest loss percentage in this category. Of the critical facilities, no facilities are expected to have substantial damage, and only one school is expected to have moderate damage.

Figure 4.4-1 shows the distribution of building-related losses by census block across Chester County. The areas with the highest potential losses are mostly scattered around the county, although many of the municipalities that are traversed by US Route 30 have census blocks with high predicted losses, along with those that border the Schuylkill River.

Figure 4.4-1 Chester County Potential Loss Calculated with Hazus



4.4.4. Future Development and Vulnerability

Risk and vulnerability to natural and human-made hazard events are not static. Risk will increase or decrease as counties and municipalities see changes in population as well as changes in land use and development.

Population change is perhaps the most significant indicator of future changes in vulnerability. As discussed in **Section 2.2**, the total population in Chester County is estimated to have increased by approximately seven percent between 2014 and 2023 (see Table 2.2-1). Areas of higher density, in the larger municipalities and growing municipalities, face increased vulnerability and increased exposed structures with most hazard events. Larger populations result in increased vulnerability to hazards such as wildfires, floods, and winter storms as more people will be impacted.

Countywide populations are expected to continue increasing in the future. Table 4.4-6 provides population forecasts for each municipality in Chester County and for the county as a whole between 2025 and 2050, developed by the Delaware Valley Regional Planning Commission. The population of the entire county is estimated to be 634,011 by the year 2050, which represents a net population increase of 84,227 people (15.3%) in a 25-year period. As shown in the table, all but one municipality (West Marlborough Township) in Chester County are projected to see an increase in population. DVRPC projects West Whiteland Township and Phoenixville Borough will add the most residents, with both adding over 5,000 people. Modena Borough is expected to more than double its population from 348 people to 697. Other municipalities with large projected percentage increases include Sadsbury Township (42.2%) and Penn Township (41.6%).

It should be noted that changes in population or demographics may be used to identify higher-risk populations. Maintaining up-to-date data on demographics will allow Chester County to better assess magnitudes of hazards and develop more specific mitigation plans and strategies. As DARA serves Downingtown Borough, Caln Township, East Caln Township, Uwchlan Township, and West Whiteland Township, any changes in development and vulnerability in those municipalities can also lead to changes for DARA and its operations.

Table 4.4-6 Population Forecasts 2023 to 2050 by Municipality (DVRPC, 2025)

MUNICIPALITY	2023 POPULATION	2030 FORECAST	2040 FORECAST	2050 FORECAST	2023 – 2050 CHANGE	% 2023 – 2050 CHANGE
Atglen Borough	1,319	1,566	1,566	1,566	247	18.7%
Avondale Borough	1,286	1,309	1,367	1,421	135	10.5%
Birmingham Township	4,086	4,151	4,240	4,296	210	5.1%
Caln Township	14,555	15,934	16,967	17,536	2,981	20.5%
Charlestown Township	6,169	6,310	6,972	7,468	1,299	21.1%
Coatesville City	13,323	13,871	14,565	14,938	1,615	12.1%
Downingtown Borough	8,163	10,587	10,751	10,825	2,662	32.6%
East Bradford Township	10,599	10,836	11,323	11,623	1,024	9.7%
East Brandywine Township	9,935	11,120	11,805	12,185	2,250	22.6%
East Caln Township	5,493	6,474	6,478	6,484	991	18.0%
East Coventry Township	7,136	7,744	8,596	9,073	1,937	27.1%
East Fallowfield Township	7,737	8,211	8,945	9,417	1,680	21.7%
East Goshen Township	18,392	18,753	19,276	19,550	1,158	6.3%
East Marlborough Township	7,567	8,326	9,167	9,741	2,174	28.7%
East Nantmeal Township	1,650	1,881	1,982	2,063	413	25.0%
East Nottingham Township	9,022	9,717	10,697	11,338	2,316	25.7%
East Pikeland Township	8,413	9,055	9,888	10,344	1,931	23.0%
Easttown Township	11,015	11,883	12,061	12,181	1,166	10.6%
East Vincent Township	7,521	8,659	9,291	9,626	2,105	28.0%
East Whiteland Township	14,459	16,764	16,896	16,994	2,535	17.5%
Elk Township	1,731	1,776	1,910	1,992	261	15.1%
Elverson Borough	1,392	1,451	1,642	1,760	368	26.4%
Franklin Township	4,430	4,673	5,122	5,340	910	20.5%
Highland Township	1,225	1,285	1,367	1,415	190	15.5%
Honey Brook Borough	2,089	1,994	2,111	2,168	79	3.8%
Honey Brook Township	8,319	9,099	9,993	10,556	2,237	26.9%

Table 4.4-6 Population Forecasts 2023 to 2050 by Municipality (DVRPC, 2025)

MUNICIPALITY	2023 POPULATION	2030 FORECAST	2040 FORECAST	2050 FORECAST	2023 – 2050 CHANGE	% 2023 – 2050 CHANGE
Kennett Township	8,763	9,422	10,093	10,453	1,690	19.3%
Kennett Square Borough	6,096	7,761	7,767	7,771	1,675	27.5%
London Britain Township	3,200	3,213	3,304	3,349	149	4.7%
Londonderry Township	2,525	2,577	2,776	2,904	379	15.0%
London Grove Township	8,884	9,497	10,559	11,257	2,373	26.7%
Lower Oxford Township	5,570	5,731	6,310	6,631	1,061	19.0%
Malvern Borough	3,427	3,556	3,864	4,017	590	17.2%
Modena Borough	348	583	659	697	349	100.3%
New Garden Township	11,423	11,911	12,754	13,294	1,871	16.4%
Newlin Township	1,223	1,389	1,471	1,542	319	26.1%
New London Township	5,823	6,303	7,049	7,620	1,797	30.9%
North Coventry Township	8,419	9,031	9,874	10,360	1,941	23.1%
Oxford Borough	5,763	6,021	6,197	6,323	560	9.7%
Parkesburg Borough	3,894	4,383	4,491	4,564	670	17.2%
Penn Township	5,654	6,371	7,370	8,005	2,351	41.6%
Pennsbury Township	3,875	4,011	4,170	4,234	359	9.3%
Phoenixville Borough	19,062	22,463	23,662	24,235	5,173	27.1%
Pocopson Township	4,452	4,577	4,695	4,803	351	7.9%
Sadsbury Township	4,248	4,816	5,634	6,042	1,794	42.2%
Schuylkill Township	8,811	9,018	9,329	9,531	720	8.2%
South Coatesville Borough	1,843	1,708	1,872	1,993	150	8.1%
South Coventry Township	2,796	2,931	3,172	3,298	502	18.0%
Spring City Borough	3,551	3,903	3,996	4,059	508	14.3%
Thornbury Township	3,181	3,618	3,688	3,719	538	16.9%
Tredyffrin Township	31,822	33,123	33,624	33,901	2,079	6.5%
Upper Oxford Township	2,547	2,580	2,642	2,656	109	4.3%

Table 4.4-6 Population Forecasts 2023 to 2050 by Municipality (DVRPC, 2025)

MUNICIPALITY	2023 POPULATION	2030 FORECAST	2040 FORECAST	2050 FORECAST	2023 – 2050 CHANGE	% 2023 – 2050 CHANGE
Upper Uwchlan Township	12,731	13,844	14,314	14,557	1,826	14.3%
Uwchlan Township	19,231	20,329	21,379	22,047	2,816	14.6%
Valley Township	7,965	8,912	9,420	9,722	1,757	22.1%
Wallace Township	3,736	4,255	4,347	4,386	650	17.4%
Warwick Township	2,596	2,889	2,926	2,952	356	13.7%
West Bradford Township	14,520	14,729	15,519	16,010	1,490	10.3%
West Brandywine Township	7,534	8,563	9,434	9,953	2,419	32.1%
West Caln Township	8,938	9,232	9,866	10,293	1,355	15.2%
West Chester Borough	19,235	19,392	19,680	19,868	633	3.3%
West Fallowfield Township	2,430	2,499	2,591	2,632	202	8.3%
West Goshen Township	23,281	25,185	25,770	26,097	2,816	12.1%
West Grove Borough	2,791	2,867	3,026	3,158	367	13.1%
West Marlborough Township	891	819	830	830	-61	-6.8%
West Nantmeal Township	2,203	2,297	2,391	2,453	250	11.3%
West Nottingham Township	2,803	2,825	2,931	3,000	197	7.0%
West Pikeland Township	4,026	4,327	4,647	4,892	866	21.5%
West Sadsbury Township	2,570	2,678	3,137	3,425	855	33.3%
Westtown Township	11,201	12,228	12,642	12,870	1,669	14.9%
West Vincent Township	6,751	7,537	8,129	8,372	1,621	24.0%
West Whiteland Township	19,951	24,373	25,043	25,494	5,543	27.8%
Willistown Township	11,286	11,556	11,727	11,842	556	4.9%
Chester County	549,784	585,262	615,749	634,011	84,227	15.3%

Land use and development trends will also impact hazard vulnerability, as development in areas of hazard risk or in ways that do not consider hazard risk may increase vulnerabilities by placing more structures, infrastructure, and populations at risk. The Chester County Planning Commission keeps data on housing development within the county and municipalities. Table 4.4-7 below shows the number of new units added each year between 2010 and 2024 in the county. It categorizes new units into single-family detached, single-family attached, and multi-family, which provides some additional information on the density of this development. There were a significant number of units added since 2020, as 2021 and 2022 saw the highest numbers of units added for all types. Of the 24,811 units added since 2010, 11,288 (45.5%) were built between 2020 and 2024. Over 50% of the multi-family units built in the county since 2010 were built in this four-year period, with a significant spike in 2021 as 1,963 units were added. On average, the county added 1,654 units per year. These were spread fairly evenly between unit types, though more single-family detached units were built than others.

Unfortunately, data on units built by municipality over this time period was unable to be found. That said, CCPC does report that Downingtown Borough, West Goshen Township, and Sadsbury Township built the most units in 2024, largely driven by single-family attached and multi-family units. West Goshen Township, Honey Brook Township, and Penn Township built the most single-family detached units in 2024. East Caln Township, West Whiteland Township, and East Coventry Township built the most single-family attached units. As stated above, areas of higher density face increased vulnerability and increased exposed structures with most hazard events. Municipalities will continue to add housing units in the future, and to address attendant increases in vulnerability that may occur they should consider how their current land use and development policies relate to hazard mitigation. Ensuring development occurs outside of high-hazard areas and promoting the use of hazard-resilient design are ways municipalities can reduce vulnerabilities.

Table 4.4-7 New Housing Units Built in Chester County 2010 to 2024 (CCPC, 2025b)

YEAR	SINGLE FAMILY DETACHED	SINGLE FAMILY ATTACHED	MULTI-FAMILY	TOTAL UNITS
2010	671	478	157	1,306
2011	494	359	141	994
2012	589	361	355	1,305
2013	710	287	235	1,232
2014	641	321	415	1,377
2015	490	311	643	1,444
2016	430	288	708	1,426
2017	508	511	656	1,675
2018	612	627	116	1,355
2019	600	588	221	1,409
2020	531	586	615	1,732
2021	916	864	1,963	3,743

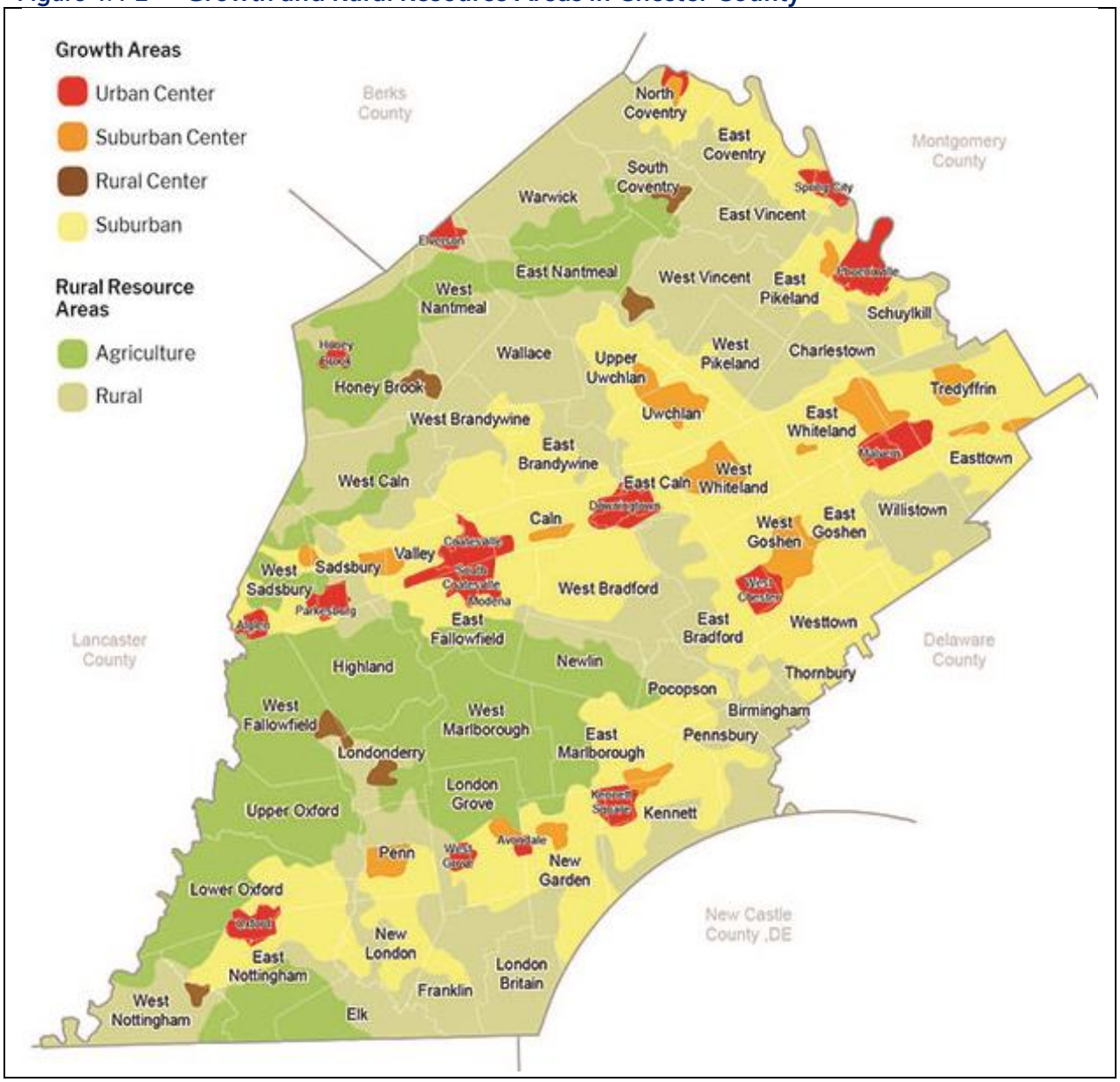
Table 4.4-7 New Housing Units Built in Chester County 2010 to 2024 (CCPC, 2025b)

YEAR	SINGLE FAMILY DETACHED	SINGLE FAMILY ATTACHED	MULTI-FAMILY	TOTAL UNITS
2022	925	838	774	2,537
2023	601	625	411	1,637
2024	569	653	417	1,639
TOTAL	9,287	7,697	7,827	24,811
AVG. / YEAR	619	513	522	1,654

CCPC has also developed several maps as part of their comprehensive and land use planning initiatives that showcase future land use and development goals, priorities, and strategies. Integrating hazard mitigation into land use and development planning at both the county and municipal level can lead to mitigation and resilience as consistent values in the community and allow development to be managed in ways that do not increase vulnerability. Figure 4.4-2 displays the growth areas and rural resources areas in the county, as identified by the *Landscapes3* Comprehensive Plan. This map and corresponding categories provide insight into where development is planned to occur and how that development may look. The different categories are described as follows:

- Growth Areas
  - Urban Center: Historic downtowns and established neighborhoods that serve as civic, economic, and population centers.
  - Suburban Center: Regional economic, population, and transportation centers with varying land uses.
  - Suburban: Predominately residential communities with locally-oriented commercial uses and community facilities.
  - Rural Center: Often an extension of a village of a historic crossroads.
- Rural Resource Areas
  - Rural: Open and woodland lands with scattered villages, farms, and residential uses.
  - Agricultural: Large concentrations of active and diverse farm operations, along with related support services.

Figure 4.4-2 Growth and Rural Resource Areas in Chester County



In addition to identifying these areas, *Landscapes3* also contained several maps that showcase areas for preservation work in the county. These maps showcase the county's considerations towards guiding development towards places that are better suited for it. By identifying areas that are better served by conservation and protection, the county is impacting future hazard vulnerability by choosing to steer development away from areas that present environmental challenges and also the ecological benefits these areas provide, potentially lowering hazard risk for adjacent areas. Figure 4.4-3 showcases areas that are currently protected via agricultural easements and land trusts while also identifying areas for additional preservation opportunities.

Figure 4.4-3 Farmland Preservation Areas in Chester County

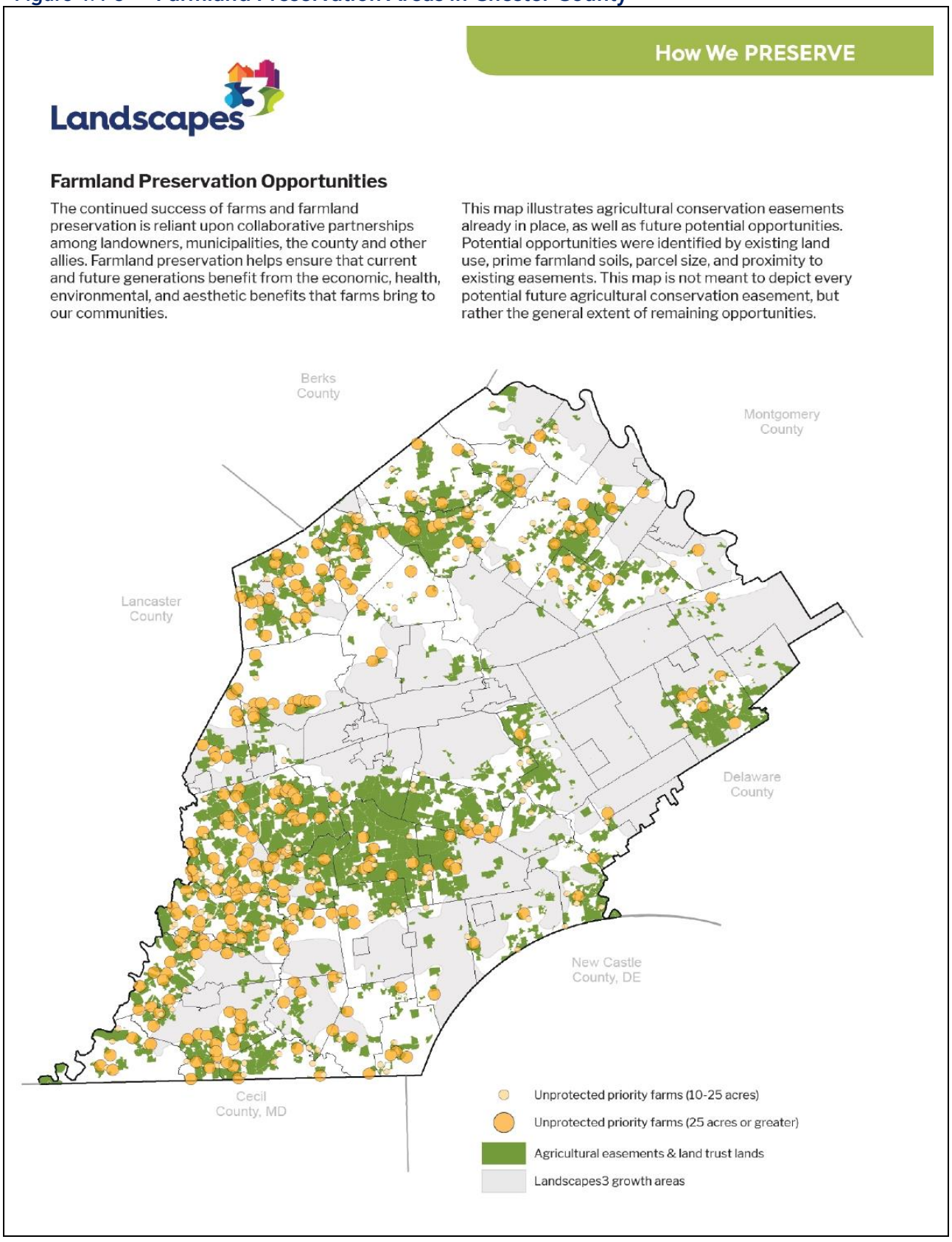


Figure 4.4-4 shows environmentally sensitive areas that should be priorities for protection efforts.

Figure 4.4-4 Natural Resource Priority Protection Areas in Chester County

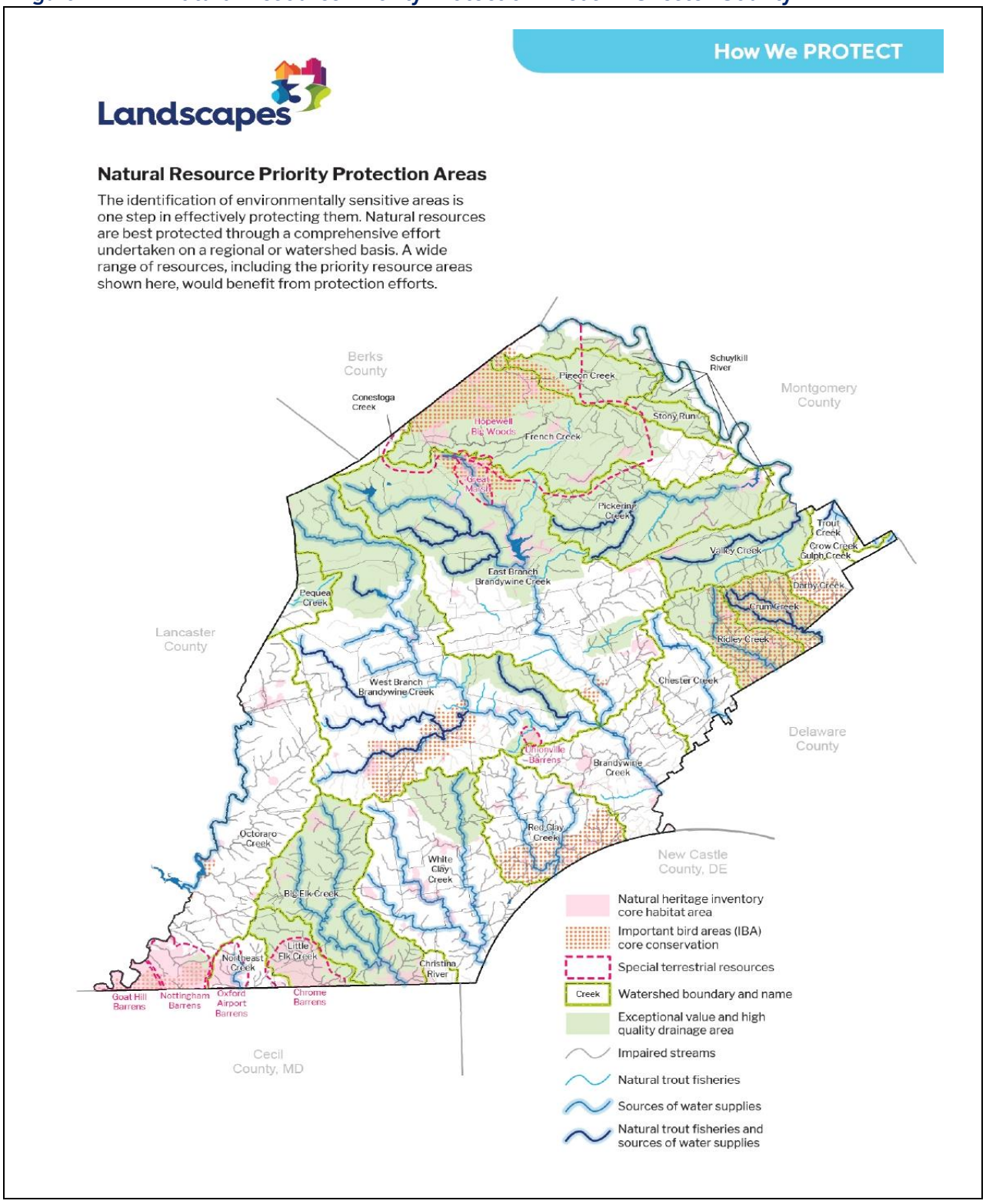
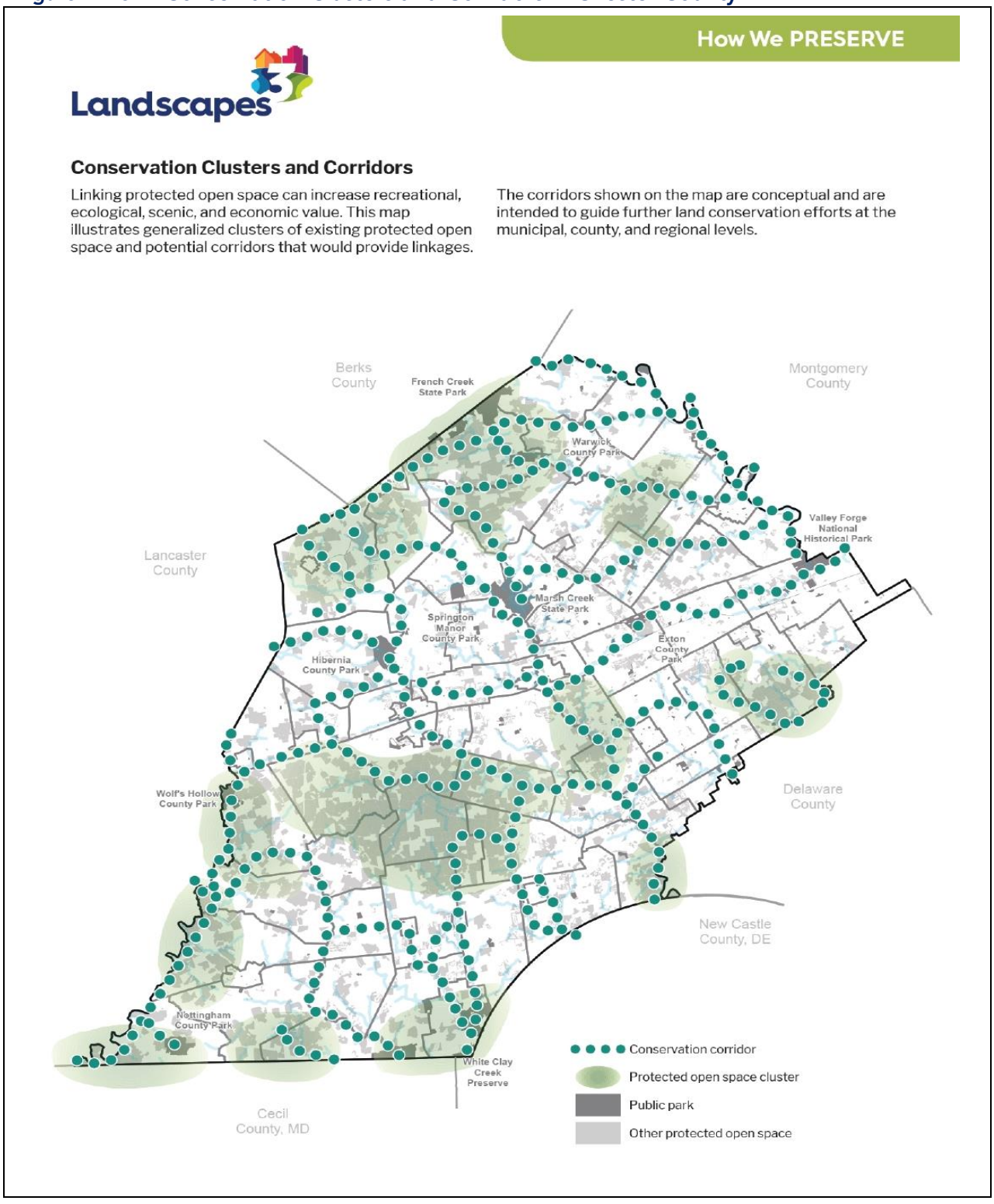


Figure 4.4-5 shows existing protected open space and presents potential corridors to link these areas to further conservation efforts and increase benefits.

Figure 4.4-5 Conservation Clusters and Corridors in Chester County



Making use of the analysis of Chester County's current and future population and development trends, it is important to explore how these projected changes may influence the county's future vulnerability to the profiled hazards. Hazard vulnerability and loss potential will be higher in places of higher density throughout the county, so as areas continue to grow, these communities might become more vulnerable to hazards. Population growth and its associated development is likely to create increases in loss potential, as more people may be living in areas prone to hazards.

This updated plan can be used to inform ongoing land use and other planning efforts by the county. The analysis and associated maps within this Plan Update can assist Chester County in accomplishing their goals of development and redevelopment and actions to make areas less prone to the negative impacts of hazards.

4.4.5. Community Survey

A community-wide survey was conducted to help understand the on-the-ground conditions and concerns of Chester County residents, therefore supporting the assessment of hazard risk and mitigation opportunities in the county. The survey asked respondents two types of questions: mitigation activities completed within the household and hazard concerns. Over 1,100 county residents took the survey with the largest cohort of respondents coming from those who live within East Goshen Township.

Across all respondents, 88% are homeowners and all have homeowner's insurance. Almost all renters have rental insurance. However, when it comes to insuring homes against any type of flooding, only 5% of individuals who responded to the survey have flood insurance. Other household preparedness and mitigation efforts included discussing what to do in the case of an emergency (56%) and preparing a family emergency plan (26%). However, 32% of respondents reported that they have done nothing to prepare for a potential hazard. This provides a good opportunity for public education training related to risk, mitigation, and preparedness with more than 91% of residents reporting they have some level of interest in attending a municipally led hazard mitigation-related event. Further, the relatively high volume of responses to the survey indicates that the community is interested in engaging in emergency preparedness activities.

Respondents were asked about how informed they are when it comes to the most pressing hazards within Chester County, and 38% said they are somewhat informed. Many (42%) stated that there is probably a lot they are not aware of, while 15% viewed themselves as very informed. The top reported hazards of concern included utility interruptions (62%), winter storm (52%), drought (51%), and flooding (47%). For information on preparedness and potential hazard risk, e-mail (newsletter or new blasts) and social media are the most desired form of communication.

5. Capability Assessment

5.1. Update Process Summary

The purpose of the capability assessment is to identify strengths and weaknesses that will affect the ability of the county and participating jurisdictions to implement mitigation actions. It is important to perform a capability assessment to develop a comprehensive and implementable mitigation strategy. Capabilities include a variety of regulations, existing planning mechanisms, and administrative capabilities provided through established agencies or authorities.

The capability assessment has three main components:

1. Document Review - an inventory of the county's existing planning and regulatory tools and a review and incorporation of existing plans and other technical information as appropriate.
2. Discussion of participation in the National Flood Insurance Program.
3. Municipal Capability Assessment - an analysis of municipal capacity from a planning, policy, staffing, training, outreach, and political will standpoint.

Based on these components as well as the vulnerability analysis identified earlier in the plan, Chester County can assess its current resources and begin to address the legal, regulatory, administrative, financial, and other capabilities which it currently has at its disposal to address the potential hazards the county and its local municipalities are vulnerable to.

Chester County has several resources it can access to implement hazard mitigation initiatives through local planning and regulatory tools, administrative assistance and technical expertise, fiscal capabilities, and participation in local, regional, state, and federal programs. The presence of these resources enables community resiliency through mitigation actions taken before, during, and after a hazard event.

In 2021, the county, municipalities, and stakeholders, identified the suite of resources available in the county to support hazard mitigation, including regulatory, planning, and administrative resources. It also indicated the presence of local plans, ordinances, and codes in applicable municipalities. Finally, the 2021 plan specified the county's staff and training capabilities. For the 2026 plan, the HMPT updated the 2021 capability assessment by distributing a *Capability Assessment Survey* to all 73 municipalities and summarizing responses. In addition, the HMPT provided additional input into the 2026 capability assessment through feedback at meetings. This plan includes an analysis of how municipalities have implemented the NFIP in their communities to meet requirements that have changed since the last plan.

The 2026 capability assessment provides an updated inventory of the most critical local planning and regulatory tools available within each municipality, a summary of the fiscal and technical capabilities available through programs and organizations outside of the county and provides an opportunity to discuss any plan integration opportunities with the hazard mitigation

plan. It also identifies emergency management capabilities, and the processes used for implementation of the NFIP.

While the capability assessment serves as a good instrument for identifying local capabilities, it also provides a means for recognizing gaps and weaknesses that can be resolved through future mitigation actions. The results of this assessment lend critical information for developing an effective mitigation strategy.

Additionally, a number of documents have been reviewed as part of this Plan Update. While some reviews have been carried over from past plan updates and revised where applicable, additional documents have been identified and reviewed for purposes of integration into other local planning mechanisms. Several plans and ordinances at the county and municipal level have been reviewed and a summary with options to integrate the data, information, and hazard mitigation goals and actions into other planning mechanisms are included.

The mitigation strategy, including the goals and actions, is incorporated into relevant planning mechanisms based on their pertinence and relevance to specific plans and ordinances. For example, all appropriate structural projects should be included in the Capital Improvements Program. Land use and zoning related projects should be incorporated into the next update of the community comprehensive plans and/or zoning ordinances through collaboration with the Planning and Zoning departments. Likewise, information from relevant planning documents was used to inform and update the HMP. A general list of relevant plans and documents and corresponding areas for incorporation are listed below:

Table 5.1-1 Relevant Departments and Documents

RELEVANT DOCUMENTS	HAZARD MITIGATION PLANNING ELEMENTS
Comprehensive Plan/Land Use Plan (Landscapes3), Zoning/Subdivision Regulations, Floodplain Ordinance	Demographic data, land use, development trends, and floodplain management information
Stormwater Management Plans (including Watersheds 2045), Sediment and Erosion Control Plan, Long Range Transportation Plan, Transportation Improvement Inventory, Public Transportation Plan	Stormwater management and infrastructure data and projects
Emergency Operations/Response Plan	All-hazards information for evacuation, response, and recovery
Climate Action Plan, Dam Safety Regulations	Risk and vulnerability data, and storm/floodwater management
Trails Master Plan, Woodlands and Tree Protection, Conservation Subdivision Design Guide, Linking Landscapes	Land preservation strategies
2021 Chester County HMP	Mitigation progress and solutions

5.2. Capability Assessment Findings

Chester County and participating jurisdictions have a wide variety of plans, tools, and resources in place to support the goals of hazard mitigation planning, and the specific mitigation strategy presented in this HMP Update.

5.2.1. Planning and Regulatory Capabilities

The purpose of a plan/ordinance review as part of this planning process is trifold:

- Identify existing Commonwealth, regional, county, and municipal initiatives.
- Provide an inventory and review of sample plans and ordinances and identify sections in these documents that address hazard mitigation-related issues.
- Provide a platform to integrate plans and other documents so recommendations and strategies are not in contradiction with one another (e.g., between the HMP and comprehensive plan).

A review of current zoning and subdivision ordinances, comprehensive plans, open space and recreation plans, stormwater management plans, sediment and erosion control plans, and emergency operations plans, among others, are summarized below by level of administration (Commonwealth, regional/county, and municipal).

Commonwealth of Pennsylvania Document Review

- The 2023 Pennsylvania State Hazard Mitigation Plan Update goals and objectives that are applicable to this Chester County Plan Update including (PEMA, 2023):
    - Protect lives, property, environmental quality, and resources of the Commonwealth.
    - Enhance consistent coordination, collaboration, and communications among stakeholders.
    - Provide a framework for active hazard mitigation planning and implementation.
    - Increase awareness, understanding, and preparedness across all sectors.

    Hazard identification and risk assessment data from the 2023 Pennsylvania State Hazard Mitigation Plan Update has been incorporated into the appropriate sections of this HMP.
- The Uniform Construction Code (UCC) is the statewide building code (Act 45 of 1999) that took effect in Pennsylvania in April of 2004. The UCC is mandated by the State for all municipalities in Pennsylvania and establishes minimum regulations for most new construction, including additions and renovations to existing structures. All new construction is required to meet the UCC requirements statewide. The current UCC is based on the 2018 International Building Code (IBC) and International Residential Code (IRC).

Building codes relate to hazard mitigation through requirements about building materials and methods that have been professionally evaluated for quality and safety, as well as inspection requirements. Municipalities have the option to adopt more stringent requirements that enhance disaster-resistant or resilient building design practices.

- The Commonwealth of Pennsylvania Governor's Executive Order 1999-1 (Land Use Planning) provides the basis for the requirement to integrate hazard mitigation into comprehensive land use planning. As part of this executive order, the Interagency Land Use Team was established, comprising the following state agencies: Department of Agriculture; Department of Community and Economic Development; Department of Conservation and Natural Resources; Department of Environmental Protection; Governor's Green Government Council; Fish and Boat Commission; Game Commission; Department of Transportation; and PEMA. One of the most significant outcomes of PEMA's participation on the team is the integration of hazard mitigation goals and objectives into comprehensive land use planning processes.

- The Pennsylvania Governor's Invasive Species Council helps identify and manage invasive plant, insect, and animal species that are either currently posing a risk to Pennsylvania's natural and agricultural resources or could potentially threaten them. The council develops and implements the Invasive Species Management Plan, which provides guidance on the prevention and control of invasive species. They also draft and update the Aquatic Invasive Species Rapid Response Plan, which outlines procedures on how to respond to new invasive species threats. This council is run by seven state agencies, including the Departments of Agriculture and Environmental Protection, and 14 non-governmental organizations, such as universities, environmental management groups, and port authorities. They provide education and outreach on identifying and managing invasive species.

- The Pennsylvania Erosion and Sediment Control Code requires all earthmoving projects in the Commonwealth to develop an erosion and sediment pollution control plan to ensure that proper site development practices are employed for land development and implement best management practices for the control of sediment pollution during construction. Pennsylvania Department of Environmental Protection requires a National Pollution Discharge Elimination System (NPDES) permit for earthmoving activities exceeding one acre. As well as erosion and sediment pollution control during construction, the permit also addresses post-construction stormwater management.

- Act 165: Hazardous Materials Emergency Planning and Response Act, amended in 2001, established a statewide hazardous materials safety program. This created the Hazardous Materials Response Fund, county Hazardous Material Emergency Response Accounts, and further provided duties to PEMA and the Pennsylvania Emergency Management Council. This Act requires facilities with extremely hazardous chemicals on site to create Off-site Emergency Response Plans, which are then presented to Local Emergency Planning Committees.

Regional/County Document Review

- The Chester County Comprehensive Plan, Landscapes3, was adopted in 2018. A comprehensive plan is a policy document that states objectives and guides the future growth and physical development of a municipality. The comprehensive plan is a blueprint for housing, transportation, community facilities, utilities, and land use. It examines how the past led to the present and charts the community's future path. The Pennsylvania Municipalities Planning Code (MPC) Act 247 of 1968, as reauthorized and amended, requires counties to prepare and maintain a comprehensive plan. In addition, the MPC requires counties to update the comprehensive plan every 10 years. The Chester County Commissioners annually approve a comprehensive 5-year capital improvement plan, which identifies both sources and uses of funds to support strategic objectives. Section 301a.(2) of the MPC requires comprehensive plans to include a plan for land use, which among other provisions suggests that the plan should give consideration to floodplains and other areas of special hazards and other similar uses. The MPC also requires comprehensive plans to include a plan for community facilities and services and recommends giving consideration to storm drainage and floodplain management. The Landscapes3 Comprehensive Plan is slated to guide Chester County until 2028. It addresses the following elements:
    - Housing.
    - Social Services.
    - Economic Development.
    - Transportation.
    - Recreation / Open Space / Natural Resources / Historic Resources.
    - Public Utilities / Services / Facilities.
    - Land Use.

  Each element includes a profile, trends, conclusions, and policy statements as well as an implementation matrix.

- The Chester County Freight Plan was written in 2023 to further advance goals outlined in the above Landscapes3 Comprehensive Plan. The purpose of the freight plan is to protect and grow the county's freight infrastructure network that moves goods across regional, national, and global markets. This infrastructure includes railways, interstate highways, intermodal terminals where freight is transferred from one mode of transport to another, and pipelines. The plan identifies existing conditions of the county's freight infrastructure, which helps the county provide a better understanding of the role, network, and impact of freight on the county, its residents, and its industries. It also includes strategies to support freight-related activity and maintain living conditions in communities that help guide future plans.

In January 2024, Chester County developed its Act 167 Stormwater Management Plan, called Watersheds 2045. The purposes of the plan are provided below (Chester County, 2024c):

- Engage and educate individuals, communities, businesses, and governments to promote scientifically based watershed stewardship.
- Expand water-based recreational opportunities and access to local water features.
- Conserve and protect the county's natural resources for clean water.
- Improve surface water and groundwater quality.
- Reduce stormwater runoff and mitigate the impacts of flooding.
- Promote the integration of water resources, natural resources protection, and land use planning.
- Ensure safe, sustainable water supply and wastewater disposal systems.

The Pennsylvania General Assembly passed the Stormwater Management Act (Act 167) of 1978 (Pennsylvania State Data Center 1978). Act 167 requires counties to prepare stormwater management plans on a watershed-by-watershed basis. The plans must be developed in consultation with the affected municipalities. Each new plan is required to provide standards for control of runoff from new development, based on a detailed hydrologic assessment. A key objective of each plan is to coordinate the stormwater management decisions of the watershed municipalities. Implementation of each plan is through mandatory municipal adoption of ordinance provisions consistent with the plan. Plans prepared under Act 167 will not resolve all drainage issues. A key goal of the planning process is to maintain existing peak runoff rates throughout a watershed as land development continues to take place. While the planning process does not solve existing flooding problems, it aims to prevent these problems from getting worse. Each municipality is responsible for correcting existing flooding problems. According to Section 11(b) of Act 167, all municipalities subject to the Stormwater Management Plan must enact or amend and implement such ordinances as necessary to regulate development in a manner consistent with the Stormwater Management Plan. Municipalities are encouraged to use the model ordinance included in the plan.

The Pennsylvania Emergency Management Services Code, Title 35, requires all political jurisdictions in the Commonwealth to have an Emergency Operations Plan (EOP), an Emergency Management Coordinator (EMC), and an EOC. The Chester County EOP documents the county's emergency preparedness planning. The EOP includes county- specific emergency response procedures during significant emergency events. Chester County's EOP complies with the National Incident Management System (NIMS) and is updated every 2 years. The updated risk assessment information from this HMP will be incorporated into subsequent updates to the EOP.

Chester County maintains several plans regarding transportation planning. Chester County has the Transportation Improvement Inventory (TII), a comprehensive record of known transportation needs and projects within the county. The TII is updated biennially and contains projects that have been recommended to the Planning Commission. The 2023 TII included 534 proposed roadway, bridge, bicycle, pedestrian, freight, and transit projects with a total

estimated cost of $4.55 billion (Chester County Planning Commission 2023). Along with the TII, Chester County also participates in the Delaware Valley Regional Planning Commission's Transportation Improvement Program (TIP). The TIP is the region's agreed-upon list of specific priority projects. The TIP lists all projects that intend to use federal funds along with non-federally funded projects that are regionally significant. The list is multimodal; in addition to the more traditional highway and public transit projects, it includes bicycle, pedestrian, and freight-related projects as well. Chester County has also put more of a priority on public transportation in recent years, releasing the Public Transportation Plan in 2024. This plan identifies key issues found in the public transportation systems of Chester County (including bus and rail) and highlights ways to improve them through connectivity, reliability, and expansion (Chester County Planning Commission, 2024a).

Chester County has prepared several plans with the goal of preserving open space in the county for recreational and environmental purposes. These plans include chapters in the Chester County Comprehensive Plan Landscape3 (Chester County Planning Commission, 2018), Watersheds 2045, Linking Landscapes, Trails Master Plan, and Conservation Subdivision Design Guide. Linking Landscapes is a 2002 document that seeks to protect already existent open space throughout the County. In more recent years, Chester County published the Conservation Subdivision Design Guide in 2022. This guide was intended to help municipalities develop effective ordinances that permit conservation subdivisions, which preserves an area as open space (Chester County Planning Commission, 2022a). The Chester County Trails Master Plan was published in 2024 after the county was awarded a grant by the DCNR's Community Conservation Partnership Program. The Trails Master Plan establishes a framework for future trail development in Chester County, creating connections between different trail networks, providing more equitable trail access, and filling critical trail "gaps" in the trail network. In addition to mapping out the trail vision, the Master Plan includes information and resources on trail design, funding, and implementation to support trail development (Chester County Planning Commission, 2024b).

Chester County also has a Climate Action Plan, which was published in 2021. The Climate Action Plan provides a blueprint for reducing greenhouse gas emissions and increasing energy efficiency at county government facilities and community-wide. The overall goal of the plan is to reduce greenhouse gas emissions by 80% of 2005 emissions by 2050 (CCPC, 2021b).

In 2025, the Brandywine Conservancy, an accredited land trust organization, published the Brandywine Flood Study alongside Chester County Water Resources Authority and the University of Delaware. Though the conservancy is located in Delaware County, they partnered with the Chester County Water Resources Authority and the University of Delaware to study flooding along the Brandywine Creek, which runs through parts of the county in Downingtown Borough, Honey Brook Borough, and the City of Coatesville. This study identified frequent flood sites and made recommendations for flood mitigation efforts. The Conservancy is looking to continue to study flood conditions, and they plan to conduct a similar study along White Clay Creek.

Chester County has mutual aid agreements (formal agreements) with the contiguous Pennsylvania counties as a result of the Pennsylvania Intrastate Mutual Assistance Program. Every county participates in this program. Chester County is part of a larger county consortium, the Southeastern Pennsylvania Regional Task Force (SEPA-RTF), which works together and shares resources during times of emergency. Originally formed in response to a growing awareness of the threat of terrorism, the Task Force's focus has broadened to include an all-hazards approach. SEPA-RTF works to prevent, prepare for, respond to, and recover from all types of emergencies and disasters. This intergovernmental agreement is between Bucks, Chester, Delaware, Montgomery, and Philadelphia Counties.

The county is a participating member in Pulsepoint, an app that empowers everyday citizens to provide life-saving assistance to victims of sudden cardiac arrest. App users who have indicated they are trained in cardiopulmonary resuscitation (CPR) and willing to assist in case of an emergency can be notified if someone nearby is having a cardiac emergency and may require CPR. If the cardiac emergency is in a public place, the location-aware application will alert users in the vicinity of the need for CPR simultaneous with the dispatch of advanced medical care. The application also directs these potential rescuers to the exact location of the closest Automated External Defibrillator (AED) (Chester County n.d.).

Municipal Document Review

In addition to county and regional-scale plans, there are municipal-scale plans and studies that have been developed by municipalities in collaboration with the county and other organizations. The Chester County Planning Commission is particularly involved in assisting municipalities in planning efforts. To record municipal planning and regulatory capabilities, a capability assessment survey was developed and administered to municipalities. Chester County received 40 completed surveys from 36 of the 73 municipalities; they are included in **Appendix C**. A summary of Planning and Regulatory capabilities for each municipality, taken from submitted surveys and discussions with county staff is provided in Table 5.2-1 below. An 'X' indicates that the municipality has that planning and/or regulatory capability in place; a 'U' indicates that the planning and/or regulatory capability is under development; an asterisk (*) indicates that the municipality did not provide information on the capability, so their information was carried over from the previous plan. Some capabilities were reported by CCPC instead of from the municipalities themselves. County capabilities, particularly through CCPC's technical assistance, can provide support as municipalities aim to expand their own planning and regulatory capabilities. CCPC's website hosts a variety of publicly accessible municipal plans. According to the commission, most municipalities include protection recommendations for both natural and historic resources as part of their comprehensive plans, as it is a requirement of Section 301(a)(6) of the MPC to include a plan for the protection of natural and historic resources. Municipalities that are subject to regulation under the MS4 program have MS4 compliance plans. According to the Chester County Water Resources Authority, 70 of 72 municipalities have adopted the county's 2022 model stormwater ordinance; only South Coatesville Borough and Wallace Township have not while Tredyffrin Township's own ordinance meets requirements. All 73 municipalities have adopted floodplain ordinances that adhere to

PA DEP's required minimum standards. More information on floodplain regulation and the NFIP is included in the next section.

Table 5.2-1 Reported Planning and Regulatory Capabilities

MUNICIPALITY	EMERGENCY OPERATIONS PLAN	BUILDING CODE	CAPITAL IMPROVEMENT PLAN	CONTINUITY OF OPERATIONS PLAN	DISASTER RECOVERY PLAN	ECONOMIC DEVELOPMENT PLAN	EVACUATION PLAN	FARMLAND PRESERVATION	FIRE CODE	FLOODPLAIN MANAGEMENT PLAN	HISTORIC PRESERVATION PLAN	NATURAL RESOURCE PROTECTION PLAN	OPEN SPACE/ PARKS/RECREATION PLAN	STORMWATER MANAGEMENT PLAN	SUBDIVISION REGULATIONS	ZONING REGULATIONS
Atglen Borough*	X	X	X						X	X				X	X	X
Avondale Borough*	X	X							X	X			X	X	X	X
Birmingham Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Caln Township	X	X	U	U			X		X	X	X	X	X	X	X	X
Charlestown Township	X	X						X	X	X	X		X	X	X	X
Coatesville City	X	X	X		X	X	X		X	U	X		X	X	X	X
Downingtown Borough*	X	X	X						X	X	X		X	X	X	X
East Bradford Township*	X	X	X						X	X	X	X	X	X	X	X
East Brandywine Township*	X	X	X				X	X	X	X	X	X	X	X	X	X
East Caln Township	X	X							X	X			X	X	X	X
East Coventry Township	X	X				X		X	X	X	X	X	X	X	X	X
East Fallowfield Township*	X	X							X	X	X		X		X	X
East Goshen Township*	X	X	X						X				X	X	X	X
East Marlborough Township*	X	X	X						X				X	X	X	X
East Nantmeal Township*	X	X							X	X	X		X	X	X	X
East Nottingham Township	X	X					X	X	X	X		U	X	X	X	X
East Pikeland Township	X	X						X	X	X	X		X	X	X	X
Easttown Township*	X	X	X						X	X	X		X	X	X	X
East Vincent Township*	X	X	X						X	X			X	X	X	X

Table 5.2-1 Reported Planning and Regulatory Capabilities

MUNICIPALITY	EMERGENCY OPERATIONS PLAN	BUILDING CODE	CAPITAL IMPROVEMENT PLAN	CONTINUITY OF OPERATIONS PLAN	DISASTER RECOVERY PLAN	ECONOMIC DEVELOPMENT PLAN	EVACUATION PLAN	FARMLAND PRESERVATION	FIRE CODE	FLOODPLAIN MANAGEMENT PLAN	HISTORIC PRESERVATION PLAN	NATURAL RESOURCE PROTECTION PLAN	OPEN SPACE/ PARKS/RECREATION PLAN	STORMWATER MANAGEMENT PLAN	SUBDIVISION REGULATIONS	ZONING REGULATIONS
East Whiteland Township	X	X	X						X	X	X	X	X	X	X	X
Elk Township*	X	X							X	X			X	X	X	X
Elverson Borough	X	X	X	U	U	U	X		X	X	X	U	X	X	X	X
Franklin Township*	X	X	X						X	X	X		X	X	X	X
Highland Township*	X	X	X						X	X				X	X	X
Honey Brook Borough	X	X	U				X		X					X	X	X
Honey Brook Township	X	X							X					X	X	X
Kennett Township	X	X	X			X		X	X	X	X	X	X	X	X	X
Kennett Square Borough*	X	X	X	X		X			X	X	X		X	X	X	X
London Britain Township	X	X	X					X	X	X	X		X	X	X	X
Londonderry Township*	X	X							X	X				X	X	X
London Grove Township*	X	X	X	X				X	X	X	X		X	X	X	X
Lower Oxford Township	X	X	U	X	X	U	X	X	X	X	U	X	X	X	X	X
Malvern Borough	X	X					X		X	X	X			X	X	X
Modena Borough*	X	X							X	X	X		X	X	X	X
New Garden Township*	X	X							X	X	X	X	X	X	X	X
Newlin Township*	X	X							X	X	X		X	X	X	X
New London Township	X	X						X	X	X	X			X	X	X
North Coventry Township	X	X	X			X	X		X	X			X	X	X	X

Table 5.2-1 Reported Planning and Regulatory Capabilities

MUNICIPALITY	EMERGENCY OPERATIONS PLAN	BUILDING CODE	CAPITAL IMPROVEMENT PLAN	CONTINUITY OF OPERATIONS PLAN	DISASTER RECOVERY PLAN	ECONOMIC DEVELOPMENT PLAN	EVACUATION PLAN	FARMLAND PRESERVATION	FIRE CODE	FLOODPLAIN MANAGEMENT PLAN	HISTORIC PRESERVATION PLAN	NATURAL RESOURCE PROTECTION PLAN	OPEN SPACE/ PARKS/RECREATION PLAN	STORMWATER MANAGEMENT PLAN	SUBDIVISION REGULATIONS	ZONING REGULATIONS
Oxford Borough	X	X	X	U	U	U	X		X	X	U	U	U	X	X	X
Parkesburg Borough*	X	X		X			X	X	X	X			X	X	X	X
Penn Township*	X	X							X	X	X		X	X	X	X
Pennsbury Township	X	X	X	X			X		X		X		X	X	X	X
Phoenixville Borough*	X	X	X						X	X	X		X	X	X	X
Pocopson Township	X	X	U				X	X	X	X	X	X	X	X	X	X
Sadsbury Township*	X	X	X						X	X	X		X	X	X	X
Schuylkill Township	X	X	X	U	U	U	X	U	X	X	X	X	X	X	X	X
South Coatesville Borough	X	X	U	X	X	U	X	U	X	U	U	U	X	X	X	X
South Coventry Township*	X	X							X	X	X		X	X	X	X
Spring City Borough	X	X				X	X		X	X			X	X	X	X
Thornbury Township	X	X	X	U	U	U	U	U	X	X	X	X	X	X	X	X
Tredyffrin Township	X	X	X	X	X	X	X	U	X	X	X	X	X	X	X	X
Upper Oxford Township*	X	X						X	X	X	X	X	X	X	X	X
Upper Uwchlan Township	X	X	X	U	U	U	U	X	X	X	X	U	X	X	X	X
Uwchlan Township	X	X	X	X	X	X	X	X	X	X	X	X	U	X	X	X
Valley Township	X	X	U	X	U	U	X	U	X	X	U	U	X	X	X	X
Wallace Township*	X	X							X	X	X		X	X	X	X
Warwick Township*	X	X							X	X	X		X	X	X	X

Table 5.2-1 Reported Planning and Regulatory Capabilities

MUNICIPALITY	EMERGENCY OPERATIONS PLAN	BUILDING CODE	CAPITAL IMPROVEMENT PLAN	CONTINUITY OF OPERATIONS PLAN	DISASTER RECOVERY PLAN	ECONOMIC DEVELOPMENT PLAN	EVACUATION PLAN	FARMLAND PRESERVATION	FIRE CODE	FLOODPLAIN MANAGEMENT PLAN	HISTORIC PRESERVATION PLAN	NATURAL RESOURCE PROTECTION PLAN	OPEN SPACE/ PARKS/RECREATION PLAN	STORMWATER MANAGEMENT PLAN	SUBDIVISION REGULATIONS	ZONING REGULATIONS
West Bradford Township	X	X	X					X	X	X	X	X	X	X	X	X
West Brandywine Township*	X	X	X						X	X	X		X	X	X	X
West Caln Township	X	X	U	U	X	U	X	X	X	X	X	X	X	X	X	X
West Chester Borough*	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X
West Fallowfield Township	X	X	X						X	X				X	X	X
West Goshen Township*	X	X							X	X				X	X	X
West Grove Borough*	X	X							X	X			X	X	X	X
West Marlborough Township	X	X	U	X	X	U	U	X	X	X	U	X	U	X	X	X
West Nantmeal Township	X	X	X	X	U	X	U	X	X	X	X	X	X	X	X	X
West Nottingham Township*	X	X							X	X	X		X	X	X	X
West Pikeland Township*	X	X							X	X	X		X	X	X	X
West Sadsbury Township	X	X		X				X	X	X			X	X	X	X
West Vincent Township	X	X	X			X	X	X	X	X	X	X	X	X	X	X
West Whiteland Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Westtown Township	X	X	U						X	X	X	X	X	X	X	X
Willistown Township*	X	X	X						X	X	X			X	X	X
Downingtown Area Regional Authority*				X												

**Did not submit 2026 form; entries are based on 2021 HMP; ** Did not submit form for 2021 HMP*

5.2.1.1. Participation in the National Flood Insurance Program

The Pennsylvania Floodplain Management Act (Act 166 of 1978) requires every municipality with flood hazard areas identified by FEMA to participate in the NFIP and permits all municipalities to adopt floodplain management regulations. It is in the interest of all property owners in the floodplain to keep development and land usage within the scope of the floodplain regulations for their community. This helps keep insurance rates low and ensures that the risk of flood damage is not increased by property development.

FEMA Region 3 makes available to communities an ordinance review checklist which lists required provisions for floodplain management ordinances. This checklist helps communities develop an effective floodplain management ordinance that meets federal requirements for participation in the NFIP. The Pennsylvania Emergency Management Agency (PEMA) provides communities with a suggested model ordinance document to assist municipalities in meeting the minimum requirements of the NFIP and the Pennsylvania Flood Plain Management Act (Act 166), based on their 44 CFR 60.3 level of regulations. As new Flood Insurance Rate Maps (FIRMs) are published, the Pennsylvania State NFIP Coordinator at PEMA works with communities to ensure the timely and successful adoption of an updated floodplain management ordinance by reviewing and providing feedback on existing and draft ordinances. In addition, PEMA provides guidance and technical support through Community Assistance Contacts (CAC) and Community Assistance Visits (CAV).

All of the county's municipalities participate in the NFIP. FIRMs for Chester County's municipalities went into effect in September 2017. All participating municipalities have adopted a floodplain ordinance, and many have adopted a stormwater management ordinance. Information on how municipalities administer their floodplain management programs was captured on an NFIP Survey. Chester County received completed surveys from 23 of the 73 municipalities; they are included in **Appendix C.** DARA is not eligible for the NFIP.

Table 5.2-2 shows the number of policies, their total coverage, and average premiums for each municipality. All municipalities in Chester County are in good standing, but several do not have any NFIP policies located in their jurisdiction. Honey Brook Borough has no SFHAs, while Atglen Borough, Elk Township, Highland Township, Honey Brook Broough, South Coatesville Borough, South Coventry Borough, West Sadsbury Township have no policies located in their jurisdiction according to data provided by PEMA in December 2025.

There are 1,287 policies that provide $365,056,000 in coverage for buildings and their contents. The average premium for policies in Chester County is $1,354. Downingtown Borough has the most policies with 152 and the most coverage with $38,656,000. Tredyffrin Township is a close second in both categories. East Caln Township has by far the highest average premium at $9,504. This may be a function of the low number of policies and potential high-risk or non-residential properties with higher premiums.

TABLE 5.2-2 NFIP Participation in Chester County (FEMA, 2026; PEMA, 2025).

MUNICIPALITY	EFFECTIVE FIRM DATE	NUMBER OF POLICIES	TOTAL COVERAGE	AVERAGE PREMIUM
Atglen Borough	9/29/2017	0	$0	$0
Avondale Borough	9/29/2017	10	$2,791,000	$4,756
Birmingham Township	9/29/2017	10	$3,021,000	$1,922
Caln Township	9/29/2017	53	$16,246,000	$1,502
Charlestown Township	9/29/2017	11	$2,803,000	$518
Coatesville City	9/29/2017	17	$5,218,000	$2,618
Downingtown Borough	9/29/2017	152	$38,656,000	$1,985
East Bradford Township	9/29/2017	12	$2,525,000	$1,247
East Brandywine Township	9/29/2017	16	$3,601,000	$982
East Caln Township	9/29/2017	8	$4,073,000	$9,504
East Coventry Township	9/29/2017	18	$5,136,000	$1,062
East Fallowfield Township	9/29/2017	12	$3,967,000	$518
East Goshen Township	9/29/2017	102	$19,778,000	$322
East Marlborough Township	9/29/2017	14	$4,542,000	$770
East Nantmeal Township	9/29/2017	1	$172,000	$611
East Nottingham Township	9/29/2017	5	$1,116,000	$1,194
East Pikeland Township	9/29/2017	9	$3,492,000	$1,199
Easttown Township	9/29/2017	44	$14,522,000	$569
East Vincent Township	9/29/2017	15	$3,713,000	$1,890
East Whiteland Township	9/29/2017	21	$6,289,000	$905
Elk Township	9/29/2017	0	$0	$0
Elverson Borough	9/29/2017	1	$350,000	$488
Franklin Township	9/29/2017	8	$2,045,000	$1,137
Highland Township	9/29/2017	0	$0	$0
Honey Brook Borough	(No SFHA)	N/A	N/A	N/A
Honey Brook Township	9/29/2017	8	$1,364,000	$773
Kennett Township	9/29/2017	8	$2,285,000	$1,924
Kennett Square Borough	9/29/2017	16	$4,629,000	$1,483
London Britain Township	9/29/2017	3	$982,000	$1,972
Londonderry Township	9/29/2017	3	$1,050,000	$381
London Grove Township	9/29/2017	17	$5,761,000	$1,816
Lower Oxford Township	9/29/2017	3	$576,000	$1,333
Malvern Borough	9/29/2017	11	$3,307,000	$291
Modena Borough	9/29/2017	9	$1,895,000	$2,359
New Garden Township	9/29/2017	19	$7,258,000	$1,551
Newlin Township	9/29/2017	9	$2,325,000	$1,270
New London Township	9/29/2017	2	$1,008,000	$2,178
North Coventry Township	9/29/2017	40	$9,008,000	$2,535
Oxford Borough	9/29/2017	1	$105,000	$532
Parkesburg Borough	9/29/2017	14	$4,031,000	$752

TABLE 5.2-2 NFIP Participation in Chester County (FEMA, 2026; PEMA, 2025).

MUNICIPALITY	EFFECTIVE FIRM DATE	NUMBER OF POLICIES	TOTAL COVERAGE	AVERAGE PREMIUM
Penn Township	9/29/2017	6	$1,771,000	$1,199
Pennsbury Township	9/29/2017	40	$13,144,000	$3,101
Phoenixville Borough	9/29/2017	14	$5,445,000	$4,638
Pocopson Township	9/29/2017	6	$1,304,000	$493
Sadsbury Township	9/29/2017	18	$5,589,000	$1,178
Schuylkill Township	9/29/2017	8	$1,364,000	$773
South Coatesville Borough	9/29/2017	0	$0	$0
South Coventry Township	9/29/2017	0	$0	$0
Spring City Borough	9/29/2017	8	$2,034,000	$1,676
Thornbury Township	9/29/2017	7	$1,890,000	$767
Tredyffrin Township	9/29/2017	137	$38,179,000	$899
Upper Oxford Township	9/29/2017	3	$745,000	$2,336
Upper Uwchlan Township	9/29/2017	18	$5,224,000	$830
Uwchlan Township	9/29/2017	25	$7,101,000	$525
Valley Township	9/29/2017	12	$2,125,000	$1,383
Wallace Township	9/29/2017	5	$1,230,000	$539
Warwick Township	9/29/2017	9	$2,326,000	$1,320
West Bradford Township	9/29/2017	9	$2,989,000	$878
West Brandywine Township	9/29/2017	7	$2,583,000	$1,036
West Caln Township	9/29/2017	5	$1,546,000	$476
West Chester Borough	9/29/2017	37	$10,635,000	$735
West Fallowfield Township	9/29/2017	3	$732,000	$739
West Goshen Township	9/29/2017	51	$20,021,000	$881
West Grove Borough	9/29/2017	1	$350,000	$620
West Marlborough Township	9/29/2017	2	$358,000	$710
West Nantmeal Township	9/29/2017	3	$456,000	$372
West Nottingham Township	9/29/2017	1	$250,000	$1,372
West Pikeland Township	9/29/2017	13	$4,271,000	$768
West Sadsbury Township	9/29/2017	0	$0	$0
West Vincent Township	9/29/2017	13	$3,281,000	$819
West Whiteland Township	9/29/2017	75	$24,178,000	$1,566
Westtown Township	9/29/2017	19	$5,372,000	$605
Willistown Township	9/29/2017	38	$10,287,000	$664
TOTAL		1,287	$365,056,000	$1,354

For a community to participate in the NFIP, it must adopt and enforce floodplain management regulations that meet or exceed the minimum NFIP standards and requirements. These standards are intended to prevent loss of life and property, as well as economic and social hardships that result from flooding. Once FEMA provides communities with flood hazard information upon which floodplain management regulations are based, the community is

required to adopt a floodplain ordinance that meets or exceeds the minimum NFIP requirements.

All NFIP participating communities in Chester County have adopted stand-alone ordinances. In addition, all of the 73 municipalities in the county have their own floodplain administration programs and are responsible for enforcing them. No enforcement work is outsourced to the county, but some municipalities use consultants. This is the same for zoning ordinances and subdivisions and land use ordinances (SALDOs). There is no county level zoning or subdivision ordinance. Local municipalities are responsible for all third party LOMR requests to either be: 1) submitted to FEMA through the local municipality, or 2) provided with evidence that the local municipality has been notified of the LOMR request to FEMA.

The county makes FIRMs and FIS Reports available to the public for review online at https://www.chesco.org/3458/FEMA-Floodplains. The Chester County Water Resources Authority also provides assistance in viewing FIRMs and FIS Reports.

An important aspect of these regulations are substantial damage and substantial improvement determinations, which are required by local floodplain management ordinances. These provisions must be in place for residents of a community to purchase flood insurance through the NFIP. The determination about whether a structure is "substantially damaged" is made at the local government level, generally by a building official or floodplain manager. Substantial damage applies to a structure in the SFHA for which the total cost of repairs is 50% or more of the structure's market value before the disaster occurred, regardless of the cause of damage. This percentage could vary among jurisdictions but must not be below NFIP standards. Preliminary damage assessments conducted by Chester County after a disaster can be used when making substantial damage determinations. If a building within the floodplain is determined to be substantially damaged after a disaster, it will need to be brought into compliance through methods such as elevating the structure and floodproofing utilities. A structure is "substantially improved" when any reconstruction, rehabilitation, or other improvement that costs at least 50% of the structure's market value is completed. Substantial improvement regulations require these structures to be built to flood-resistant standards, which often includes elevating the structure up to or above the base flood elevation designated by FEMA. These should be monitored by the local community in order to stay in compliance with the NFIP. Municipalities typically enforce these regulations through a designated Floodplain Administrator. In addition, zoning officers or building code officials may enforce these regulations through the permit process. These officials may also be the designated Floodplain Administrator. More information on how municipalities enforce these regulations can be found in NFIP Survey responses located in **Appendix C.**

Table 5.2-3 below presents the designated individual or agency responsible for implementing the requirements of the NFIP for each participating municipality. In some cases, municipalities have contracts in place for floodplain management. DARA is not eligible to participate in the NFIP.

TABLE 5.2-3 Floodplain Administrators by Municipality (PA DCED, 2025).

MUNICIPALITY	INDIVIDUAL OR AGENCY
Atglen Borough	Craig Kologie, Castle Valley Consultants
Avondale Borough	Sharon Norris
Birmingham Township	Mark Gordon
Caln Township	Raymond Stackhouse
Charlestown Township	Linda Csete
Coatesville City	Zoning Officer
Downingtown Borough	JMR Engineering
East Bradford Township	Ayman Shehata
East Brandywine Township	Luke Reven
East Caln Township	Michael O'Brien
East Coventry Township	Michael Cosentino
East Fallowfield Township	Scott Swichar
East Goshen Township	Kelly Krause
East Marlborough Township	Charles Shock
East Nantmeal Township	LTL. Consultants, LTD
East Nottingham Township	Rachel Greer
East Pikeland Township	Kimberly Moretti
Easttown Township	Don Curley, PhD, PE, AICP
East Vincent Township	Haley Baer
East Whiteland Township	John Mateja
Elk Township	Michael Corcoran
Elverson Borough	Kraft Municipal Group
Franklin Township	Pennoni Engineering
Highland Township	Ted Jasiniski
Honey Brook Borough	Matthew Halvorsen
Honey Brook Township	Jennifer McConnel
Kennett Township	Kate Morgenstern
Kennett Square Borough	Rob Moran
London Britain Township	Dave Gargula
Londonderry Township	Louis Simone
London Grove Township	Kenneth Battin
Lower Oxford Township	Deborah J. Kinney
Malvern Borough	Nicole S. Whitaker
Modena Borough	Jennifer Daywalt
New Garden Township	Pennoni Engineering
Newlin Township	Craig Kologie
New London Township	Michael Corcoran
North Coventry Township	LTL Consultants
Oxford Borough	Pauline Garcia-Allen
Parkesburg Borough	Arro Consulting
Penn Township	Karen Versuk

TABLE 5.2-3 Floodplain Administrators by Municipality (PA DCED, 2025).

MUNICIPALITY	INDIVIDUAL OR AGENCY
Pennsbury Township	Russell Drumheller
Phoenixville Borough	E. Jean Krack
Pocopson Township	Craig Kologie
Sadsbury Township	Tammy Russell
Schuylkill Township	Kimberly J. Yocom
South Coatesville Borough	Steven Plaugher
South Coventry Township	Amanda Shaner
Spring City Borough	Kisha Tyler
Thornbury Township	Mike Conrad
Tredyffrin Township	Stephen Burgo
Upper Oxford Township	Jane Daggett
Upper Uwchlan Township	Rhys Lloyd
Uwchlan Township	Tara Giordano
Valley Township	Patrice Proctor
Wallace Township	Craig Kologie, Castle Valley Consultants
Warwick Township	Zoning Officer
West Bradford Township	Chris Adamek
West Brandywine Township	Dale Barnett
West Caln Township	Kim Milane-Sauro
West Chester Borough	Sean Metrick
West Fallowfield Township	Solanco Engineering Associates, LLC
West Goshen Township	Bryan Kulakowsky
West Grove Borough	Greg McCummings
West Marlborough Township	Yerkes Engineering
West Nantmeal Township	Castle Valley Consultants
West Nottingham Township	LTL Consultants
West Pikeland Township	Michael Cosentino
West Sadsbury Township	Edgar "Ted" Nelson
West Vincent Township	Tommy Ryan
West Whiteland Township	John Weller
Westtown Township	Zoning Officer
Willistown Township	Robert Smiley

Community Rating System

The NFIP's Community Rating System (CRS) provides discounts on flood insurance premiums in communities that establish floodplain management programs that go beyond NFIP requirements. Under the CRS, communities receive credit for more restrictive regulations; acquisition; relocation, or flood-proofing of flood-prone buildings, preservation of open space; and other measures that reduce flood damage or protect the natural resources and functions in floodplains.

The CRS was implemented in 1990 to recognize and encourage community floodplain management activities that exceed the minimum NFIP standards. Section 541 of the 1994 Act amends Section 1315 of the 1968 Act to codify the CRS in the NFIP, and expands the CRS goals to specifically include incentives to reduce the risk of flood-related erosion and to encourage measures that protect natural and beneficial floodplain functions. These goals have been incorporated into the CRS, and communities now receive credit toward premium reductions for activities that contribute to them.

Under CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that meet a minimum of three of the following CRS goals:

- Reduce flood losses.
- Reduce damage to property.
- Protect public health and safety.
- Prevent increases in flood damage from new construction.
- Reduce the risk of erosion damage.
- Protect natural and beneficial floodplain functions.
- Facilitate accurate insurance rating.
- Promote the awareness of flood insurance.

There are 10 CRS classes that provide varied reduction in insurance premiums. Class 1 requires the most credit points and gives the largest premium reduction; Class 10 receives no premium reduction. CRS premium discounts on flood insurance range from 5% for Class 9 communities up to 45% for Class 1 communities. The CRS recognizes 18 creditable activities that are organized under four categories: Public Information, Mapping and Regulations, Flood Damage Reduction, and Flood Preparedness.

Currently, no Chester County municipalities participate in the CRS Program. Based on conversations with the county and the municipality, the administrative documentation procedures and their associated costs may be a hindrance to municipalities in using this program. When applicable, the county will help provide information on the program to interested municipalities. CCWRA is tentatively exploring ways in which the county can further support communities in enrolling in the program.

5.2.2. Administrative and Technical Capability

Administrative capability is described by an adequacy of departmental and personnel resources for the implementation of mitigation-related activities. Technical capability relates to an adequacy of knowledge and technical expertise of local government employees or the ability to contract outside resources for this expertise to effectively execute mitigation activities. Common examples of skill sets and technical personnel needed for hazard mitigation include: planners with knowledge of land development/management practices, engineers or professionals trained in construction practices related to buildings and/or infrastructure (e.g. building inspectors), planners or engineers with an understanding of natural and/or human caused hazards, emergency managers, floodplain administrators, land surveyors, scientists

familiar with hazards in the community, staff with the education or expertise to assess community vulnerability to hazards, personnel skilled in geographic information systems, resource development staff or grant writers, and fiscal staff to handle complex grant application processes.

These capabilities can exist at the municipal level, but municipalities are often further supported by county, regional, state, and federal administrative and technical capabilities. The majority of support agencies and resources have been identified and referenced throughout this HMP update.

County Administrative and Technical Capabilities

- The Chester County Department of Emergency Services (DES) maintains a strong emergency management capability that supports Chester County. The county operates an emergency communication center and activates its own emergency operations center (EOC) during emergencies. In addition, the county provides or supports emergency service programs and measures, including emergency response; training coordination and administration; disaster response planning, coordination, recovery, and mitigation; hazardous materials emergency response; and fire prevention and investigation. Capabilities include the 9-1-1 center, Pulsepoint, EOC, emergency service measures, emergency response planning, public information programs, and GIS services, which are described in the sections below.

- The Chester County Planning Commission partners with federal, state, and regional agencies, as well as local municipalities. Their main goal is to improve the quality of life of all county residents, as outlined in their comprehensive plan, Landscapes3. The Chester County Planning Commission provides technical assistance to municipalities, which can be found on their Municipal Corner page. Technical assistance can be awarded through programs like the Vision Partnership Program. The Planning Commission also offers grants, planning guides, and education and outreach services. This page houses planning resources, eTools, and project examples.

  The CCPC must partner with all local municipalities for all subdivision and land development proposals, in accordance with the Pennsylvania Municipalities Planning Code (Act 247). The County Planning Commission must review, approve, and endorse all subdivision and land development proposals before municipalities can take action. The county has created a subdivision and land development activity tracking map and also maintains monthly reports.

  The commission is also required to review local municipality sewage facility plans and amendments, according to the Pennsylvania Sewage Facility Act (Act 537). The Chester County Planning Commission reviews all agricultural security area proposals to comply with the Pennsylvania Agricultural Security Area Law (Act 43). The county planning commission encourages local leaders to meet with them for planning ideas by creating and submitting community sketch plans.

- The Chester County Board of Commissioners established the Chester County Water Resources Authority (CCWRA) in 1961 under the PA Municipal Authorities Act as a county-wide municipal authority for the purposes of providing flood protection and water resources management for Chester County. CCWRA owns and operates four regional flood control facilities that provide flood protection for 23 municipalities, and a water supply reservoir that serves as a water source for the greater Coatesville region. CCWRA provides planning and technical information; guidance; and assistance to municipalities in other aspects of water resources management, including flood mitigation, stormwater management, water supply planning, source water management and protection, groundwater management and protection, and stream water quality restoration and protection.

  In 2024, CCWRA received a state-funded Act 167 Stormwater Management grant for additional planning efforts including: developing an interactive stormwater "hot spots" map; conducting a baseline inventory of publicly owned stormwater infrastructure (basins, pipes, etc.) and conducting additional flood studies for priority sub watersheds. In 2025, CCWRA partnered with the Brandywine Conservancy to complete the Brandywine Flood Study and have continued to implement recommendations from the study. In addition, CCWRA also updates and provides Emergency Action Plans for four flood control facilities categorized as high hazard dams to municipalities and other stakeholders and implements the Countywide Stormwater Management Plan. CCWRA runs numerous education and outreach events, including workshops, festivals and community days.

- The mission of the Chester County Health Department is to provide personal and environmental health services to residents and visitors so that they may grow, live, and work in healthy and safe communities. The Health Department is responsible to the County Commissioners through a five-member Board of Health, made of Chester County residents. Services are available to all Chester County residents regardless of race, color, religious creed, ancestry, national origin, age, handicap, or sex. They help mitigate and respond to public health emergencies, including pandemics. They may also assist in communicating information and educating residents on risks associated with certain hazards.

- The Chester County Department of Human Services houses multiple departments to support their residents: Aging; Children, Youth, and Families; Community Development; Community Transit; Drug & Alcohol; Human Needs Network; Managed Behavior Healthcare; and Veterans Affairs. This department is described in further detail under the socially vulnerable population section.

- The Chester County Agricultural Land Preservation Board manages the Commonwealth Agricultural Conservation Easement Purchase Program and the Chester County Challenge Grant Program. These programs help the county preserve viable agricultural

lands and protect the county's agriculture economy and resources, which are particularly vulnerable to the natural hazards discussed throughout the Risk Assessment.

- The Chester County Conservation District works with landowners and land users to protect the county's natural resources. They assist builders, contractors, farmers and residents with protecting clean water, maintaining healthy farming soils, and sustaining other natural resources through education and technical assistance.
- The Chester County Economic Development Council promotes local business within Chester County. They assist with financing solutions, such as helping local business secure state and local funding programs and grants. The council also helps businesses who are interested in relocating to Chester County, recruiting local employees, and assists start-ups and entrepreneurs through the county's Ideas x Innovation Network (i2n), which also partners with Delaware County.
- The Chester County Local Emergency Planning Committee focuses on protecting the county from hazardous materials. This committee helps the county stay compliant under state and federal law and provides public outreach and training for safe management of hazardous materials.
- The Transportation Management Association of Chester County advances safe and equitable multimodal transportation solutions. They provide resources, collaborate with public, private, and non-profit sectors, and implement best practices for transportation, such as bike and pedestrian safety, walking trails, and public transportation infrastructure.

Chester County also assists in the preparation of local (municipal) EOPs and in planning for emergency preparedness and response regionally for medical facilities, dams, airports, schools, day care and special needs facilities, and special events, such as concerts, parades, etc. The county also supports county and regionally planning for pandemics, mass casualty/fatality incidents, terrorism events. Additionally, in cooperation with the American Red Cross, the county has designated shelters that may be used during emergencies and disasters.

Municipal Administrative and Technical Capabilities

Based on assessment results, municipalities in Chester County have mostly moderate to limited administrative and technical staff needed to conduct hazard mitigation-activities. The municipalities vary in staff size, resource availability, fiscal status, service provision, population, overall size, and vulnerability to the profiled hazards. Each municipality carries out its own daily operations and provides various community services according to their local needs and limitations. For example, Oxford Borough reported that they have instituted annual life safety inspections of non-residential properties. Some of these municipalities have formed cooperative agreements and work jointly with their neighboring municipalities to provide such services as police protection, fire and emergency medical response, solid waste disposal, recreational opportunities, wastewater treatment, water supply management and infrastructure maintenance. Many jurisdictions rely on consulting firms for GIS personnel, scientists, and land

surveying capabilities. This means that jurisdictions may only have access to their provider's capabilities when there is budget available. All municipalities in the county have an identified emergency management coordinator, although some of these coordinators are responsible for more than one jurisdiction. The current administrative and technical capabilities may create a challenge for some municipalities to expand or improve their current overall capabilities. That said, the county's capabilities in this area can supplement and even support the municipalities' ability to expand their own.

Engineering

A municipal engineer performs duties as directed in the areas of construction, reconstruction, maintenance, and repair of streets, roads, pavements, sanitary sewers, bridges, culverts, and other engineering work. The municipal engineer reviews and/or prepares plans, specifications, and estimates of the work undertaken within the municipality.

When staff responsible for planning and engineering the structures are familiar with the hazards that can impact the community, there is a great potential for synergy. These staff members will design communities and structures with hazard impacts in mind, resulting in more sustainable communities and stronger structures. Although some individual municipalities do not have a staff member with an understanding of hazards (natural or otherwise), the County Planning Department and CCPC can provide consultation in many facets of planning and mitigation of natural hazards.

Floodplain Administrator

Floodplain Administrators (FPAs) should be knowledgeable on the rules and regulations of development in a floodplain and be able to provide vast amounts of information on the risks and impacts of building within those hazard areas. They should be an integral part of mitigation planning and should make recommendations based on the needs and conditions of the community. All 73 municipalities participate in the NFIP and have a designated FPA. In some municipalities floodplain management duties are assigned to a staff position with several roles, which maybe a barrier to enforcement of floodplain regulations. Floodplain Administrators may be contracted engineering firms.

Grant-Writing Staff or Other Fiscal Staff

Few communities have the financial resources that are required to implement all of their potential programs (e.g., mitigation measures). Therefore, they must rely on grants and other fundraising opportunities to obtain the money necessary to perform mitigation projects. Employing or having access to staff specializing in grants management will help the community ensure that it does not lose a grant opportunity because it did not meet the administrative requirements of that grant.

This may be difficult but having a specialist on staff will likely increase the community's chances of receiving funding. In meetings with municipalities, grant-writing was a capability concern raised by attendees. The Chester County Economic Development Council helps businesses and

municipalities with writing grant proposals and administering funds. CCPC also provides assistance on grant writing.

Staff with Experience Using Mapping (GIS) Software

Spatial and tabular data are linked in a computerized, visual format through the use of sophisticated GIS technology. Through GIS projects, it is possible to accomplish environmental restoration, economic development, Smart Growth land use planning, infrastructure development, and training to use GIS for decision support. Chester County has GIS capabilities and can assist municipalities as needed. The county has a GIS HUB that provides municipalities and their residents access to a variety of relevant land use, assessment, and floodplain layers/data. Various maps can be accessed at the following link: https://chester-county-s-gis-hub-chesco.hub.arcgis.com/

Municipal Planning Commissions

As established by the Municipalities Planning Code (MPC), municipal planning commissions advise municipal staff on matters relating to land use, zoning, or development decisions, providing recommendations for action after reviewing plans, proposals, and applications. Through this, they play a role in guiding community development. Planning commissions may also be responsible for implementing any general or comprehensive plans in the community. Members are typically appointed by the municipal board or council. Currently 70 of the 73 municipalities in Chester County have planning commissions. Only Avondale Borough, Modena Borough, and West Grove Borough do not.

The 36 municipalities that returned assessment forms were more likely to rate their administrative capabilities as limited or moderate, with only three rating themselves as having high administrative capabilities. Table 5.2-4 below shows the self-reported Administrative and Technical capabilities. An 'X' indicates that the municipality has that administrative and technical capability in place; a 'U' indicates that the administrative and technical capability is under development; an asterisk (8) indicates that the municipality did not provide information on the capability so their information from the last plan was used instead.

Table 5.2-4 Reported Administrative and Technical Capabilities

MUNICIPALITY	ENGINEERS	GIS PERSONNEL	GRANT WRITERS/ FISCAL STAFF
Atglen Borough*			
Avondale Borough*			
Birmingham Township	X	X	X
Caln Township	X		X
Charlestown Township	X		X
Coatesville City	X	X	X
Downingtown Borough*	X	X	
East Bradford Township*	X	X	X
East Brandywine Township*	X	X	
East Caln Township	X		

Table 5.2-4 Reported Administrative and Technical Capabilities

MUNICIPALITY	ENGINEERS	GIS PERSONNEL	GRANT WRITERS/ FISCAL STAFF
East Coventry Township	X		X
East Fallowfield Township*	X	X	
East Goshen Township*	X		X
East Marlborough Township*			
East Nantmeal Township*	X		
East Nottingham Township	X	X	
East Pikeland Township*			X
Easttown Township*	X	X	
East Vincent Township*	X	X	
East Whiteland Township	X		X
Elk Township*	X		
Elverson Borough	X		X
Franklin Township*	X	X	
Highland Township*	X		
Honey Brook Borough	X		X
Honey Brook Township	X		X
Kennett Township	X	X	X
Kennett Square Borough*	X		
London Britain Township	X		X
Londonderry Township*			
London Grove Township*	X	X	
Lower Oxford Township	X		
Malvern Borough*	X	X	
Modena Borough*	X	X	
New Garden Township*	X		X
Newlin Township*	X		
New London Township	X		
North Coventry Township*	X		X
Oxford Borough	X	X	X
Parkesburg Borough*	X	X	X
Penn Township*	X		
Pennsbury Township			X
Phoenixville Borough*	X	X	
Pocopson Township	X		U
Sadsbury Township*	X	X	
Schuylkill Township	X	X	
South Coatesville Borough	X	X	
South Coventry Township*	X		
Spring City Borough	X		X
Thornbury Township	X		

Table 5.2-4 Reported Administrative and Technical Capabilities

MUNICIPALITY	ENGINEERS	GIS PERSONNEL	GRANT WRITERS/ FISCAL STAFF
Tredyffrin Township	X	X	
Upper Oxford Township*			
Upper Uwchlan Township	X	X	X
Uwchlan Township	X	X	X
Valley Township	X		X
Wallace Township*	X		
Warwick Township*	X		
West Bradford Township	X		X
West Brandywine Township*	X		
West Caln Township	X		U
West Chester Borough*			
West Fallowfield Township	X		
West Goshen Township*	X		
West Grove Borough*			
West Marlborough Township	X	X	
West Nantmeal Township	X		X
West Nottingham Township*	X		
West Pikeland Township*	X	X	
West Sadsbury Township	X		
West Vincent Township	X	X	X
West Whiteland Township	X	X	X
Westtown Township	X	X	X
Willistown Township*	X		
Downingtown Area Regional Authority**	X		

**Did not submit 2026 form; entries are based on 2021 HMP; ** Did not submit form for 2021 HMP*

5.2.3. Financial Capability

A critical part of implementing any plan is having the financial resources to accomplish the projects identified. The implementation of mitigation actions requires time and fiscal resources. While some mitigation actions are less costly than others, it is important that money is available locally to implement policies and projects. Financial resources are particularly important if communities need to have local matching funds for state or federal grant funding. Based on the *Capability Assessment Survey* results received, most municipalities within the county perceive fiscal capability to be limited or moderate. No communities listed their fiscal capability as high. Additionally, none of the municipalities are identified as "fiscally distressed" using the Pennsylvania Municipalities Financial Recovery Act (Act 47 of 1987) criteria.

Though the smaller, less populous municipalities do not have sufficient budgets to do costly mitigation projects without financial assistance, this does not preclude these municipalities from participating in hazard mitigation activities. Cooperative arrangements, coordinated efforts, and resource efficiency may serve as effective avenues for overcoming fiscal constraints and accomplishing hazard mitigation objectives at the local level.

There are also partnering opportunities at the local level to implement mitigation. These would include a Council of Governments (COG), which is a general, multi-purpose, cooperative organization established to enable a group of municipalities to work together on mutually beneficial projects. A COG has a broad responsibility; it may study and propose new joint programs and projects and is almost always composed of elected officials. A variety of organizations work across municipal boundaries within Chester County and with the Western Chester County COG. In addition, regional emergency management groups have been developed in various areas, usually centered on school district boundaries.

Financial support for mitigation actions is often provided by the Commonwealth of Pennsylvania and the federal government.

Pennsylvania administered programs include:

- Municipal Assistance Program (MAP), which provides grant funds to implement a variety of services and improvements to manage development with intergovernmental strategies.
- Land Use Planning and Technical Assistance Program, which provides grant funds for the preparation of community comprehensive plans and ordinances to implement them.
- Flood Mitigation Program (FMP), which provides grants and technical assistance for projects that address flood mitigation.
- The Growing Green Plus Grants Program is an extension to the Growing Greener Grant Program administered by the PA DEP. Programs covered with these funds are: Growing Greener Watershed Restoration and Protection, Surface Mining Conservation and Reclamation Act Bond Forfeiture, and Abandoned Mine Drainage Set-Aside Grants.
- The Environmental Education grant administered by the PA DEP was established by the Environmental Education Act of 1993, which mandates that five percent of all pollution fines and penalties collected annually be set aside for environmental education.
- The Alternative Fuels Incentive Grant (AFIG) Program was established by the PA DEP in 1992 under Act 166. This program provides funding to create new markets for alternative fuels in Pennsylvania. Municipalities and agencies are eligible to apply for grant funding for alternative fuels through this grant program.
    - Individuals may be eligible for funding through the Alternative Fuel Vehicle Rebate program administered by the PA DEP. The program provides rebates for

individuals when purchasing new, pre-owned, and demonstration vehicles that use alternative fuel sources such as hydrogen fuel cells, compressed natural gas, or battery electric. AFV Rebates have been awarded to several individuals in Chester County.

- Pennsylvania Infrastructure Investment Authority (PennVEST) administers a low interest loan and grant program for new construction or improvements to publicly or privately-owned drinking water, storm water, or sewage treatment facilities, as well as non-point source pollution prevention best management practices (BMPs).
- DCNR administers Community Conservation Partnerships Program Grants. This program is funded with a variety of state and federal funding sources, including the Keystone Recreation, Park and Conservation Fund (Key 93) which encompasses several environmental and conservation related funds.
- DCED manages the PA Small Water and Sewer Grant which funds small water, sewer, storm sewer, and flood control infrastructure projects. Funding is made available by the Commonwealth Financing Authority.

Federal programs that support mitigation include:

- FEMA's Hazard Mitigation Assistance Program, which provides grants for cost-effective mitigation projects either before or after a disaster declaration has occurred. Currently, the available programs are the Flood Mitigation Assistance program (FMA), Hazard Mitigation Grant Program (HMGP), and HMGP Post Fire. FMA provides mitigation funding for NFIP-insured properties on an annual basis, while HMGP and HMGP Post Fire provide mitigation funding after Presidentially declared disasters and Fire Management Assistance Grant declared disasters, respectively.
- Community Development Block Grants (CDBG), which provides funds to address a wide range of community development needs, including community development activities directed toward revitalizing neighborhoods, economic development, and providing improved community facilities and services. CDBG funds may be used for activities such as acquisition of real property; relocation and demolition; rehabilitation of residential and non-residential structures; and construction of public facilities and improvements to facilities such as water, sewer, and streets. After a major disaster, Congress may appropriate CDBG Disaster Recovery (CDBG-DR) funds, which many Pennsylvania communities leverage for both recovery and resilience. Since 2021, this has included a mitigation set-aside to focus efforts on long-term risk reduction.
- Weatherization Assistance Program, which enables low-income households to make their homes more energy efficient. This can help mitigate extreme temperatures. Upgrades included in weatherization can also support reducing utility interruptions.

- The Emergency Watershed Protection (EWP) Program is administered by the USDA Natural Resources Conservation Services to help communities quickly address serious and long-lasting damage to infrastructure and the environment. These funds are allocated soon after disasters to assist with immediate recovery needs.
- The Homeland Security Grant Program (HSPG) assists communities in implementing the National Preparedness System by supporting the building, sustainment, and delivery of core capabilities essential to achieving the National Preparedness Goal of a secure and resilient Nation. The HSGP's allowable costs support efforts to build and sustain core capabilities across the prevention, protection, mitigation, response, and recovery, including priorities towards preventing terrorism and enhancing state and major urban area fusion centers.
- The Assistance to Firefighters Grant (AFG) administered by FEMA provides funds to help firefighters and other first responders obtain essential resources to protect the public and emergency responders in hazard events.

Besides federal and state programs, municipalities may have their own local programs to provide financial support for mitigation activities. These types of programs include:

- *Capital Improvement Planning:* Capital improvement plans are multiyear policy documents that identify needed capital projects and are used to coordinate the financing and timing of public improvements. Capital improvements relate to streets, stormwater systems, water distribution, sewage treatment, and other major public facilities. A capital improvement plan should be prepared by the respective county's planning commission and should include a capital budget. While the capital improvement plan is not a funding source, this budget identifies the highest priority projects recommended for funding in the next annual budget. The capital improvement plan is dynamic and can be tailored to specific circumstances. As such, during this update process, the county and its municipalities have been encouraged to consider the mitigation benefits associated with their known or anticipated capital projects to help prioritize their execution and to develop awareness that mitigation grants may be available to help fund such projects.
- *Special Purpose Taxes:* Communities may exercise their taxing authority to raise funds for any project they see fit. This includes special purpose taxes to fund mitigation measures. Spreading the cost of a community project among the community's taxpayers helps provide the greatest public good for relatively low individual cost.
- *Gas/Electric Utility Fees:* In the same way that special taxes can be levied to fund mitigation projects, a community can use another avenue for financing a project, which includes dedicating a portion of homeowners' gas and electric utilities fees to upgrade and maintain the related infrastructure. Burying transmission lines, thereby mitigating from the effects of winds and ice storms, is expensive. These fees help to offset that cost.

- *Water Authorities and Fees:* Water authorities are multipurpose authorities with water projects, many of which operate both water and sewer systems. The financing of water systems for lease back to the municipality is among the principal activities of the local government facilities' financing authorities. An operating water authority issues bonds to purchase existing facilities or to construct, extend, or improve a system. The primary source of revenue is user fees based on metered usage. The cost of constructing or extending water supply lines can be funded by special assessments against abutting property owners. Tapping fees also help fund water system capital costs. Water utilities are directly operated by municipal governments and by privately owned public utilities regulated by the Pennsylvania Public Utility Commission. The PA Department of Environmental Protection has a program to assist with consolidation of small individual water systems to make system upgrades more cost-effective.
- *Sewer Authorities and Fees:* Sewer authorities include multipurpose authorities with sewer projects. The authorities issue bonds to finance acquisition of existing systems or to finance construction, extension, and improvements. Sewer authority operating revenues originate from user fees. The fee frequently is based on the amount of water consumed, and payment is enforced by the ability to terminate service or the imposition of liens against real estate. In areas with no public water supply, flat rate charges are calculated on average use per dwelling unit.
- *Stormwater Utility Fees:* Stormwater utility fees are assessed and collected to offset the cost of maintaining and upgrading stormwater management structures such as drains, retention ponds, and culverts.
- *Development Impact Fees:* Development impact fees are one-time fees assessed to offset the cost of providing public services to a new development. They may be directed to fund new water or sewer infrastructure, roads, parks and recreational areas, libraries, schools, etc. required by a new development. If mitigation is taken into account during design and construction, the new infrastructure may be less vulnerable to hazard impacts.
- *General Obligation, Revenue, and/or Special Tax Bonds:* Jurisdictions may decide to dedicate general funds or use bonds as a financing mechanism to implement hazard mitigation projects.

The county provides funding for municipalities to fund comprehensive plans and other planning programs as outlined in the Landscapes3 plan through the Vision Partnership Program. Since 2018, this program awards two municipalities each year with a cash grant for plans, ordinances, ordinance amendments, and planning studies. This program also offers technical assistance, technical grants, and mini grants to municipalities. In addition, CCPC acts in accordance with Pennsylvania Acts 67 and 68 to direct state agencies to consider local land-use plans and ordinances for funding and creating permits for any state infrastructure or facilities.

Table 5.2-5 below summarizes the self-reported financial capabilities of municipalities in Chester County. An 'X' indicates that the municipality has that financial capability in place; a 'U' indicates that the financial capability is under development; a dash indicates that the municipality did not provide information on the capability.

Table 5.2-5 Reported Financial Capabilities

MUNICIPALITY	CAPITAL IMPROVEMENT PLANNING	DEVELOPMENT IMPACT FEES	GAS/ELECTRIC UTILITY FEES	GENERAL OBLIGATION, REVENUE, OR SPECIAL TAX BONDS	PARTNERING ARRANGEMENTS OR INTERGOVERNMENTAL AGREEMENTS	SPECIAL PURPOSE TAXES	STORMWATER UTILITY FEES	WATER/SEWER FEES
Atglen Borough*	X			X				
Avondale Borough*				X				
Birmingham Township	X			X				
Caln Township	U	X		X	X	X		X
Charlestown Township		X		X		X		
Coatesville City	X	X	X	X	X	X		X
Downingtown Borough*	X			X				
East Bradford Township*	X			X	X			
East Brandywine Township*	X	X		X	X	X		X
East Caln Township				X				X
East Coventry Township	X	X		X	X	X		X
East Fallowfield Township*				X				
East Goshen Township*	X	X		X				X
East Marlborough Township*				X				
East Nantmeal Township*				X				
East Nottingham Township				X		X		
East Pikeland Township*		X		X	X	X		
Easttown Township*	X			X				
East Vincent Township*	X			X				X
East Whiteland Township	X			X		X		
Elk Township*				X				
Elverson Borough	X	U	U	X	X	U	X	X
Franklin Township*	X		-	X				
Highland Township*				X				
Honey Brook Borough	X			X				X
Honey Brook Township	X	X		X	X	X		X

Table 5.2-5 Reported Financial Capabilities

MUNICIPALITY	CAPITAL IMPROVEMENT PLANNING	DEVELOPMENT IMPACT FEES	GAS/ELECTRIC UTILITY FEES	GENERAL OBLIGATION, REVENUE, OR SPECIAL TAX BONDS	PARTNERING ARRANGEMENTS OR INTERGOVERNMENTAL AGREEMENTS	SPECIAL PURPOSE TAXES	STORMWATER UTILITY FEES	WATER/SEWER FEES
Kennett Township	X	X	X	X	X	X	U	X
Kennett Square Borough*	X	X		X	X		X	
London Britain Township	X			X	X			X
Londonderry Township*				X				
London Grove Township*	X			X		X		X
Lower Oxford Township	U	U	X	X	X	X	X	X
Malvern Borough*	X			X				
Modena Borough*				X				
New Garden Township*	X	X		X	X	X		X
Newlin Township*				X				
New London Township				X				X
North Coventry Township*	X			X	X			
Oxford Borough	X	U		X	X		U	X
Parkesburg Borough*	X			X				
Penn Township*				X				
Pennsbury Township	X			X				
Phoenixville Borough*	X			X				
Pocopson Township	U			X	X	X		X
Sadsbury Township*	X			X				
Schuylkill Township	X	X	X	X	X	U	U	X
South Coatesville Borough	U	U	U	X	X	X	U	X
South Coventry Township*				X				
Spring City Borough				X				
Thornbury Township	U	U	U	X	U	U	U	X
Tredyffrin Township	X	X	X	X	X	X	X	X
Upper Oxford Township*		X		X	X			
Upper Uwchlan Township	X	X		X		X		X
Uwchlan Township	X	X	X	X	X	X	U	X
Valley Township	X		U	X	X	X	U	X
Wallace Township*				X				
Warwick Township*				X				

Table 5.2-5 Reported Financial Capabilities

MUNICIPALITY	CAPITAL IMPROVEMENT PLANNING	DEVELOPMENT IMPACT FEES	GAS/ELECTRIC UTILITY FEES	GENERAL OBLIGATION, REVENUE, OR SPECIAL TAX BONDS	PARTNERING ARRANGEMENTS OR INTERGOVERNMENTAL AGREEMENTS	SPECIAL PURPOSE TAXES	STORMWATER UTILITY FEES	WATER/SEWER FEES
West Bradford Township	X	X	X	X	X		X	X
West Brandywine Township*				X				X
West Caln Township	U	X	U	X	X	X	U	X
West Chester Borough*	X			X				
West Fallowfield Township				X				X
West Goshen Township*	X			X	X		X	X
West Grove Borough*				X				
West Marlborough Township	U			X	X			X
West Nantmeal Township	X	X	U	X	X	X	U	X
West Nottingham Township*				X	X	X		
West Pikeland Township*				X				
West Sadsbury Township				X	X			X
West Vincent Township	X	X		X	X	X		X
West Whiteland Township	X	X	U	X	X	U	U	X
Westtown Township	U	X		X	X	X		X
Willistown Township*	X			X	X			
Downingtown Area Regional Authority**	X				X			X

**Did not submit 2026 form; entries are based on 2021 HMP; ** Did not submit form for 2021 HMP*

5.2.4. Education and Outreach

Education and outreach programs and methods are used to implement mitigation activities and communicate hazard-related information. Examples include obtaining certification in existing, national programs like StormReady® and developing and communicating hazard awareness and safety information to residents.

At the municipal level, education and outreach capabilities vary. Some municipalities have the capability to handle outreach initiatives, while others rely on county resources. Several municipal websites post local plans and ordinances, and many municipalities post information regarding hazard-related topics. The local fire departments and emergency managers are active in the schools participating in programs, such as fire safety in the fall and attending other community

activities to conduct outreach through the Youth Fire and Injury Reduction and Education Program (Y-FIRE).

Reported education and outreach activities in Chester County are summarized below.

Training and Exercises

Chester County DES hosts many trainings and exercises for municipalities, first responders, emergency managers, and more. Most trainings are hosted at the Public Safety Training Campus (PSTC), which includes an academic building for classes and both a tactical village and firing range for training, More information, including training checklists and other resources, can be found at https://www.chesco.org/4870/Training-Exercise. DES has a website for scheduling and registration, which also provides the schedule for upcoming trainings: https://destraining.chesco.org/CVSFListView.aspx. According to the county, they completed 16 exercises (workshops, functionals, full scales) and 19 trainings (in and out of county) in 2025. Table 5.2-6 lists them, along with the date they occurred and the number in attendance. Not listed is Limerick Generating Stations Evaluation Exercise attended by DES in November 2025, hosted by Lehigh County. In addition to the events they host, DES also supports and attends community events. DES hosted the 2025 Law Enforcement Open House at the PSTC in September 2025.

Table 5.2-6 2025 Trainings and Exercises

DATE	TITLE	APPROXIMATE ATTENDANCE
EXERCISES		
1/17	AGCS Active Threat TTX	50
2/27	Civil Air Patrol TTX	50
3/17	AGCS Active Threat FSE	380
6/7	CERT Disaster Day Drills	20
8/6	CCSO Prisoner Transport Escape Workshop	15
8/8	CCP/PCM MCI Workshop/TTX	40
9/10	CCSO Prisoner Transport Escape TTX	15
9/23	Chester County FIRST Exercise Overview (Seminar)	25
9/24	CCP/PCM MCI FSE	60
10/1	Devereux Mapleton Active Threat TTX	60
10/16	Downingtown Flooding TTX	15
10/27	Pipeline FSE	Unknown
11/20	West Chester Area COG TTX	12
12/5	Haven Behavior Health Active Threat Seminar	10
12/10	CCSO Active Threat TTX	15
12/10	Arkema Fire Incident TTX	15
TRAININGS		

Table 5.2-6 2025 Trainings and Exercises

DATE	TITLE	APPROXIMATE ATTENDANCE
1/27 – 1/31	L101	22
2/18	EMA Quarterly Training Q1	46
2/24 – 2/28	Logistics SC	15
3/20	G191 (ICS/EOC Interface)	17
3/24 - 3/26	L102	22
3/27 – 3/28	L103	22
3/24	CERT (12 virtual sessions held)	240
4/7 - 4/11	K2300	30
4/30 – 5/1	L146 (Homeland Security Exercise and Evaluation Program (HSEEP))	19
5/14 – 5/15	G235 (Emergency Planning)	28
5/21 – 5/23	L105	20
5/27	EMA Quarterly Training Q2	33
6/9 – 6/13	Lean Six Sigma Green Belt	9
6/24 - 6/26	ICS 300 (Intermediate Incident Command)	30
7/14 – 7/18	Lean Six Sigma Black Belt	9
8/4 - 8/5	ICS 400 (Advanced Incident Command)	30
8/26	EMA Quarterly Training Q3	43
9/18 – 9/19	G271	27
10/15	G402	7
11/25	EMA Quarterly Training Q4	42

Maps and Geospatial Data

Flood maps and flood data, including 2017 digital maps for Chester County, are available on FEMA's Map Service Center website as well as at the Chester County Water Resources Authority. County and municipality maps, tax maps, and property assessment records are available at the Assessment Office and the GIS Office, and deeds are available at the Register and Recorder Office. The county's GIS HUB can be accessed at https://chester-county-s-gis-hub-chesco.hub.arcgis.com/.

Chester County Government Weekly Newsletter

This newsletter is available to residents to keep them updated on official news and information from the county, such as veterans program updates, election news, and stormwater education events. Residents can subscribe to this weekly newsletter through the county's website.

ReadyChesCo

ReadyChesCo is the county's official emergency notification system. This free service provides a source for emergency and government notifications through text messages, such as shelter-

in-place notifications, evacuation notices, missing persons notifications, and other emergency information. This program is run by the Chester County Department of Emergency Services.

Chester County Public Preparedness Guide

The Public Preparedness Guide is prepared by the Chester County Department of Emergency Services. This guide offers important information to residents on what to do during emergencies caused by events like severe weather, active shooter, and hazardous materials. It offers information on the county's pipelines, how to communicate with 911 services, and how families can plan for emergencies.

Outreach Projects

Several organizations (both public and private sector) have developed outreach projects, educational tools, and training programs. The county promotes both online and traditional in-person programs to appeal to as wide an audience as possible.

- ReadyPA Campaign: Established by the Commonwealth of Pennsylvania, www.readypa.org is a website that aims to prepare the public for times of disaster by providing education on the risks within Pennsylvania, template emergency plans and kits, and information on ways to get involved with community organizations to help others.
- Emergency management courses are provided through the county DES to local coordinators and elected officials, including Basic Orientation, Duties and Responsibilities of the Local Emergency Management Coordinator (LEMC), and Damage Assessment.

Firewise

Firewise is an optional recognition program that empowers neighbors to take action to reduce wildfire risk. It is a five-step, voluntary process that helps communities develop an action plan that minimizes wildfire risk and helps build more safely. The following communities identified themselves as Firewise communities: Birmingham Township, City of Coatesville, South Coatesville Borough, Uwchlan Township, Valley Township, and West Whiteland Township. Elverson Borough, Lower Oxford Township, Oxford Borough, Schuylkill Township, Thornbury Township, Tredyffrin Township, West Caln Township, West Marlborough Township, and West Nantmeal Township expressed interest in becoming Firewise communities.

StormReady®

The StormReady® program helps communities with communication and safety skills to prepare for storm events. Counties, Indian nations, universities and colleges, military bases, government sites, commercial enterprises and other groups that work to be better prepared through planning, education and awareness can become officially StormReady. The program is administered by the National Weather Service of the National Oceanic and Atmosphere Administration (NOAA).

The requirements to become an official StormReady® community are:

- Establish a 24-hour warning point and emergency operations center;
- Have more than one way to receive severe weather warnings and forecasts and to alert the public;
- Create a system that monitors weather conditions locally;
- Promote the importance of public readiness through community seminars;
- Develop a formal hazardous weather plan, which includes training severe weather spotters and holding emergency exercises.

Chester County and the Main Line Health System are both participants in the program. Longwood Gardens, located in East Marlborough, Kennett, and Pennsbury Townships, is a supporter of the program.

Chester County Planning Commission

The CCPC produces a planning and sustainability newsletter, available at https://www.chescoplanning.org/News/SustainabilityNews.cfm. They also host a biannual sustainability summit, the Chester County Sustainability Summit and Expo. The latest summit was held on May 17, 2025, at West Chester University's Sciences and Engineering Center. Agenda items included presentations on energy efficiency and sustainable landscapes along with university tours and exhibitions by 40 vendors. Lastly, CCPC provides updates to the Pipeline Information Center website.

Local Emergency Planning Committee

The Local Emergency Planning Committee (LEPC) for the Emergency Planning District of Chester County is a partnership to protect the public against risks from hazardous materials. The following features of the LEPC demonstrate the capability of the LEPC to support county emergency management and preparedness initiatives.

These LEPCs must include elected officials; fire, police, civil defense, and public health professionals; and environmental, hospital, and transportation officials, as well as representatives of the facilities, community groups, and the media. The objectives of Chester County's LEPC include:

1. Establish procedures for receiving and processing requests from the public for information under The Emergency Planning and Community Right to Know Act of 1986; Develop, implement, and exercise the emergency plan required by The Emergency Planning and Community Right to Know Act of 1986; and carry out the duties enumerated in Act 1990- 165.
2. Develop and organize a systematic, efficient, and effective method for providing public education and training opportunities to residents to make communities safer, stronger, and better prepared to respond to the threats of terrorism, crime, public health issues and disasters of all kinds.

3. Chemicals and other hazardous materials are here to stay. Our economy and lifestyle depend on their use. Most of us are aware of the risks involved but accept them because there are prevention and response plans in place that minimize this risk. The Chester County LEPC is very active in carrying out their responsibilities.
4. As a citizen, you can be aware of the risks that affect you. Support industry efforts to reduce or manage the risk. Manage the risk at home. Read labels; buy only what you really need to do the job. Volunteer as an emergency responder with your local fire company or ambulance service.
5. Match the needs of emergency services first responders with the skills and abilities of volunteers.
6. Promote Citizen Corps activities, programs, and projects.
7. Enhance community awareness and Citizen Corps participation (Chester County LEPC, n.d.).

Municipal Websites

Each municipality in Chester County has a website that hosts a variety of information. Websites typically display information such as news, public notices, calendars, agendas and minutes from municipal meetings, links to important resources, and newsletters. Websites can be used to communicate information to residents and house mitigation resources such as brochures or pamphlets on how residents can engage in property-level mitigation activities to protect themselves from hazard events.

Links to each municipality's website can be found on the county website at https://www.chesco.org/1742/Municipality-Listing.

5.2.5. Socially Vulnerable or Underserved Communities

This section provides an overview of the county's capabilities of service and assistance to socially vulnerable and underserved communities. These capabilities may be leveraged to mitigate the impacts of hazards discussed in this plan.

The Chester County Department of Human Services provides a number of services through different programs and departments that directly support vulnerable and underserved populations.

- The Chester County Department of Aging Services assists residents aged 60 or over and their families for housing, independent living, and abuse reporting. They manage community services to enable residents to remain in their homes, offer caregiver support, and make assessments for nursing home placement. This department also provides personal home care services and protective services, such as investigating reports of abuse and neglect for residents aged 60 and over.
- Chester County Children, Youth, and Families promotes the safety, well-being, and permanency of all children in Chester County through collaboration with families and the community. The agency will also intervene to provide for children who cannot be

assisted through family. In addition, the county also runs four specialized programs for youth residents out of their Youth Center.

- The Chester County Department of Community Development (DCD) assists residents with affordable housing, provides outreach to the homeless, and invests in neighborhood revitalization.
- Chesco Connect provides community transportation services, specializing in door-to-door transportation for residents. Residents aged 65 and older; residents with disabilities, and residents with a Medical Assistance card can request services for a reduced fare. This program is also open to the general public, but they must pay the full fare.
- The Chester County Department of Drug and Alcohol Services provides comprehensive care for residents and communities dealing with substance abuse. The department has been designated by the Pennsylvania Department of Drug and Alcohol Programs as the Single County Authority (SCA) for drug and alcohol services in prevention, intervention, and treatment.
- The Chester County Human Needs Network provides mental health emergency services. The department partners with PA211 to provide a single contact point for information and referral support for 211 callers, who are calling for health, housing and human services. The department also assists residents with 988 suicidal calls and Mobile Crisis Response Teams. In addition, Chester County also has a Managed Behavioral Healthcare department for mental health and other services for vulnerable residents.
- The Chester County Mental Health/Intellectual and Developmental Disabilities Department provides a full range of mental health and intellectual disability services responsive to individual and community needs. This department also provides early intervention services for infants and toddler and early childhood services.
- The Chester County Veteran Affairs Office serves veterans and their families by providing services such as disability compensation, medical coverage, tax exemptions, temporary assistance, burial benefits, and housing assistance.

5.2.6. Plan Integration

Plan integration recognizes that hazard mitigation is most effective when it works in concert with other plans, regulations, and programs. Per FEMA, plan integration is described as the regular consideration and management of hazard risks in a community's existing planning framework. Plan integration is the process by which communities critically analyze their existing planning framework and align efforts to build a safer, smarter community. Plan integration involves a two-way exchange of information and incorporation of ideas and concepts between hazard mitigation plans (state and local) and other community plans. Specifically, plan integration involves the incorporation of hazard mitigation principles and actions into community plans and community planning mechanisms into hazard mitigation plans (FEMA, 2015). For information on how the last plan was integrated into planning mechanisms across the county, see **Section 6.1.3**.

While not all regulatory tools are relevant to every municipality in Chester County, each municipality should evaluate what tools are available to them related to their vulnerability identified in this HMP. This Capability Assessment provides a summary of the resources communities have to mitigate hazards. Communities should continue to review and revise building codes, zoning ordinances, floodplain ordinances, and subdivision and land development ordinances with the results of the 2026 HMP risk assessment in mind. For example, a municipality could revise its zoning ordinance to restrict the density of new development in hazard-prone areas or guide development away from these areas. Some tools may also be useful for addressing multiple hazards in these municipalities; for example, the presence of a stormwater management plan would greatly enhance mitigation capabilities needed to address flood hazards.

Implementation actions will include incorporating the goals of the HMP into ongoing planning, zoning, building, and engineering activities. Specifically, the county will urge municipalities to take the following actions to integrate the results of this HMP into other planning mechanisms:

- Fund hazard mitigation projects or actions in operating budgets to the extent possible.
- Notify other municipalities about grant and other funding opportunities as they arise.
- Use data and maps from this HMP as supporting documentation in grant applications.
- Review mitigation actions when allocating funding for the municipal budgets.
- Include hazard mitigation when updating municipal ordinances.
- Identify hazard areas in updates of comprehensive plans to identify land use issues.
- Review the HMP prior to land use or zoning changes and permitting or development decisions.

The information on hazards, risk, vulnerability, and mitigation contained in this HMP is based on the best science and technology available at the time of the plan's preparation. Additionally, certain plans were incorporated directly into this HMP update. All participating jurisdictions recognize that this information can be invaluable in making decisions under other planning programs, such as comprehensive, capital improvement, and emergency management plans. Figure 5.2-7, also presented at the beginning of this section, illustrates the interrelationships between the HMP, the Chester County comprehensive plan, the county EOP, and other community planning mechanisms. Existing processes and programs through which the HMP should be implemented are described below.

Table 5.2-7 Relevant Departments and Documents

RELEVANT DOCUMENTS	HAZARD MITIGATION PLANNING ELEMENTS
Comprehensive Plan/Land Use Plan (Landscapes3), Zoning/Subdivision Regulations, Floodplain Ordinance	Demographic data, land use, development trends, and floodplain management information
Stormwater Management Plans (including Watersheds 2045), Sediment and Erosion Control Plan, Long Range Transportation	Stormwater management and infrastructure data and projects

Table 5.2-7 Relevant Departments and Documents

RELEVANT DOCUMENTS	HAZARD MITIGATION PLANNING ELEMENTS
Plan, Transportation Improvement Inventory, Public Transportation Plan	
Emergency Operations/Response Plan	All-hazards information for evacuation, response, and recovery
Climate Action Plan, Dam Safety Regulations	Risk and vulnerability data, and storm/floodwater management
Trails Master Plan, Woodlands and Tree Protection, Conservation Subdivision Design Guide, Linking Landscapes	Land preservation strategies

Integration with Existing Planning Mechanisms

As mentioned above, Chester County adopted its updated Comprehensive Plan in 2018, called Landscapes3. The "How We Live" section recommends providing exemplary emergency services. This includes continuing to "update services (such as operating the 911 system and providing countywide hazardous material spill response) and plans (including the Emergency Operations Plan and Hazard Mitigation Plan) as needed" (Chester County Planning Commission, 2018). Each municipality in the county also has a comprehensive plan that can integrate mitigation goals and activities. As future updates are made to comprehensive plans, the county and municipalities can leverage the data and analysis in this plan to account for hazard risk when planning for long-term growth. Any updates should continue to include and consider hazard mitigation as an element and incorporate high-priority mitigation projects as appropriate.

Hazard mitigation planning can be integrated into Chester County's Stormwater Management Regulations. The municipalities that are regulated by the county's stormwater management requirements in its SALDO could also opt to develop their own, more stringent stormwater management ordinances that address stormwater and urban flooding. Municipalities can provide recommendations for proper long-term operation and maintenance of stormwater management facilities within the land development subdivision ordinances, work closely with the county to assure that stormwater facilities are maintained over the long-term, and can ensure any new hydrology studies are adopted upon completion.

The Chester County Emergency Operations Plan is based on the National Incident Management System (NIMS), which utilizes incident command systems and local emergency responders. The plan outlines how local municipalities and state government can partner while using the framework established by the federal government. It embraces an "all-hazards" principle. As these plans are updated, they should incorporate relevant information from the Chester County HMP Risk Assessment to provide a more detailed overview of potential hazards. Most emergency response functions are similar, regardless of the hazard, and the EMC is required to mobilize functions and personnel as required by the emergency. This plan

mentions that mitigation opportunities will be considered throughout disaster operations. Implementation includes a combination of conservation tools including land management plans and easements; regulatory methods like density transfers, zoning overlays, buffer zones, and subdivision exactions; and land acquisition made possible through donation, purchase, and purchase of development rights. Emergency Operations Plans should also incorporate long-term mitigation strategies, such as those outlined in this HMP Update, in addition to short-term response and recovery.

DARA may utilize information, strategies, and funding opportunities identified in this plan to assist in their facility-specific planning activities, particularly their Continuity of Operations plans and procedures, ensuring that hazard risks and vulnerabilities are considered and addressed as the authority continues to deliver critical services to the community.

Integration Since the 2021 Plan

All of Chester County's jurisdictions have some form of local land use controls. As is discussed in **Section 6.1**, upon review of the 2021 mitigation actions, it became clear that several municipalities completed mitigation actions that achieve plan integration by furthering hazard mitigation goals through various land development regulations.

Some other land use tools in municipalities have not been updated recently. As municipalities work to update comprehensive plans and land use ordinances, local governments can go further to use land use regulations to direct development away from hazard-prone areas.

Ongoing Integration Capabilities

A barrier to plan integration and expanding mitigation capabilities is often the lack of resources to accomplish activities that integration requires. Several municipalities noted on the capability assessment surveys that lack of financial resources precludes development of some planning tools. The self-assessment portion of the survey provided each municipality with an opportunity to conduct its own self-assessment of its capability to effectively implement hazard mitigation activities. As part of this process, county and municipal officials were encouraged to consider the barriers to implementing proposed mitigation strategies in addition to the mechanisms that could enhance or further such strategies. In response to the survey questionnaire, local officials classified each of the capabilities as either "limited," "moderate," or "high." "N/A" indicates that the municipality did not submit a capability assessment as part of the plan update process. Table 5.2-8 lists the results for each municipality while Table 5.2-9 summarizes the results as a percentage of responses received. With available resources being limited and stretched into the foreseeable future, plan integration is extremely relevant and will help leverage existing resources to the maximum extent possible. The support provided by county departments and CCPC, summarized throughout this section, is crucial for each municipality's ability to expand on its current capabilities. In particular, the administrative, technical, and financial capabilities of the county can be leveraged by municipalities to identify grant opportunities, begin planning processes, and develop their own technical skills.

Table 5.2-8 Municipal Responses to Capability Questionnaire

MUNICIPALITY	PLANNING & REGULATORY	ADMINISTRATIVE & TECHNICAL	FINANCIAL
Atglen Borough*	N/A	N/A	N/A
Avondale Borough*	N/A	N/A	N/A
Birmingham Township	Moderate	Moderate	Moderate
Caln Township	Moderate	Moderate	Moderate
Charlestown Township	Moderate	Moderate	Moderate
Coatesville City	Moderate	Moderate	Limited
Downingtown Borough*	N/A	N/A	N/A
East Bradford Township*	N/A	N/A	N/A
East Brandywine Township*	N/A	N/A	N/A
East Caln Township	Limited	Limited	Limited
East Coventry Township	Moderate	Moderate	Limited
East Fallowfield Township*	N/A	N/A	N/A
East Goshen Township*	N/A	N/A	N/A
East Marlborough Township*	N/A	N/A	N/A
East Nantmeal Township	Moderate	Moderate	Moderate
East Nottingham Township	Moderate	Moderate	Moderate
East Pikeland Township*	N/A	N/A	N/A
Easttown Township*	N/A	N/A	N/A
East Vincent Township*	N/A	N/A	N/A
East Whiteland Township	Moderate	Moderate	Moderate
Elk Township*	N/A	N/A	N/A
Elverson Borough	Moderate	Moderate	Limited
Franklin Township*	N/A	N/A	N/A
Highland Township*	N/A	N/A	N/A
Honey Brook Borough	Moderate	Limited	Limited
Honey Brook Township	Moderate	Moderate	Limited
Kennett Township	Moderate	Moderate	Moderate
Kennett Square Borough*	N/A	N/A	N/A
London Britain Township	Moderate	Moderate	Moderate
Londonderry Township*	N/A	N/A	N/A
London Grove Township*	N/A	N/A	N/A
Lower Oxford Township	Moderate	Moderate	Moderate
Malvern Borough	Moderate	Moderate	Moderate
Modena Borough*	N/A	N/A	N/A
New Garden Township*	N/A	N/A	N/A
Newlin Township*	N/A	N/A	N/A

Table 5.2-8 Municipal Responses to Capability Questionnaire

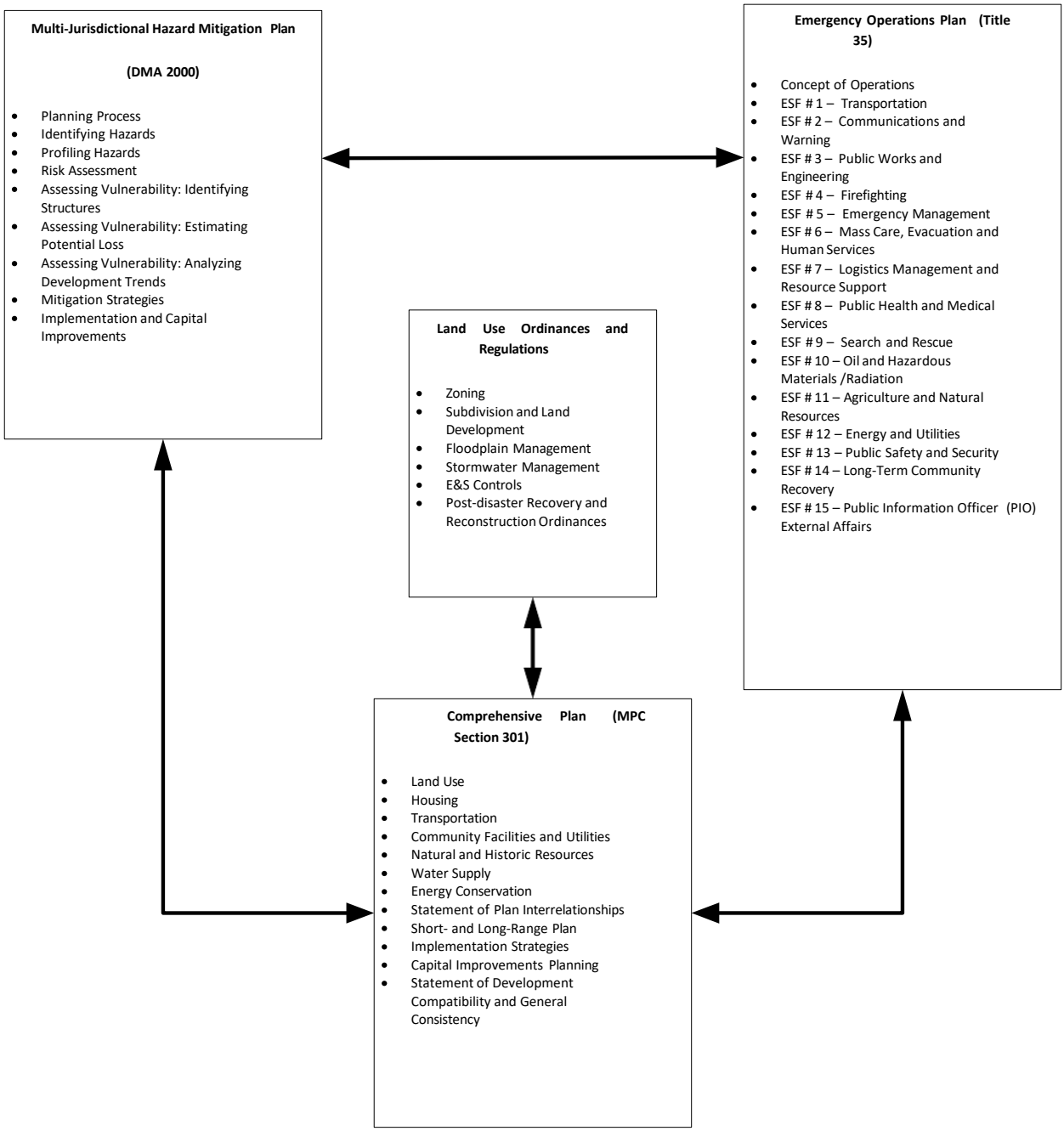
MUNICIPALITY	PLANNING & REGULATORY	ADMINISTRATIVE & TECHNICAL	FINANCIAL
New London Township	High	Moderate	Limited
North Coventry Township	Moderate	Moderate	Moderate
Oxford Borough	High	Moderate	Moderate
Parkesburg Borough*	N/A	N/A	N/A
Penn Township*	N/A	N/A	N/A
Pennsbury Township	Moderate	Moderate	Moderate
Phoenixville Borough*	N/A	N/A	N/A
Pocopson Township	Moderate	Moderate	Moderate
Sadsbury Township*	N/A	N/A	N/A
Schuylkill Township	Moderate	Limited	Limited
South Coatesville Borough	Limited	Limited	Limited
South Coventry Township*	N/A	N/A	N/A
Spring City Borough	Limited	Limited	Limited
Thornbury Township	High	Limited	Limited
Tredyffrin Township	Moderate	Moderate	Moderate
Upper Oxford Township*	N/A	N/A	N/A
Upper Uwchlan Township	Moderate	Moderate	Moderate
Uwchlan Township	Moderate	Limited	Limited
Valley Township	Moderate	Moderate	Limited
Wallace Township*	N/A	N/A	N/A
Warwick Township*	N/A	N/A	N/A
West Bradford Township	High	Moderate	Moderate
West Brandywine Township*	N/A	N/A	N/A
West Caln Township	High	High	High
West Chester Borough*	N/A	N/A	N/A
West Fallowfield Township	Moderate	Moderate	Moderate
West Goshen Township*	N/A	N/A	N/A
West Grove Borough*	N/A	N/A	N/A
West Marlborough Township	Limited	Limited	Limited
West Nantmeal Township	Moderate	Moderate	Moderate
West Nottingham Township*	N/A	N/A	N/A
West Pikeland Township*	N/A	N/A	N/A
West Sadsbury Township	Limited	Limited	Limited
West Vincent Township	High	High	High
West Whiteland Township	High	High	High
Westtown Township*	N/A	N/A	N/A

Table 5.2-8 Municipal Responses to Capability Questionnaire

MUNICIPALITY	PLANNING & REGULATORY	ADMINISTRATIVE & TECHNICAL	FINANCIAL
Willistown Township*	N/A	N/A	N/A
Downingtown Area Regional Authority*	N/A	N/A	N/A
**Did not submit form; question not asked in the 2021 HMP Capability Assessment Survey*			

Table 5.2-9 Summary of Self-Assessment Capability Responses Expressed as a Percentage of Responses Received.

CAPABILITY CATEGORY	LIMITED	MODERATE	HIGH
Planning & Regulatory	13.5%	67.6%	18.9%
Administrative & Technical	24.3%	67.6%	8.1%
Financial	40.5%	51.4%	8.1%


Multi-Jurisdictional Hazard Mitigation Plan
(DMA 2000)
Planning Process
Identifying Hazards
Profiling Hazards
Risk Assessment
Assessing Vulnerability: Identifying Structures
Assessing Vulnerability: Estimating Potential Loss
Assessing Vulnerability: Analyzing Development Trends
Mitigation Strategies
Implementation and Capital Improvements
Emergency Operations Plan (Title 35)
Concept of Operations
ESF # 1 – Transportation
ESF # 2 – Communications and Warning
ESF # 3 – Public Works and Engineering
ESF # 4 – Firefighting
ESF # 5 – Emergency Management
ESF # 6 – Mass Care, Evacuation and Human Services
ESF # 7 – Logistics Management and Resource Support
ESF # 8 – Public Health and Medical Services
ESF # 9 – Search and Rescue
ESF # 10 – Oil and Hazardous Materials /Radiation
ESF # 11 – Agriculture and Natural Resources
ESF # 12 – Energy and Utilities
ESF # 13 – Public Safety and Security
ESF # 14 – Long-Term Community Recovery
ESF # 15 – Public Information Officer (PIO) External Affairs
Land Use Ordinances and Regulations
Zoning
Subdivision and Land Development
Floodplain Management
Stormwater Management
E&S Controls
Post-disaster Recovery and Reconstruction Ordinances
Comprehensive Plan (MPC Section 301)
Land Use
Housing
Transportation
Community Facilities and Utilities
Natural and Historic Resources
Water Supply
Energy Conservation
Statement of Plan Interrelationships
Short- and Long-Range Plan
Implementation Strategies
Capital Improvements Planning
Statement of Development Compatibility and General Consistency

6. MITIGATION STRATEGY

6.1. UPDATE PROCESS SUMMARY

The mitigation strategy serves as the long-term road map to reduce the potential losses, vulnerabilities, and gaps identified in the risk and capability assessments. A typical mitigation strategy includes a list of goals and objectives, with mitigation actions to address the goals and objectives, that are then prioritized, based on the community's need.

- ✓ **Goals** are long-term aspirations about the resiliency of the community given the potential effects of hazards.
- ✓ **Objectives** are measurable strategies that the Chester County and its communities and partners have determined will be necessary to move closer to attaining each goal.
- ✓ **Actions** are the tasks that are proposed for realizing each objective.

6.1.1. Mitigation Goal and Objective Review

There were four goals and 16 objectives identified in the 2021 Chester County Hazard Mitigation Plan Update. The Steering Committee reviewed goals and objectives during a Steering Committee Review Meeting on October 1, 2025. The summary of changes to the goals and objectives based on that meeting are found in Table 6.1-1.

Goals and objectives from the 2021 Plan remain relevant and were largely carried over to the 2026 HMP. Three additional goals were added. The full list of the updated goals and objectives for 2026 is in Table 6.2-1 (**Section 6.2**). This table shows that three new goals were added to address continuity of operations, consistency, and the mitigation of High Hazard Potential Dams. One objective addressing socially vulnerable and underserved communities was added under Goal 1. Three objectives were added to address increased public awareness and education through strategic media channels.

Table 6.1-1 List and Review Summary of 2021 Mitigation Strategy Goals and Objectives

Goal 1: Prevent injury/death, physical damage, and other impacts from hazards in Chester County		Continued to 2026 HMP.
Objective 1.1	Enhance regulations for addressing development in hazard-prone areas.	Continued to 2026 HMP with minor text revisions.
Objective 1.2	Upgrade infrastructure to reduce the likelihood of hazards from impacting Chester County.	Combined with Objective 2.1.
Objective 1.3	Support government agencies and non-governmental organizations to provide aid to vulnerable populations before, during, and after a hazard.	Continued to 2026 HMP.

Goal 2: Protect the citizens of Chester County as well as public and private property from the impacts of natural and human-caused hazards.		Continues to 2026 HMP.
Objective 2.1	Protect existing structures, including critical facilities and culturally or historically significant assets, from damage that can be caused by hazards.	Combined with Objective 1.2.
Objective 2.2	Acquire, relocate, elevate, and/or retrofit existing structures, including repetitive loss properties, located in hazard areas.	Removed; worded as an action, not an objective.
Objective 2.3	Improve existing stormwater management systems to reduce flooding.	Continued to 2026 HMP with minor text revisions.
Objective 2.4	Provide resources that encourage regular inspection and maintenance of existing stormwater facilities to reduce flooding.	Continued to 2026 HMP.
Objective 2.5	Assist with updating local stormwater management standards to reduce flooding.	Continued to 2026 HMP with minor text revisions.
Objective 2.6	Encourage homeowners, renters, and businesses to insure their properties against all hazards, including purchasing flood coverage under the National Flood Insurance Program (NFIP).	Moved under new Goal 6.
Goal 3: To protect and restore existing natural resources including wetlands, floodplains, and riparian buffers.		Continued to 2026 HMP with minor text revisions.
Objective 3.1	Lessen impacts on natural resources and open space from natural and human-caused hazards by promoting sustainable land use and water resources management practices.	Continued to 2026 HMP.
Objective 3.2	Provide appropriate safeguards for the preservation of the quality of water resources, stream corridors, watershed areas, and floodplains.	Continued to 2026 HMP.
Goal 4: To promote public awareness on the potential impacts of natural and human-caused hazards, and actions to reduce those impacts.		Continued to 2026 HMP with minor text revisions.
Objective 4.1	Develop public education and outreach programs on hazards and hazard mitigation.	Continued to 2026 HMP with minor text revisions.
Objective 4.2	Educate property owners in hazard-risk areas regarding their risks and the precautions they can take.	Continued to 2026 HMP.

Objective 4.3	Encourage residents to implement hazard mitigation and preparedness measures on their properties.	Continued to 2026 HMP.
Objective 4.4	Encourage local participation in the Community Rating System (CRS) Program.	Moved under new goal 6.
Objective 4.5	Provide outreach and educational opportunities to the community about where to find comprehensive information on hazards.	Continued to 2026 HMP.

6.1.2. Mitigation Action Review

The HMP is a long-term strategy, and not everything will be complete in the five-year period between plans. This section reviews the status of all mitigation actions from the 2021 plan.

County and municipal actions in the 2021 plan were distributed at the March workshops and the municipal participation meetings and calls, as appropriate, for review and update. Each action has been assigned one of the following categories:

- ✓ **"Completed"** – Actions that were completed since the adoption of the 2021 plan.
- ✓ **"Cancelled"** – Actions that were terminated and would not be carried into the 2026 HMP.
- ✓ **"Deferred"** – Actions that had not been started since the adoption of the 2021 plan.
- ✓ **"On-Going"** – Actions that are performed on a regular and continuous basis by the county or community.

Most existing mitigation actions have been carried over into the 2026 Hazard Mitigation Plan as they are continuous actions or actions that were not completed. A list of these actions as well as their status is included in Table 6.1-2. Actions were evaluated by the HMPT and municipal officials with the intent of producing a usable mitigation action plan in 2026 with actions and projects that could be completed over the next five years. **Appendix C** contains a summary of responses provided by municipalities to the *Mitigation Action Progress Report Form*.

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
As opportunities arise, elevate, or acquire properties within flood-prone areas. In addition, wet and dry proof commercial structures if they cannot be elevated or acquired	Chester County				X	
Coordinate utilization of privately-owned digital billboards for emergency usages	Chester County	X				
Create a website to assist landowners and municipalities to navigate FEMA resources	Chester County				X	
Develop a countywide Debris Management Plan	Chester County				X	
Develop a plan to stagger traffic and implement delays/early releases for schools, government, and private sector during a disaster	Chester County				X	
Develop an outreach and awareness program and provide to municipalities, where residents and potential homeowners could access to identify any risks they might have to address	Chester County				X	
Develop and implement a model natural conservation ordinance for municipal adoption	Chester County	X				
Educate county residents on the NFIP following flood events	Chester County				X	
Educate the public on all the hazards they face	Chester County				X	
Encourage municipal Code Enforcement Officials to become trained in Floodplain Management and NFIP Programs	Chester County				X	
Encourage municipalities to adopt an ordinance outlining the process to implement a snow emergency declaration	Chester County				X	

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Encourage municipalities to require radon testing at the time sale of homes	Chester County				X	
Encourage new development planning to include burying of utility cables	Chester County				X	
Encourage upgrades and improvements to stormwater runoff capabilities when reconstructing roads	Chester County				X	
Enhance the household hazard waste program to reduce post-event hazardous debris	Chester County			X		
Ensure that the county has a COOP/COG Plan and procedures in place for off-site hazmat releases that can affect the buildings	Chester County	X				
Ensure that the municipal EMAs have COOP/COG plans	Chester County				X	
Identify snow emergency routes in all municipalities to increase clearing efforts and travel ability of residents	Chester County				X	
Improve storm drains throughout the county to handle snow melt	Chester County				X	
Include flood mitigation recommendations and NFIP program information in public education materials prepared by the Department of Emergency Services for Chester County	Chester County	X				
Increase cell coverage and telecommunications bandwidth in areas with poor coverage	Chester County				X	
Increase mutual aid and interagency agreements to support preparedness, mitigation, and response activities in Chester County	Chester County	X				

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Install back-up power sources for traffic signals (generator, battery, solar)	Chester County				X	
Install roadway gates to close off flood-prone intersections/ roads during flood incidents and signage to warn motorists of the closed road	Chester County				X	
Investigate the interaction of public agencies and camera data from private companies/citizens	Chester County			X		
Plan for replenishment fuel for generators	Chester County	X				
Plant bushes/other vegetation to stop drifting snow in known problem areas	Chester County				X	
Produce a map to be used for public outreach and education showing the relative frequency that county roads/bridges are subject to flooding	Chester County	X				
Provide education to the municipalities on flood gauges	Chester County				X	
Provide education to the municipalities on resident evacuation processes and need	Chester County				X	
Provide public education on traffic accident reduction	Chester County				X	
Provide public information on debris management	Chester County				X	
Purchase backup generators for critical infrastructure/ key resources	Chester County				X	
Pursue local mitigation efforts to improve areas that are vulnerable to flooding including both repetitive and non-repetitive loss structures within floodplains	Chester County				X	

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Retrofit critical public facilities with safe rooms	Chester County			X		
Study traffic control boxes that would be exposed to riverine or stormwater flooding to determine if they are able to withstand the water	Chester County				X	
Sustain tree management programs around power lines	Chester County				X	
The county and all municipalities will work with their major businesses to ensure they have continuity plans in place	Chester County				X	
The county and all municipalities with a dam will work with dam operators to ensure they are protected to the 0.2% annual chance flood level	Chester County				X	
The county and municipalities will work with the higher education facility operators to discuss the hazards they face and ensure their emergency plans address those hazards	Chester County				X	
The county and municipalities will work with the intermediate care facility operators to discuss the hazards they face and ensure their emergency plans address those hazards	Chester County				X	
The county and municipalities will work with the long-term care facility operators to discuss the hazards they face and ensure their emergency plans address those hazards	Chester County				X	
The county and municipalities will work with the senior living facility operators to discuss the hazards they face and ensure their emergency plans address those hazards	Chester County				X	

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
The county will assess their bridges to determine what measures can be taken to protect them to the 0.2% annual chance flood level	Chester County				X	
The county will work with all municipalities that have a child care facility exposed to any of the hazards to work with the child care facility operators to discuss hazards they face and ensure their emergency plans address those hazards	Chester County				X	
Update countywide Model Stormwater Ordinance	Chester County	X				
When provided by FEMA, evaluate and apply FEMA non-regulatory electronic floodplain mapping and mitigation tools, where appropriate	Chester County				X	
Work with district courts to ensure they have plans in place for off-site hazmat releases that can affect the courts.	Chester County				X	
Work with hazmat facilities to inform them of the hazards they face and ensure emergency plans are current.	Chester County				X	
Work with hospitals to ensure they have plans in place for off-site hazmat releases that can affect hospitals.	Chester County				X	
Work with schools and school districts to inform them of the hazards they face and ensure emergency plans are current.	Chester County				X	
Work with the municipalities to develop a map of the stormwater system, including intakes and outflows	Chester County				X	

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Work with the railroad industry to address safety concerns and aging rail infrastructure	Chester County				X	
Work with the USPS on options for protecting the post offices from flooding and possible inundation from dam failure.	Chester County			X		
Work with Verizon to protect the facilities from flood or dam failure.	Chester County			X		
Educate the public about resources available to combat the opioid abuse/addiction.	Chester County				X	
Improve telecommunications infrastructure, including accessibility of high-speed Internet connectivity, throughout the county	Chester County				X	
The municipal FPA will work with the Atglen Borough Sewer Plant facility owner/operator to protect the facility to at least the 0.2% chance flood level	Atglen Borough			X		
Work with the property owner to determine what flood protection measures can be taken to protect the structure to the 0.2% annual chance flood level.	Atglen Borough			X		
The municipal FPA will work with the Avondale Sewer Authority facility owner/operator to protect the facility to at least the 0.2% chance flood level	Avondale Borough			X		
Build an access road to Masters Way to Webb Rd	Birmingham Township			X		
Work with PennDOT to reengineer intersection at Street Road (PA 926) bridge over Brandywine Creek	Birmingham Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Brinton's Mill, Lenape Bridge, and Painter, Joseph, Farm	Birmingham Township			X		
Acquire/Elevate the building located on 135 Seltzer Road	Caln Township			X		Focused dialogue has not occurred.
Caln Township has major businesses that are vulnerable to dam failure and will work with management to protect the buildings.	Caln Township				X	
Protect the Caln Radio Tower to the 0.2% annual chance flood level and from a potential dam failure.	Caln Township				X	
Work with Downingtown Middle School to determine specific vulnerability to dam failure and determine appropriate mitigation measures.	Caln Township			X		Focused dialogue has not occurred.
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Pennsylvania Railroad Bridge (No.205), Pickering Dam	Charlestown Township				X	
Emergency Alert System - the City of Coatesville will implement an emergency alert system that will inform residents in the event of an emergency in an effort to improve public safety.	Coatesville City			X		
Install gates to be closed during flood incidents and signage at 11th Avenue and railroad underpass	Coatesville City			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
West End Fire Station Generator - obtain a backup generator in order ensure that emergency operations are maintained during a power outage.	Coatesville City			X		
Protect ArcelorMital Emergency Services to the 0.2% annual chance flood level.	Coatesville City			X		
Gibbons Run Culvert Flooding and Structural Stability – evaluate the culverts and repair, rehabilitate, or replace them as necessary.	Coatesville City			X		
The municipal FPA will work with the Martin-Brower facility owner/operator to protect the facility to the 0.2% annual chance flood level and dam failure.	Coatesville City			X		
Upgrade City Hall Command Center - these upgrades include upgrades to the existing generator to allow for increased functionality of City Hall, the Police Station and the Emergency Command Center during a power outage and upgrades to the communication utilities to permit full functionality during an emergency.	Coatesville City			X		
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: High Bridge, Huston, Abram, House & Carriage House, Lukens Main Office Building	Coatesville City			X		
Amtrak Keystone Corridor Underpass Flooding – evaluate and improve drainage and eroding areas along the corridor.	Coatesville City			X		
S. 5th Avenue Stormwater Improvements	Coatesville City			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
63 S. 5th Ave. Property Protection - protect the existing grocery store on the corner of Olive St. and S 5th Ave.	Coatesville City			X		
Pre-Plan Emergency Access Routes	Coatesville City			X		
Ash Park Stormwater Improvements - improve infiltration and mitigate floodwaters that pose a threat for travelers during/after storm events.	Coatesville City			X		
Downtown Stormwater Improvements - upgrade Coatesville's existing stormwater infrastructure in the downtown business district	Coatesville City			X		
Millview Basin - restore proper stormwater detention basin function with added water quality improvements	Coatesville City			X		
Public Information Programs - develop education packages, classes, meetings, programs, etc. with the goal of improving public knowledge of potential hazards are dealt with. within the City and how these hazards	Coatesville City			X		
Create a Capital Improvements Plan	Coatesville City			X		
Provide backup power at the City's traffic signals, including developing a plan for implementation and refueling.	Coatesville City			X		
Route 82 Slope Stability - ensure the stability of the slopes along the eastern side of Route 82 in order to maintain unimpeded direct access into and out of the City.	Coatesville City			X		
Determine the specific vulnerability of the Downingtown Borough Building to dam failure	Downingtown Borough			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
and determine appropriate mitigation measures.						
Downingtown Borough has major businesses that are vulnerable to dam failure and will work with management to protect the buildings	Downingtown Borough			X		
Protect Alert FC Fire Station from dam failure.	Downingtown Borough			X		
Protect Downingtown - Jefferson Ave Electrical Substation to the 0.2% annual chance flood level and from the vulnerability to dam failure.	Downingtown Borough			X		
Protect Downingtown Boro PD from potential dam failure.	Downingtown Borough			X		
Protect Minquas Ambulance Fire Station from dam failure and determine appropriate mitigation measures.	Downingtown Borough			X		
Protect Minquas FC from potential dam failure.	Downingtown Borough			X		
Protect the Downingtown Municipal Waste from dam failure.	Downingtown Borough			X		
The municipal FPA will work with AT&T Mobility Downingtown - USID53712 facility owner/operator to protect the facility from its vulnerability to dam failure.	Downingtown Borough			X		
The Municipal FPA will work with the Downingtown Municipal Water Authority owner/operator to the 0.2% annual chance flood level and from vulnerability to dam failure.	Downingtown Borough			X		
The municipal FPA will work with the Inland Flexo, LLC facility owner/operator to protect the facility from its vulnerability to dam failure.	Downingtown Borough			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
The municipal FPA will work with the Johnson Matthey AGT facility owner/operator to protect the facility from vulnerability to dam failure.	Downingtown Borough			X		
The municipal FPA will work with the Verizon Downingtown CO owner/operator to protect the facility from vulnerability to dam failure.	Downingtown Borough			X		
The municipal FPA will work with the Victory Brewing Company, LLC owner/operator to protect the facility from vulnerability to dam failure.	Downingtown Borough			X		
Work with Beaver Creek Elementary School to determine specific vulnerability to dam failure and determine appropriate mitigation measures.	Downingtown Borough			X		
Work with Downingtown High School West to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	Downingtown Borough			X		
Work with East Ward Elementary School to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	Downingtown Borough			X		
Work with Lori Petrie's Pre School to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	Downingtown Borough			X		
Work with Regina Luminis Academy to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	Downingtown Borough			X		
Work with SEPTA and Amtrak to protect the station from dam failure	Downingtown Borough			X		
Work with St. Joseph School to determine specific vulnerability to dam failure and determine appropriate mitigation measures.	Downingtown Borough			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Work with STEM Academy to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	Downingtown Borough			X		
Work with Step by Step Children's House to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	Downingtown Borough			X		
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect the, to the 0.2% annual chance flood level and vulnerability to dam failure: Downingtown Log House, Hunt, Roger, and Mill Complex	Downingtown Borough			X		
Work with the United States Marine Recruiting Office to protect the structure from the vulnerabilities of dam failure.	Downingtown Borough			X		
Acquisition/elevation of structure at 414 Cottage Lane	East Bradford Township				X	Still interested in acquiring properties but require the underlying property owner to complete a subdivision before it can be done. The owner has been working on doing this, but it has been a complicated and time-consuming process legally and logistically.
Acquisition/elevation of structure located at 402 Cottage Lane	East Bradford Township				X	
Acquisition/elevation of structure located at 406 Cottage Lane	East Bradford Township				X	
Acquisition/elevation of structure located at 418 Cottage Lane	East Bradford Township				X	
Acquisition/Elevation of structure located at 502 River Bed Lane	East Bradford Township				X	
Acquisition/Elevation of structure located at 530 River Bend Lane	East Bradford Township				X	
Acquisition/Elevation of structure located at 550 River Bend Lane	East Bradford Township				X	
Acquisition/Elevation of structure located at 558 River Bend Lane	East Bradford Township				X	

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Install battery back-up and/or generator hookup on traffic signal on South Bradford Avenue and West Nields Street	East Bradford Township	X				
Install gates to be closed during flood incidents and signage on Allerton Road between North Creek Road and Lucky Hill Road	East Bradford Township			X		
Install gates to be closed during flood incidents and signage on North Creek Road between Jefferis Bridge Road and Hillsdale Road	East Bradford Township			X		
Install gates to be closed during flood incidents and signage on South Creek Road between Cottage Lane and Withers Way	East Bradford Township			X		
Install gates to be closed during flood incidents and signage on Valley Creek Road between Harmony Hill Road and Ravine Road	East Bradford Township			X		
Municipal FPA to work with the Aqua Ingrams Mill Plant facility owner/operator to protect the facility from the vulnerabilities to dam failure.	East Bradford Township		X			
Property protection of structure located at 1010 Valley Creek Road	East Bradford Township				X	Have met with the property owner to discuss options they can pursue and possible grant opportunities.
Protect East Bradford Electrical Substation from vulnerability to dam failure.	East Bradford Township				X	Have met with PECO about the substation.
Protect Good Fellowship Ambulance (Sub-Station) from the vulnerabilities from dam failure.	East Bradford Township				X	Working with GFA on possible relocation options.

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
The municipal FPA to work with the PECO Bradford Substation facility owner/operator to protect the facility from vulnerabilities to dam failure.	East Bradford Township				X	Have met with PECO about the substation.
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Cope's Bridge, East Bradford Historic District- HDA, Gibson's Covered Bridge, Hance, Joseph, House & Barn, Hannum, Col. John House, Jefferis Ford Bridge, Paradise Valley Historic District, Strode's Mill, Strode's Mill Historic District, and Taylor-Cope Historic District	East Bradford Township		X			
Acquire/elevate structure at 745 Creek Road	East Brandywine Township		X			
Acquire/elevate structure at 755 Creek Road	East Brandywine Township		X			
Acquire/elevate structure at 765 Creek Road	East Brandywine Township		X			
Acquire/elevate structure at 775 Creek Road	East Brandywine Township		X			
Acquire/elevate structure at 785 Creek Road	East Brandywine Township		X			

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Beaver Creek Dam Rehabilitation Project	East Brandywine Township	X				Chester County Water Resource Authority rebuilt the spillway.
Increase size of culvert crossing at 2069 Bondsville Road	East Brandywine Township		X			No current plan for mitigation.
Install a flood wall protecting homes along Brandywine Creek from flooding along Creek Road at Crawford Road	East Brandywine Township		X			No current plan for mitigation.
Install generator connection at East Brandywine Baptist Church	East Brandywine Township		X			No current plan for mitigation.
Install generator connection at Hopewell United Methodist Church	East Brandywine Township		X			No current plan for mitigation.
Property protection of structure located at 1051 Creek Road	East Brandywine Township		X			No current plan for mitigation.
Property protection of structure located at 1061 Creek Road	East Brandywine Township		X			No current plan for mitigation.
Property protection of structure located at 1081 Creek Road	East Brandywine Township		X			No current plan for mitigation.
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to flooding: Bridge Mill Farm, Dowlin Farm, and Marshall's Bridge	East Brandywine Township		X			No current plan for mitigation.

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Determine the specific vulnerability to dam failure and determine appropriate mitigation measures for the Downingtown Sewer Authority	East Caln Township				X	
The municipal FPA to work with the D.R.W.P.C.C facility owner/operator to protect the facility from vulnerabilities to flooding.	East Caln Township				X	
Acquisition/elevation of structure located at 285 Linfield Road	East Coventry Township			X		
Install emergency alerting systems for East Coventry Township	East Coventry Township			X		
Project East Coventry - Linfield Road Electrical Substation from the vulnerabilities of dam failure.	East Coventry Township			X		
The municipal FPA to work with Taylor Industries Inc facility owner/operator to protect the facility to at least the 0.2% chance flood level and from the vulnerabilities to dam failure	East Coventry Township			X		
Work with the property owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level and from the vulnerabilities to dam failure.	East Coventry Township			X		
Improve drainage to reduce flooding along Mortonville Road including intersection of Mortonville Road and Sawmill Road	East Fallowfield Township				X	
Improve drainage to reduce flooding on Timacula Road	East Fallowfield Township				X	

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Protect East Fallowfield - Spring Dell Road Electrical Substation to the 0.2% annual chance flood event	East Fallowfield Township				X	
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Strasburg Rd Bridge, Speakman No.2, and the Gorden Farm	East Fallowfield Township				X	
Work with the Goodwin Acres owner to determine what protection measures can be taken to protect them from vulnerabilities to dam failure.	East Goshen Township			X		
Emergency alerting systems for East Marlborough Township	East Marlborough Township			X		
Conduct power assessment for critical infrastructure/key resources to determine emergency generator needs and coordinate information with the Army Corps of Engineers	East Pikeland Township			X		
Monitor and manage reservoirs and stream flows to sustain water sources needed to meet public water supply needs	East Pikeland Township			X		
Plant bushes/other vegetation to stop drifting snow in known problem areas	East Pikeland Township			X		
Purchase temporary mobile camera to set up for events and use to monitor safety and security	East Pikeland Township			X		
Retrofit critical public facilities with safe rooms	East Pikeland Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
The municipal FPA to work with the Cromby Generating Station facility owner/operator to protect the facility to at least the 0.2% chance flood level and from vulnerabilities to dam failure.	East Pikeland Township			X		
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and vulnerabilities to dam failure: Bernard Property, Hare's Hill Road Bridge, Hartman, Peter, Residence, Kimberton Historic District, and Rapp's Covered Bridge	East Pikeland Township			X		
Work with the railroad industry to address safety concerns and aging rail infrastructure	East Pikeland Township			X		
Protect the Shady Lane Water Treatment Plant from dam failure	East Vincent Township			X		
The municipal FPA to work with the Columbia Gas Transmission/Birdsboro Heater facility owner/operator to protect the facility to at least the 0.2% chance flood level and from the vulnerabilities of potential dam failure.	East Vincent Township			X		
The municipal FPA to work with the Oehlert Bros., Inc facility owner/operator to protect the facility to at least the 0.2% chance flood level	East Vincent Township			X		
The municipal FPA to work with the Shady Lane Plant-Royersford facility owner/operator to protect the facility from the vulnerabilities of dam failure	East Vincent Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to dam failure: Kennedy Covered Bridge and Parker's Ford	East Vincent Township			X		
Increase stormwater pipe size at Hillbrook Circle	East Whiteland Township		X			No longer feasible.
Install a generator at the Meadowview pump station	East Whiteland Township			X		Sold system to AQUA.
Install a generator at the pump station on Flat Road	East Whiteland Township			X		Sold system to AQUA
Install gates to be closed during flood incidents and signage at Church Road	East Whiteland Township				X	Township is currently investigating this.
Install gates to be closed during flood incidents and signage at Old Morehall Road	East Whiteland Township				X	Township is currently investigating this.
Work with management of major businesses to protect the buildings to the 0.2% annual chance flood level.	East Whiteland Township			X		
Work with the Spring Mill Complex owner to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood event.	East Whiteland Township			X		
Construct new stormwater management systems to address uncontrolled water runoff creating flooding of Darby Creek and its tributaries at Darby Creek Watershed	Easttown Township			X		
Work with Sugartown Road Bridge owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level	Easttown Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Glen Hope Covered Bridge, Rudolph & Arthur Covered Bridge, and Stephens, Linton Covered Bridge	Elk Township			X		
Clear out blocked inlets at 896 between Goodhope Road and Gypsey Hill	Franklin Township	X				
Divert water on 512 Chesterville Road during heavy rain events	Franklin Township	X				
Improve drainage on North Clay Creek and Churchill Road	Franklin Township				X	This is an ongoing issue due to water flow and the elevation of the cartway.
Improve drainage to reduce flooding at Green Bridge on Strickersville Road and Appleton Road	Franklin Township	X				
Work with PennDOT to improve US-322 corridors to mitigate traffic accidents	Honey Brook Borough			X		
The municipal FPA to work with the Honey Brook Borough Authority facility owner/operator to protect the facility to at least the 0.2% chance flood level.	Honey Brook Township				X	Township is waiting on a response from HBBA and will send information when advised.
Improve drainage on East South Street between S Walnut and Broad Street to prevent flooding	Kennett Square Borough		X			Flooding was being caused by debris blockage, area is inspected when rain is expected.

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Improve drainage on South Street at Lafayette and Grant Way	Kennett Square Borough			X		Will need to wait until funding.
Improve drainage on Walnut Street between Birch and East South St	Kennett Square Borough		X			Flooding was being caused by debris blockage, area is inspected when rain is expected.
Improve/install drainage systems to handle rain to reduce localized flooding from Cypress St to Cedar St, west of Union St	Kennett Square Borough			X		Will need to wait until funding.
The municipal FPA will work with Comcast Cable- Kennell Square Hubsite owner/operator to protect the facility to the 0.2% annual chance flood level.	Kennett Square Borough			X		There has been no communication with Comcast.
Acquisition/elevation of structure located at 611 Creek Road	Kennett Township			X		
Acquisition/elevation of structure located at 903 Creek Road	Kennett Township			X		
Acquisition/elevation of structure located at 909 Creek Road	Kennett Township			X		
Assess and determine the best action to prevent East Hillendale Rd from flooding	Kennett Township			X		
Assess and determine the best action to prevent flooding of Kaolin Rd from stream	Kennett Township			X		
Assess and determine the best action to prevent flooding of Marshall Bridge a Route 82 South	Kennett Township			X		
Assess and determine the best action to prevent flooding of the West Hillendale stream from Chandler Mill to Scarlet	Kennett Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Assess and determine the best action to prevent further erosion of Bucktoe Road stream banks and prevent flooding of the road	Kennett Township			X		
Assess and determine the best action to prevent Rosedale Road stream from overflowing onto the road	Kennett Township			X		
Assess and determine the best action to prevent the stream on Center Mill Road from overflowing	Kennett Township			X		
Install gates to be closed during flood incidents and signaled at flood intersections within the township	Kennett Township			X		
Install warning signs to be utilized during flood incidents at flood-prone bridges within the township	Kennett Township			X		
The municipal FPA to work with the AT&T SBA Kennett Square facility owner/operator to protect the facility to at least the 0.2% chance flood level	Kennett Township			X		
The municipal FPA to work with the Kennett Square Borough Sewage Treatment Plant facility owner/operator to protect the facility to at least the 0.2% chance flood level	Kennett Township			X		
Work with county to improve drainage on Bayard Road	Kennett Township			X		
Work with the county to improve drainage on Pemberton Road Bridge from Mill Road to Cedar Springs to prevent flooding	Kennett Township			X		
Work with the county to improve drainage on South Street from Scarlet to Chandler Mill	Kennett Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Emergency alerting systems for London Britain Township	London Britain Township	X				
Install a snow fence during snow season to prevent snow drifting on South Bank Rd	London Britain Township			X		
Install a snow fence during snow season to prevent snow drifting on Strickersville Rd	London Britain Township			X		
Install gates to be closed during flood incidents and signage at Flint Hill Rd & Mercer Mill Rd	London Britain Township			X		
Install gates to be closed during flood incidents and signage at Good Hope & London Tract Rd/Broad Run Rd	London Britain Township			X		
Install gates to be closed during flood incidents and signage at London Tract Rd & New Peltier Rd	London Britain Township			X		
Install gates to be closed during flood incidents and signage at Mercer Mill Rd and N. Creek Rd	London Britain Township			X		
Install gates to be closed during flood incidents and signage at Yeatmans Station Rd	London Britain Township			X		
Emergency alerting systems/public notification system for London Grove Township	London Grove Township				X	
Install alerting system/public notification system to profiteering/notification of potentially dangerous and damaging weather. Area is populated with outdoor activities and large population.	London Grove Township				X	
Install gates and signage within flood-prone areas to reduce the risk of motorist and other traveling public from becoming entrapped in the flood waters.	London Grove Township				X	

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Protect West Grove Sewage Treatment Plant to the 0.2% annual chance flood level.	London Grove Township				X	
Reconfigure stream channel at Sullivan Rd & Clay Creek Rd	London Grove Township				X	
Reconstruct stream and roadway elevations to reduce the ability of flooding during rain and flash flood events.	London Grove Township				X	
Supply electrical connections for a portable generator at each of the wastewater facilities. Providing alternative power during power outages utilizing a portable until as opposed to three permanent generators providing additional costs savings.	London Grove Township				X	
The municipal FPA to work with the West Grove Wastewater Treatment facility owner/operator to protect the facility to at least the 0.2% chance flood level	London Grove Township				X	
To remove an existing failed culvert and replace it with a new structure to span the base flood elevation. Portions or all of structure removal and replacement could be completed utilizing Municipal Public Works Resources.	London Grove Township				X	
To remove an existing narrow culvert and replace with a structure to span the base flood elevations. Portions or all the structure removal and replacements could be completed utilizing Municipal Public Works.	London Grove Township				X	
Widen bridge and bridge approaches at Indian Run Rd	London Grove Township				X	
Work with PennDOT to clear the brush in roadway lines of sight at Rt 796 and Rt 41	Londonderry Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Work with PennDOT to construct a roundabout at the intersection of PA Route 41 and PA route 926	Londonderry Township			X		
Emergency alerting systems/public notification system for Londonderry Township	Londonderry Township			X		
Improve and enhance culverts on Jackson Rd and Faggs Manor Rd	Londonderry Township			X		
Improve plans and communication in case of emergency.	Londonderry Township			X		
Increase the height of the bridge at Whitehorse Rd near Creek Rd	Londonderry Township			X		
Install a generator in the Township Building	Londonderry Township			X		
Obtain approximately 1 mile of snow fencing or install natural landscapes to stop snow drifting along White Horse Rd by Power Station	Londonderry Township			X		
Purchase 2-way radios to assist in communication during emergency events in the township	Londonderry Township			X		
Purchase and install a backup generator at the Municipal Building	Londonderry Township			X		
Work with PennDOT to reconstruct the intersection to allow for better water drainage and strength the road at Fernwood Rd and Jackson Rd	Londonderry Township			X		
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to dam failure: Octoraro Water Company and Pine Grove Covered Bridge	Lower Oxford Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Elevation/Acquisition of structure located at 135 Powelton Ave	Malvern Borough			X		
Elevation/Acquisition of structure located at 145 Powelton Ave	Malvern Borough			X		
Elevation/Acquisition of structures 10 through 142 W First Ave	Malvern Borough			X		
Elevation/Acquisition of structures 193 through 323 Paoli Pike	Malvern Borough			X		
Elevation/Acquisition of structures 2 through 10 Remington Ln	Malvern Borough			X		
Elevation/Acquisition of structures 217 through 545 S. Warren Ave	Malvern Borough			X		
Increase culvert size at 313 S Warren Ave	Malvern Borough			X		
Work with management of Malvern Preparatory School to protect the buildings to the 0.2% annual chance flood level.	Malvern Borough			X		
Determine the specific vulnerability of the Modena Borough Building to dam failure and determine appropriate mitigation measures.	Modena Borough			X		
Protect Modena Ambulance EMS Station from vulnerabilities to dam failure.	Modena Borough			X		
Protect Modena FC Fire Station from a potential dam failure.	Modena Borough			X		
The Municipal FPA will work with the Mahoney-Modena owner/operator to protect the facility to the 0.2% annual chance flood level and from the vulnerabilities to dam failure.	Modena Borough			X		
The Municipal FPA will work with the Sealed Air Corporation owner/operator to protect the	Modena Borough			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
facility to the 0.2% annual chance flood level and from the vulnerabilities of dam failure.						
Work with the Mode Paper Mill owner to determine what flood protection measures can be taken to protect it from the vulnerabilities of dam failure.	Modena Borough			X		
Construct larger culvert at Cedar Springs Rd at Pemberton Rd	New Garden Township			X		
Construct larger culvert at Egypt Run Road	New Garden Township			X		
Emergency alerting systems for New Garden Township	New Garden Township			X		
Purchase portable generator for traffic signal at Chambers Rd and Baltimore Pike	New Garden Township			X		
Purchase portable generator for traffic signal at Newark Rd and Baltimore Pike	New Garden Township			X		
Purchase portable generator for traffic signal at Newark Rd and Rt 41	New Garden Township			X		
Purchase portable generator for traffic signal at Penn Green Rd and Rt 41	New Garden Township			X		
Purchase portable generator for traffic signal at Scarlett Rd and Baltimore Pike	New Garden Township			X		
Purchase portable generator for traffic signal at Southwood Rd and Rt 7	New Garden Township			X		
Work with To-jo Mushrooms Inc. management to protect the building to the 0.2% annual chance flood level.	New Garden Township			X		
Determine the specific vulnerability of the Newlin Township Building to dam failure and determine appropriate mitigation measures.	Newlin Township				X	

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Fix and pave road that has been destroyed on Laurel Road including three driveways	Newlin Township				X	
Protect the Embreeville Sewage Treatment from dam failure and protect it to the 0.2% annual chance flood event and from vulnerabilities to dam failure.	Newlin Township				X	
Replant Ash Trees that were lost to the Ash Borer and determine the best actions to prevent invasive species in the future	Newlin Township				X	
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Embreeville Historic District, House at Upper Laurel Iron Works, Marlborough Village Historic District, Spruce Groce School House, Worker's House at Lower Laurel Iron Works	Newlin Township				X	
Protect the North Coventry Municipal Authority from dam failure and to the 0.2% annual chance flood level.	North Coventry Township			X		
The municipal FPA to work with the North Coventry Municipal Authority facility owner/operator to protect the facility to at least the 0.2% chance flood level and from the vulnerabilities to dam failure	North Coventry Township			X		
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Schuylkill Navigation Company Canal and historic structure located on SR 7046	North Coventry Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Rain gardens to be installed in recently created bump- outs on Broad Street at intersection with 8th Street.	Oxford Borough			X		After further engineering, location not ideal and infrastructure not likely to function as intended. Bumpouts planned for other locations.
The municipal FPA will work with the Hayes Heating and Cooling Bulk owner/operator to protect the facility to the 0.2% annual chance flood level.	Parkesburg Borough			X		
Work with power company to protect Parkesburg - N Church St Electrical Substation to the 0.2% annual chance flood level.	Parkesburg Borough			X		
Enhance stormwater management regulations	Penn Township			X		
Work with power company to protect Penn - Neward Road Electrical Substation to the 0.2% annual chance flood level.	Penn Township			X		
Install warning signals at unguarded railroad crossing at US Rt 1 at the railroad tracks by Fairville Rd	Pennsbury Township			X		
Install warning signals for times when road is closed due to flooding on US Rt 1 in the area of the Brandywine creek	Pennsbury Township			X		
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to dam failure: Bissel/Hill	Pennsbury Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Girt/Beverly Rural Historic District and Delaware Boundary Makers.						
Improve drainage at the intersection of Bridge and Church St.	Phoenixville Borough			X		
Protect the District Court 15-2-01 to the 0.2% annual chance flood level.	Phoenixville Borough			X		
Protect the Phoenixville Boro PD to the 0.2% annual chance flood level.	Phoenixville Borough			X		
Protect the Phoenixville Water Treatment to the 0.2% annual chance flood event and from dam failure.	Phoenixville Borough			X		
The municipal FPA to work with the Phoenixville Water Plant facility owner/operator to protect the facility to at least the 0.2% chance flood level and from the vulnerabilities to dam failure.	Phoenixville Borough			X		
Work with the management of major businesses to protect the buildings from dam failure and to the 0.2% annual chance flood level and from the vulnerabilities to dam failure.	Phoenixville Borough			X		
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to dam failure: Black Rock Bridge, Lobok, John, Property, Mansion House, and Phoenixville Canal Spur	Phoenixville Borough			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Assess and determine the best action to prevent flooding around Brandywine Creek on Northbrook Road, one lane historical bridge	Pocopson Township				X	
Stabilize existing roadway in danger of collapse from damage due to frequent flooding of Brandywine Creek, with retaining wall and guide rail system. This will improve traffic safety for local residents, allow for better access by EMS vehicles, and mitigate the damage from future flooding	Pocopson Township				X	
The municipal FPA to work with the Lenape Forged Products Corp facility owner/operator to protect the facility from the vulnerabilities of dam failure.	Pocopson Township				X	
Work with power company to protect the Pocopson - Lenape Unionville Road Electrical Substation to the 0.2% annual chance flood level.	Pocopson Township				X	
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Pocopson Station, State Route 3027, and Wilkinson House	Pocopson Township				X	
Assess and determine the best action to improve drainage and reduce flooding on Greenbelt Drive	Sadsbury Township			X		
Install gates to be closed during flood incidents and signage on sections of Old Mill Road	Sadsbury Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Acquisition/Elevation of the structure located at 493 State Creek Road	Schuylkill Township			X		
Construct Larger Culvert at East Phillip Drive	Schuylkill Township			X		
Construct larger culvert at S Whitehorse Road	Schuylkill Township			X		
Determine specific vulnerability to dam failure and determine appropriate mitigation measures for the Valley Forge Sewage Treatment Plant	Schuylkill Township			X		
Plant bushes/other vegetation to stop drifting snow in known problem areas	Schuylkill Township			X		
Protect Structure with Barrier at Creek Road Bridge	Schuylkill Township			X		
Retrofit critical public facilities with safe rooms	Schuylkill Township			X		
The municipal FPA to work with the Aqua Pickering Water Treatment facility owner/operator to protect the facility to at least the 0.2% chance flood level	Schuylkill Township			X		
The municipal FPA to work with the Valley Forge Sewer Authority facility owner/operator to protect the facility to at least the 0.2% chance flood level	Schuylkill Township			X		
Work with power company to protect Schuylkill - Valley Forge Road to the 0.2% annual chance flood level.	Schuylkill Township			X		
Work with YMCA management to protect the building to the 0.2% annual chance flood level.	Schuylkill Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Investigate stormwater management options and identify mitigati Coatesville Boroughon or structural projects to reduce vulnerability to stormwater flooding incidents throughout South	South Coatesville Borough				X	
Protect the Coatesville Sewer Authority from dam failure and to the 0.2% annual chance flood level.	South Coatesville Borough				X	
The municipal FPA will work with the Scrap Metal Services owner/operator to protect the facility to the 0.2% annual chance level.	South Coatesville Borough				X	
Construct larger culvert at Bealor Road	South Coventry Township			X		
Determine the best action to prevent downhill flooding on Coventryville Rd & Harmonyville Road, close to North Cov. Border	South Coventry Township			X		
Install flood water collection boxes and piping on Schoolhouse Road and Porter's Mill Road	South Coventry Township			X		
Purchase and install a backup generator for the Woodridge Sewer Plant at 190 Ridgeview Drive	South Coventry Township			X		
Work with power company to protect South Coventry - Porters Mill Road Electrical Substation to the 0.2% annual chance flood level.	South Coventry Township			X		
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Coventryville	South Coventry Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Historic District and Coventryville Historic District (1975)- HAD						
Protect the Spring City Sewer Plan from the vulnerably to dam failure and to the 0.2% annual chance flood level.	Spring City Borough				X	
The municipal FPA will work with the Hydromotion owner/operator to protect the facility from the vulnerabilities of dam failure	Spring City Borough				X	
Work with management of major businesses to protect the buildings from the vulnerably to dam failure and to the 0.2% annual chance flood level.	Spring City Borough				X	
Work with the Textile Mill owner to determine what flood protection measures can be taken to protect the facility from the vulnerabilities from dam failure	Spring City Borough				X	
Work with PennDOT to conduct an assessment of flood-prone areas along roadway Rt 926 from Rt 202 to Cheyney Rd	Thornbury Township			X		
Install gates to be closed during flood incidents and signage at Rt 926 and Creek Road	Thornbury Township			X		
Install gates to be closed during flood incidents and signage at Rt 926 and S. Westtown Rd	Thornbury Township			X		
Install gates to be closed during flood incidents and signage at Rt 926 and Westtown-Thornton Rd	Thornbury Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Install gates to be closed during flood incidents and signage at Westtown-Thornton Rd north of Railroad Bridge	Thornbury Township			X		
Install gates to be closed during flood incidents and signage at Westtown- Thornton Rd south of Railroad Bridge	Thornbury Township			X		
Work with power company to protect Thornbury - Westtown Road Electrical Substation to the 0.2% annual chance flood level and from the vulnerabilities to dam failure.	Thornbury Township			X		
Clogged inverts throughout the township causing flooding	Tredyffrin Township			X		
Improve drainage to reduce flooding on Hadwick Road and Upper Weedly Road	Tredyffrin Township			X		
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Cedar Hollow Industrial Track: Bridge, County Bridge No. 171, Great Valley Mill, Jerman, Thomas, Property, and historic structure on SR 7015	Tredyffrin Township			X		
Improve drainage to reduce flooding on Wills Lane, Woodcrest Drive, and Saunders Drive	Tredyffrin Township			X		
Acquisition/elevation of the structure located at 2 Kiloran Wynd	Upper Uwchlan Township			X		There are no issues currently, with a runoff issue addressed downstream.
Acquisition/elevation of the structure located at 80 Saint Andrews Ln	Upper Uwchlan Township			X		There are no issues currently, with a runoff

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
						issue addressed downstream.
Protect Larkins Bridge with barrier	Upper Uwchlan Township			X		No loss of life hazard potential.
Protect structure with barrier on Dorothy Lane	Upper Uwchlan Township			X		No loss of life hazard potential.
Protect structure with barrier on Font Road	Upper Uwchlan Township				X	This is maintained by the DPW.
Protect structure with barrier on Lyndell Road	Upper Uwchlan Township				X	This is maintained by the DPW.
Protect structure with barrier on Moore Road and Turnstone Way	Upper Uwchlan Township				X	This is maintained by the DPW.
Protect structure with barrier on St Andrews Lane	Upper Uwchlan Township				X	This is maintained by the DPW.
Protect Windsor Schoolhouse with barrier	Upper Uwchlan Township		X			No known issue at this location.
Raise Fellowship Road roadway at Red Bone Road	Upper Uwchlan Township				X	This is maintained by the DPW.
Stormwater culvert and basin re-sizing on Greenridge Road	Upper Uwchlan Township		X			Duplicate from another action listed.

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Stormwater culvert and basin re-sizing on Krauser Rd	Upper Uwchlan Township				X	This is maintained by the DPW.
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from vulnerabilities to dam failure: County Bridge No. 101 and Scott Farm Property	Valley Township			X		
Assess and determine the best action to protect Wagontown Road near the West Branch of the Brandywine Creek, and implement the action.	Valley Township			X		
Assess drainage into Sucker Run near South Park Avenue and PA-372 to identify the best action to prevent flooding during heavy rainfall events, and implement the action.	Valley Township			X		
Protect Glenmoore FC Fire Station from a potential dam failure	Wallace Township			X		
The municipal FPA to work with the Verizon Glenmoore ESS Bldg. facility owner/operator to protect the facility from the vulnerabilities to dam failure	Wallace Township			X		
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to dam failure: Glenmoore Historic District and Steels Bridge	Wallace Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Hockley Mill Farm, Knauer Patent Thematic District, North Warwick Historic & Archaeological District (HDA), North Warwick HDA, and historic structure located on SR 7015	Warwick Township			X		
Acquire and install back-up generator at Wastewater Treatment Plant	West Bradford Township				X	
Improve drainage on Broad Run Road between Beacon Hill	West Bradford Township				X	
Install 4 gates to be closed during flood incidents and signage at Downingtown Pike between Harmony Hill Rd and Skelp Level Rd	West Bradford Township			X		Requires collaboration with PennDOT as Downingtown Pike is a state highway.
Protect the Broad Run Sewage Treatment Plant from dam failure and to the 0.2% annual chance flood level.	West Bradford Township			X		Requires collaboration with a private landowner.
Work with the management of Ram-t Construction Specialist to protect the buildings from dam failure.	West Bradford Township				X	
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to flooding: Derbydown Homestead, Northbrook Historic District, Pennsylvania Railroad: Morrisville Lien: Viaduct	West Bradford Township				X	

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Work with the Grow, James, House property owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	West Brandywine Township			X		
Obtain a backup generator for Goodwill Fire Company	West Chester Borough	X				Vendor was selected for a Summer 2025 install.
The municipal FPA to work with the National Foam facility owner/operator to protect the facility to at least the 0.2% chance flood level	West Chester Borough			X		
Work with the Ross Fording Road Bridge property owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	West Fallowfield Township			X		
Improve culvert at 103 Oak Lane	West Goshen Township			X		
Install 3 gates to be closed during flood incidents and signage at East Chestnut and Montgomery	West Goshen Township			X		
The municipal FPA to work with the A. Duie Plyle PB II Warehouse facility owner/operator to protect the facility to at least the 0.2% chance flood level	West Goshen Township			X		
The municipal FPA to work with the A. Duie Plye Bolmar Street Warehouse facility owner/operator to protect the facility to at least the 0.2% chance flood level	West Goshen Township			X		
The municipal FPA to work with the A. Duie Pyle West Chester Truck Terminal facility owner/operator to protect the facility to at least the 0.2% chance flood level	West Goshen Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
The municipal FPA to work with the Wire and Cable Specialties facility owner/operator to protect the facility to at least the 0.2% chance flood level	West Goshen Township			X		
Work with the Greystone Hall property owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	West Goshen Township			X		
Assess and determine the best actions to prevent flooding on bridges along Rt 82 from Unionville to Coatesville	West Marlborough Township			X		
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: House at Springdell, Pennock, Martha House & Industrial Site, and Speakman No.1 Covered Bridge	West Marlborough Township			X		
Work with the Isabella Furnace owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	West Nantmeal Township			X		
Install gates to be closed during flood incidents and signage at Fremont Road between Willow Road and King Pen Road	West Nottingham Township			X		
Install gates to be closed during flood incidents and signage at Park Road between Veteran's Drive and Sand Hill Road	West Nottingham Township			X		
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Anselma Mill	West Pikeland Township				X	

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
District-HDA, Clinger- Moses Mill Complex, Lightfoot Mill, and Vitale House						
Backup Generators (2) Acquisition and Installation at Matthews Meadows Sewer Plant	West Vincent Township			X		
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Halls Covered Bridge, Tyson's Bridge, and historic structure on Kimberton Road	West Vincent Township			X		
Elevation/acquisition of structure located at 116 N. Locust Lane	West Whiteland Township			X		
Elevation/acquisition of structure located at 117 N. Locust Lane	West Whiteland Township			X		
Elevation/acquisition of structure located at 117 Valley Road	West Whiteland Township			X		
Elevation/acquisition of structure located at 118 Valley Road	West Whiteland Township			X		
Elevation/acquisition of structure located at 120 Valley Road	West Whiteland Township			X		
Elevation/Acquisition of structure located at 510 Winding Way	West Whiteland Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Elevation/acquisition of structure located at 512 Winding Way	West Whiteland Township			X		
Elevation/acquisition of structure located at 513 Winding Way	West Whiteland Township			X		
Remove silt/clean Valley Creek bed	West Whiteland Township			X		
The municipal FPA to work with the Verizon Exton ESS Bldg. facility owner/operator to protect the facility to at least the 0.2% chance flood level	West Whiteland Township			X		
Work with power company to protect West Whiteland - S Whitford Road Electrical Substation to the 0.2% annual chance flood event.	West Whiteland Township			X		
Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Colebrook Manor, Exton Hotel, Thomas, John Roberts, Tennant Farmstead, Turnpike Station House, Whitford Station House, and William's Deluxe Cabins	West Whiteland Township			X		
Acquire/elevate roadways/properties along Chester Creek - Skiles Blvd, Kolbe Lane, Piedmont Road, Tower Course Drive, Blenheim Road, Wood Lane, Westbourne Road, Westtown Road, Westtown Way, Ponds Edge Road, Diane Drive, Leslie Lane, Robin Drive	Westtown Township		X			

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Conduct a wildlands/forestry survey of township-owned forested areas, to determine need for strategies for mitigating invasive species risks.	Westtown Township				X	
Conduct flood mitigation analysis of the township WWTP on Westtown Road, and pump stations on Rt. 926 (Rustin) and Rt. 3 (Kirkwood)	Westtown Township	X				
Develop/maintain a hazard risk management webpage on the municipal website where information and mapping can be posted.	Westtown Township				X	
Encourage regular offerings of the American Red Cross Citizen's Disaster Course and other relevant classes.	Westtown Township				X	
Enhance public outreach to residents in areas subject to flooding to inform them of annual grant opportunities; this may include distributing periodic articles and including handouts in the annual newsletter.	Westtown Township				X	
Work with PennDOT to conduct an assessment on how to improve design of Route 352/Rt. 3 intersection	Westtown Township	X				
Work with PennDOT to conduct an assessment to improve the design of Route 202 at 926 intersection and High Street/202 merge	Westtown Township				X	
Post flyers and other readily available informational materials at municipal hall or distribute at regular civic meetings.	Westtown Township				X	
Protect critical infrastructures (Schools, daycare, apartment buildings, and nursing	Westtown Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
home) on Rt. 202 around Skiles Blvd from HAZMAT transportation accidents						
Protect the following properties from a potential pipeline incident: Pipeline - Avonlea and Overhill neighborhoods, Sts. Simon and Jude Church and School (8 Cavanaugh Ct West Chester, PA 19382) . Advent Lutheran Church at Green Lane on 352, Chesterfield Condominiums at Rt. 3 and 352	Westtown Township				X	
Protect the Westtown Wastewater Treatment Plant from dam failure and to the 0.2% annual chance flood level.	Westtown Township	X				
Provide general hazard risk preparedness and mitigation information in regular newsletters and mailings.	Westtown Township				X	
Work with PennDOT to redesign of the 926 intersection, elimination of the East Pleasant Grove Road/Rt. 202 connection, further improvements to the Skiles Road intersection, High Street/202 Northbound merge	Westtown Township		X			
Work with PennDOT to redesign the intersection of SR 926 and Avonlea Circle and Tanguy Road to improve line of sight.	Westtown Township		X			
Retrofit WWTP on Westtown Road, Pump Stations at Kirkwood Highway and Rustin H.S.	Westtown Township	X				
Work with the County Bridge No. 148 owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	Westtown Township			X		
Elevation/Acquisition of the structure located at 1 Eisenhower Dr	Willistown Township			X		

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Elevation/Acquisition of the structure located at 116 Davis Rd	Willistown Township			X		
Emergency alerting systems for Willistown Township	Willistown Township				X	Social media and website have been used for notifications regarding any hazard or emergency throughout the township.
Increase Culvert Size on Hillview Rd between Fox Chase and Bar Rd	Willistown Township				X	This project was part of a key focus area of the 2024 Stormwater Master Plan.
Increase drainage basin size at Rustmont Homeowners Association	Willistown Township			X		
Increase drainage basin size behind Malvern Fire Company	Willistown Township			X		
Increase drainage basin size of the Family Life Basin	Willistown Township			X		
Increase size of drainage pipe crossing under road at Paoli Pike west of Rustin Ln and Devon Rd	Willistown Township			X		
Install gates to be closed during flood incidents and signage on Jaffery Rd over Crum Creek	Willistown Township			X		
Install gates to be closed during flood incidents and signage on Whitehorse Rd between Rabbit Run Rd and Grubbs Mill Rd	Willistown Township			X		
Strengthen Bridge/Re- engineer bridge approaches at Jaffery Rd over Crum Creek	Willistown Township				X	Bridge is inspected yearly.

Table 6.1-2 2021 Mitigation Action Progress

MITIGATION ACTION	COUNTY / MUNICIPALITY	COMPLETED	CANCELED	DEFERRED	ONGOING	NOTES
Strengthen Bridge/Re- engineer bridge approaches at Whitehorse Rd between Davis Rd and Fox Chase Rd	Willistown Township				X	Township monitors road conditions, but the state is responsible for the bridge.
Strengthen Bridge/Re- engineer bridge approaches at Whitehorse Rd between Rabbit Run Rd and Grubbs Mill Rd	Willistown Township	X				Project completed with assistance from Pennoni Engineering. A guiderail and curbing were installed to prevent overtopping of the road by the creek, and approach surfaces were reconstructed.
Installation of a storm water management system in Ronnie Park section of the Township to mitigate surface water runoff impacts during severe weather events that have resulted in past flooding of the neighborhood; and prevent damage to property, housing, and infrastructure in the project area.	Willistown Township				X	

6.1.3. Mitigation Successes

Chester County and its partners and municipalities have made a great deal of progress on hazard mitigation projects and actions in the last five years. Details on numerous actions marked as "Completed" since the 2021 plan update are summarized below.

Structure and Infrastructure Efforts

- The Brandywine Flood Study, a joint effort between The Brandywine Conservancy, Chester County Water Resources Authority, and the University of Delaware, was completed in April 2025. The study serves as an aid to better protect people and property from the impacts of future floods, providing a broader analysis of flood risk in the Brandywine watershed, including historic flooding, projections for future floods, potential impacts of future precipitation and storm events, and land use based on population projections. Additionally, the report provides an actionable suite of proposed flood mitigation recommendations throughout the watershed.
- The White Clay Watershed Association (WCWA) has initiated a bi-state flood study with Drexel University, Chester County Water Resources (CCWRA), and other partners to better understand—and ultimately help mitigate—the increasing threat of flooding in the White Clay Creek watershed. The effort brings together Drexel's engineering and modeling expertise with WCWA's deep community ties and environmental leadership in the region.
- Willistown Township worked to strengthen and re-engineer the bridge approaching Whitehorse Rd between Rabbit Run Rd and Grubbs Mill Rd. Guiderails and curbing were installed to prevent overtopping of the road by the creek.
- Caln Township replaced the Municipal Drive bridge over Valley Run that was significantly damaged during Hurricane Ida.
- The Chester County Water Resources Authority completed the Beaver Creek Dam Rehabilitation Project in conjunction with the USDA Natural Resources Conservation Service. The rehabilitation included the reconstruction of the principal water control tower (known as the riser) as well as the auxiliary spillway and improvements to the internal drainage system in the embankment.
- Franklin Township improved drainage systems at Green Bridge on Strickersville Road and Appleton Road to reduce flooding during and after heavy rain events.
- A backup battery for a traffic signal was installed at the intersection of South Bradford Avenue and West Nields Street in East Bradford Township to prevent outages during heavy rain and wind events.
- Franklin Township cleared out blocked inlets at 896 between Goodhope Road and Gypsey Hill.
- Chester County installed a new USGS stream gage on Beaver Creek along Mary Street in Caln Township in 2024. The gage is part of a network of 22 stream gages which includes 14 gages with established flood threshold water levels.

- All public and private water utilities in Chester County conducted infrastructure inventories to identify lead service lines within their networks, in compliance with the revised Federal Lead and Copper Rule.

Local Plans and Regulations

- Chester County developed and approved a model natural conservation ordinance for municipal adoption.
- Chester County adopted *Watersheds 2045,* a comprehensive water resources plan, which includes an updated the PA Act 167 Stormwater Management Plan Countywide Model Stormwater Ordinance.
- Chester County developed a COOP/COG Plan and procedures for off-site hazmat releases that can impact buildings.
- Chester County continued to develop mutual aid and interagency agreements to support preparedness, mitigation, and response activities in the county.
- Chester County developed a plan for replenishment fuel for generators.
- In 2024, CCWRA received a state-funded grant to lead planning efforts on developing an interactive stormwater "hot spots" map, conduct a baseline inventory of publicly owned stormwater infrastructure (basins, pipes, etc.), and conduct additional hydrologic & hydraulic models for the White Clay Creek, Valley Creek, and Trout Creek watersheds.
- Penn Township, East Caln Township, Oxford Borough, Willistown Township, Highland Township, Malvern Borough, and Modena Borough all adopted their respective Comprehensive Plan with key planning elements of their plans including preserving open space and protecting natural resources, guiding growth, and resilience preparedness.
- West Vincent Township adopted a new Forest Protection Ordinance to help safeguard the township's woodlands and forests from development. The ordinance sets tree replacement standards, such as when trees are damaged through wildfires. Additionally, it sets standards for cutting declined, damaged, or diseased trees that present hazards to existing structures, which can reduce structural risks during wildfires or windstorms.
- London Britain Township Subdivision and Land Development Ordinance Update was updated in 2022 with notable provisions were included in the updated ordinance to further protect riparian buffers in the township.
- New Garden Township is working to update its zoning ordinance to aid in the protection of the township's open spaces and agricultural landscape through the enhanced regulation of development. Additionally, the zoning ordinance will aid in the reduction of risk from hazards like floods and source water protection through its restrictions on development near riparian buffers.

Natural Systems Protections

- Water releases from Marsh Creek Dam (operated by PA DCNR) and Hibernia Dam (operated by CCWRA) are strategically managed to protect downstream flows that support aquatic life and drinking water withdrawals.

- The county supports the USGS's Pennsylvania Drought Conditions Monitoring program and helps to fund one of the most robust county-wide observation-well networks in Pennsylvania.

Education and Awareness

- Chester County updated Department of Emergency Services public education materials to include flood mitigation recommendations and NFIP program information.
- To support public education efforts, Chester County developed a map showing the relative frequency that county roads and bridges are subject to flooding.
- Chester County coordinated with owners of privately-owned digital billboards for emergency uses.
- London Britain Township set up emergency alerting systems for its residents to increase awareness of potential hazards.
- Chester County Water Resources Authority has developed a FloodTools web page (www.chesco.org/FloodTools) that highlights key resources from the National Weather Service and the U.S. Geological Survey so the public can stay informed of forecasted and current stream flooding conditions throughout Chester County.
- Chester County Water Resources Authority has developed a Drought Dashboard (www.chesco.org/Drought) to provide the current drought status as declared by the Commonwealth Drought Task Force as well as current groundwater conditions of the Chester County Observation Well Network and current and forecasted conditions.
- Chester County Water Resources Authority has developed a web app so that the public can submit non-emergency information about stormwater issues in Chester County, Pennsylvania. The purpose of the app is to gather locations of stormwater issues, photos and other information about when they occur, how often they occur, and associated impacts.

6.2. Mitigation Goals and Objectives

Based on results of the review of the 2021 HMP mitigation goals and objectives established, a new set of goals and objectives were developed in 2026. Table 6.1-1 explains how goals and objectives were updated and revised. Table 6.2-1 lists the mitigation goals and objectives established for the 2026 plan. There are seven goals, and 29 objectives identified.

Table 6.2-1 Chester County 2026 Mitigation Goals and Actions

GOAL 1	Prevent injury/death, physical damage, and other impacts from hazards in Chester County.

Objective 1.1	Enhance regulations for addressing development in hazard-prone areas. Encourage high construction standards on all structural projects to reduce risk from all natural and human caused hazards.
Objective 1.2	Support government agencies and non-governmental organizations to provide aid to vulnerable populations before, during, and after a hazard.
GOAL 2	Protect the citizens of Chester County as well as public and private property from the impacts of natural and human-caused hazards.
Objective 2.1	Develop a comprehensive approach to upgrade infrastructure to reduce the possibility of damage to and loss of function to infrastructure, critical facilities and culturally or historically significant assets located in high-hazard areas.
Objective 2.2	Improve existing stormwater management systems and implement new warning systems and tools to reduce flooding.
Objective 2.3	Provide resources that encourage regular inspection and maintenance of existing stormwater facilities to reduce flooding.
Objective 2.4	Assist with updating local stormwater management standards to reduce flooding and education of stormwater management/ flooding.
Objective 2.5	Protect existing structures in the Special Flood Hazard Area.
GOAL 3	Protect and restore existing natural resources including wetlands, floodplains, and riparian buffers.
Objective 3.1	Lessen impacts on natural resources and open space from natural and human-caused hazards by promoting sustainable land use and water resources management practices.
Objective 3.2	Provide appropriate safeguards for the preservation of the quality of water resources, stream corridors, watershed areas, and floodplains.
GOAL 4	Promote public awareness on the potential impacts of natural and human-caused hazards, and actions to reduce those impacts.
Objective 4.1	Develop public education and outreach programs on hazards and hazard mitigation and develop and distribute public awareness materials about natural hazard risks, preparedness, and mitigation.
Objective 4.2	Educate property owners in hazard-risk areas regarding their risks and the precautions they can take.
Objective 4.3	Encourage residents to implement hazard mitigation and preparedness measures on their properties.
Objective 4.4	Provide outreach and educational opportunities to the community about where to find comprehensive information on hazards.
Objective 4.5	Work with media partners to promote public awareness on the potential impacts of natural hazards and actions to reduce those impacts.
Objective 4.6	Consider education campaigns and workshops to promote 'safe' development and other hazard mitigation principles.

Objective 4.7	Develop an understanding of increased risk from climate change impacts to natural hazards and promote education on potential impacts from increased risk.
GOAL 5	Ensure adequacy and continuity of emergency management services during hazard events.
Objective 5.1	Continue to provide residents with adequate warning of potential hazards.
Objective 5.2	Identify safe and efficient evacuation routes during hazard events to ensure continued service.
Objective 5.3	Provide for adequate shelters during hazard events.
Objective 5.4	Conduct damage assessments and provide flood mitigation resources to municipalities and the public.
GOAL 6	Ensure hazard mitigation goals and objectives are consistent with goals of other plans and ordinances in the county and municipalities.
Objective 6.1	Promote responsible growth and development via proper enforcement and through the incorporation of hazard mitigation principles in municipal plans, and zoning, subdivision and land development, stormwater ordinances, and floodplain ordinances, as appropriate.
Objective 6.2	Incorporate hazard mitigation planning projects into capital improvement plans.
Objective 6.3	Continue to regulate development in conservation areas and within floodplains to prevent flood damage.
Objective 6.4	Integrate plans and ordinances to ensure concurrency and harmony between them.
Objective 6.5	Encourage homeowners, renters, and businesses to insure their properties against all hazards, including purchasing flood coverage under the NFIP.
Objective 6.6	Encourage local participation in FEMA's Community Rating System (CRS) Program.
GOAL 7	Protect people and assets from the potential impacts of High Hazard Potential Dams.
Objective 7.1	Coordinate with High Hazard Potential Dam owners and affected officials on dam rehabilitation and funding.
Objective 7.2	Ensure High Hazard Potential Dams are mitigated to decrease potential hazard risks.
Objective 7.3	Continue planning efforts and emergency preparedness surrounding high hazard dams.

6.3. Identification and Analysis of Mitigation Techniques

The mitigation strategy in the updated Hazard Vulnerability Assessment and Mitigation Plan Update should include analysis of a comprehensive range of specific techniques or actions. FEMA, through the June 2025 Local Mitigation Handbook, and PEMA, through the 2020 Standard Operating Guide (SOG), identify four categories of hazard mitigation techniques.

- Local plans and regulations: Government authorities, policies, or codes that influence the way land and buildings are developed and built. Examples include, but are not limited to, comprehensive plans, subdivision regulations, building codes and enforcement, and NFIP and CRS.
- Structure and infrastructure: Modifying existing structures and infrastructure or constructing new structures to reduce hazard vulnerability. Examples include, but are not limited to, acquisition and elevation of structures in flood prone areas, utility undergrounding, structural retrofits, floodwalls and retaining walls, detention and retention structures, and culverts.
- Natural systems protection: Actions that minimize damage and losses and preserve or restore the functions of natural systems. Examples include, but are not limited to, sediment and erosion control, stream corridor restoration, forest management, conservation easements, and wetland restoration and preservation.
- Education and awareness: Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate the hazards and may also include participation in national programs. Examples include, but are not limited to, radio or television spots, websites with maps and information, provide information and training, NFIP outreach, StormReady®, and Firewise® Communities.

The HMPT reviewed the four types of mitigation techniques and examples of actions at the Regional Municipal Workshops and ensured that all mitigation technique types were applied across hazards. Table 6.3-1 provides a matrix identifying the mitigation techniques used for the hazards identified in the Risk Assessment. The specific actions associated with these techniques are included in Table 6.4-1 in the next section.

Table 6.3-1 Mitigation Techniques for All Hazards in Chester County

HAZARD NATURAL (N) OR MAN-MADE (M) *(IN ORDER OF RISK FACTOR RANKING)*	MITIGATION TECHNIQUE			
	PLANS AND REGULATIONS	STRUCTURE AND INFRASTRUCTURE	NATURAL SYSTEMS PROTECTION	EDUCATION AND AWARENESS
Utility Interruption (M)	X	X		X
Flood, Flash Flood, and Ice Jam (N)	X	X	X	X

Table 6.3-1 Mitigation Techniques for All Hazards in Chester County

HAZARD NATURAL (N) OR MAN-MADE (M) *(IN ORDER OF RISK FACTOR RANKING)*	MITIGATION TECHNIQUE			
	PLANS AND REGULATIONS	STRUCTURE AND INFRASTRUCTURE	NATURAL SYSTEMS PROTECTION	EDUCATION AND AWARENESS
Pandemic and Infectious Disease (N)	X	X		X
Drought (N)	X	X		X
Transportation Incidents (M)	X	X	X	X
Urban Fire and Explosion (M)	X	X		X
Substance Use Disorder (M)	X	X		X
Extreme Temperatures (N)	X	X		X
Tornado, Windstorm (N)	X	X		X
Winter Storm (N)	X	X		X
Nuclear Incident (N)	X	X		X
Environmental Hazards: Hazardous Materials Release (M)	X	X		X
Wildfire (N)	X	X		X
Invasive Species (N)	X	X	X	X
Hurricane, Tropical Storm, Nor'easter (N)	X	X		X
Terrorism (M)	X	X		X
Dam failure (M)	X	X		X
Earthquake (N)	X	X		X
Environmental Hazards: Gas and Liquid Pipelines (M)	X	X		X
Radon Exposure (N)	X	X		X
Cyber-Terrorism (M)	X	X		X

Table 6.3-2 provides a matrix identifying which municipalities have mitigation actions for each hazard identified in the Risk Assessment. Each municipality has:

- At least one action for each hazard identified for their community.
- At least one action for any hazards that the municipality identified as being at equal to or greater risk than the county overall in Table 4.4-3.

The specific actions are detailed in Table 6.4-1 in the next section.

Table 6.3-2 Hazards Addressed by Mitigation Actions by Municipality

MUNICIPALITY	Utility Interruption (M)	Flood, Flash Flood, Ice Jam (N)	Pandemic and Infectious Disease (N)	Drought (N)	Transportation Incidents (M)	Urban Fire and Explosion (M)	Substance Use Disorder (M)	Extreme Temperature (N)	Tornado, Windstorm (N)	Winter Storm (N)	Nuclear Incidents (M)	Hazardous Materials Release (M)	Wildfire (N)	Invasive Species (N)	Hurricane, Tropical Storm, Nor' easter (N)	Terrorism (M)	Dam Failure (M)	Earthquake (N)	Gas and Liquid Pipelines	Radon Exposure (N)	Cyber-Terrorism (M)
Atglen Borough	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Avondale Borough	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Birmingham Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Caln Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Charlestown Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Coatesville City	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Downingtown Borough	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
East Bradford Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
East Brandywine Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
East Caln Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
East Coventry Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
East Fallowfield Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
East Goshen Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
East Marlborough Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 6.3-2 Hazards Addressed by Mitigation Actions by Municipality

MUNICIPALITY	Utility Interruption (M)	Flood, Flash Flood, Ice Jam (N)	Pandemic and Infectious Disease (N)	Drought (N)	Transportation Incidents (M)	Urban Fire and Explosion (M)	Substance Use Disorder (M)	Extreme Temperature (N)	Tornado, Windstorm (N)	Winter Storm (N)	Nuclear Incidents (M)	Hazardous Materials Release (M)	Wildfire (N)	Invasive Species (N)	Hurricane, Tropical Storm, Nor' easter (N)	Terrorism (M)	Dam Failure (M)	Earthquake (N)	Gas and Liquid Pipelines	Radon Exposure (N)	Cyber-Terrorism (M)
East Nantmeal Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
East Nottingham Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
East Pikeland Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Easttown Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
East Vincent Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
East Whiteland Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Elk Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Elverson Borough	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Franklin Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Highland Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Honey Brook Borough	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Honey Brook Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Kennett Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Kennett Square Borough	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 6.3-2 Hazards Addressed by Mitigation Actions by Municipality

MUNICIPALITY	Utility Interruption (M)	Flood, Flash Flood, Ice Jam (N)	Pandemic and Infectious Disease (N)	Drought (N)	Transportation Incidents (M)	Urban Fire and Explosion (M)	Substance Use Disorder (M)	Extreme Temperature (N)	Tornado, Windstorm (N)	Winter Storm (N)	Nuclear Incidents (M)	Hazardous Materials Release (M)	Wildfire (N)	Invasive Species (N)	Hurricane, Tropical Storm, Nor' easter (N)	Terrorism (M)	Dam Failure (M)	Earthquake (N)	Gas and Liquid Pipelines	Radon Exposure (N)	Cyber-Terrorism (M)
London Britain Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Londonderry Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
London Grove Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Lower Oxford Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Malvern Borough	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Modena Borough	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
New Garden Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Newlin Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
New London Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
North Coventry Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Oxford Borough	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Parkesburg Borough	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Penn Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Pennsbury Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 6.3-2 Hazards Addressed by Mitigation Actions by Municipality

MUNICIPALITY	Utility Interruption (M)	Flood, Flash Flood, Ice Jam (N)	Pandemic and Infectious Disease (N)	Drought (N)	Transportation Incidents (M)	Urban Fire and Explosion (M)	Substance Use Disorder (M)	Extreme Temperature (N)	Tornado, Windstorm (N)	Winter Storm (N)	Nuclear Incidents (M)	Hazardous Materials Release (M)	Wildfire (N)	Invasive Species (N)	Hurricane, Tropical Storm, Nor' easter (N)	Terrorism (M)	Dam Failure (M)	Earthquake (N)	Gas and Liquid Pipelines	Radon Exposure (N)	Cyber-Terrorism (M)
Phoenixville Borough	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Pocopson Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Sadsbury Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Schuylkill Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
South Coatesville Borough	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
South Coventry Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Spring City Borough	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Thornbury Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tredyffrin Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Upper Oxford Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Upper Uwchlan Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Uwchlan Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Valley Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Wallace Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 6.3-2 Hazards Addressed by Mitigation Actions by Municipality

MUNICIPALITY	Utility Interruption (M)	Flood, Flash Flood, Ice Jam (N)	Pandemic and Infectious Disease (N)	Drought (N)	Transportation Incidents (M)	Urban Fire and Explosion (M)	Substance Use Disorder (M)	Extreme Temperature (N)	Tornado, Windstorm (N)	Winter Storm (N)	Nuclear Incidents (M)	Hazardous Materials Release (M)	Wildfire (N)	Invasive Species (N)	Hurricane, Tropical Storm, Nor' easter (N)	Terrorism (M)	Dam Failure (M)	Earthquake (N)	Gas and Liquid Pipelines	Radon Exposure (N)	Cyber-Terrorism (M)
Warwick Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
West Bradford Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
West Brandywine Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
West Caln Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
West Chester Borough	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
West Fallowfield Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
West Goshen Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
West Grove Borough	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
West Marlborough Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
West Nantmeal Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
West Nottingham Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
West Pikeland Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Table 6.3-2 Hazards Addressed by Mitigation Actions by Municipality

MUNICIPALITY	Utility Interruption (M)	Flood, Flash Flood, Ice Jam (N)	Pandemic and Infectious Disease (N)	Drought (N)	Transportation Incidents (M)	Urban Fire and Explosion (M)	Substance Use Disorder (M)	Extreme Temperature (N)	Tornado, Windstorm (N)	Winter Storm (N)	Nuclear Incidents (M)	Hazardous Materials Release (M)	Wildfire (N)	Invasive Species (N)	Hurricane, Tropical Storm, Nor' easter (N)	Terrorism (M)	Dam Failure (M)	Earthquake (N)	Gas and Liquid Pipelines	Radon Exposure (N)	Cyber-Terrorism (M)
West Sadsbury Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
West Vincent Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
West Whiteland Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Westtown Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Willistown Township	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Downingtown Area Regional Authority	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

6.4. Mitigation Action Plan

Mitigation actions have been carried over from the 2021 Plan and have been newly developed for the county and participating jurisdictions. While some actions are more general in nature and could apply to more than one jurisdiction, other actions are specific to individual projects or jurisdictions. Mitigation actions were developed based on issues identified in the risk assessment, gaps identified in the mitigation capability analysis, input from HMSC, and feedback from the HMPT.

During the Regional Municipal Workshops held on February 24, March 10 and 13, 2025, mitigation techniques and actions were discussed. After the meetings, municipalities were provided with their respective Mitigation Action Progress Form, which listed mitigation actions for their municipality from the 2021 HMP for review and update as described in **Section 6.1**.

Actions that have been deferred or ongoing have been carried over to the 2026 Action Plan and are again proposed for implementation.

In addition, each participating jurisdiction was given New Mitigation Action Forms to provide any new actions or projects to be included in the plan update. New Mitigation Action Forms were also posted to the project website and set out via e-mail. Meeting participants who were not affiliated with a municipality, organization or agency that had any actions identified in the 2021 plan were provided with New Mitigation Action Forms to include new actions in the 2026 Plan if they wished.

The final list of 465 mitigation actions is described in Table 6.4-1 below. This table provides an overview of the strategy that will be used to implement each of the proposed mitigation actions. It lists all actions that apply to all municipalities first, then in alphabetical order by municipality, including Chester County. There are several dam actions that apply to many municipalities, including Chester County. For each action listed in the table, the associated strategy identifies the agency or job title that will be responsible for initiating the work and potential sources of funding for the work. Each strategy also indicates a timeframe for when the action will happen. At least one mitigation action was established for each hazard in Chester County. More than one action is identified for several hazards. Every participating jurisdiction has at least one mitigation action for each high-risk hazard they identified for their community (see Table 6.3-2).

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
1	Adopt the latest published editions of relevant consensus-based codes and standards, such as the International Building Code (IBC), International Residential Code (IRC), and International Existing Building Code (IEBC).	All Municipalities	1,2,6	Local Plans and Regulations	Earthquake; Hurricane, Tropical Storm, Nor'Easter; Radon Exposure; Tornado, Windstorm; Winter Storm; Urban Fire and Explosion	Municipal Planning and Zoning Departments	Long	Staff Time
2	Coordinate with county and state officials on invasive species of concern, including the development of messaging and outreach materials for how residents can mitigate risks on their property. Materials should be created in all languages relevant to the community.	All Municipalities	3,4	Education and Awareness	Invasive Species	Municipal EMAs	Short	Staff Time
3	Coordinate with county, state and federal agencies to stay up-to-date on training and exercise opportunities and coordinating potential mitigation actions for terrorist activities.	All Municipalities	1,5,6	Education and Awareness	Terrorism	DES, Municipal EMAs	Short	Staff Time

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
4	Develop and maintain a stockpile of PPE for distribution during pandemic or infectious disease events.	All Municipalities	1,5	Local Plans and Regulations	Pandemic and Infectious Disease	Municipal EMAs	Long	General Funds
5	Develop and maintain adequate road clearing capabilities.	All Municipalities	1,2	Structure and Infrastructure	Winter Storm	Municipal Public Works Departments	Long	Public Works Budgets, Staff Time
6	Develop/maintain a hazard risk management webpage on the municipal website where information and mapping can be posted, including property-level mitigation measures that homeowners and other residents can take. Materials will be posted in all languages relevant to the community.	All Municipalities	2,4,5,6	Education and Awareness	All Hazards	Municipalities	Short	Staff Time
7	Identify or develop cyber security awareness training and require all municipal staff to complete yearly. Develop certificate and tracking database to ensure all employees are up to date on trainings.	All Municipalities	4,6	Education and Awareness	Cyber-Terrorism	Municipal EMAs	Short	Staff Time
8	Improve coordination to reduce risk from hazardous material incidents and conduct information sessions and trainings to educate and prepare local officials and first responders.	All Municipalities	1,2,5	Education and Awareness	Environmental Hazards - Hazardous Materials	DES, Municipal EMAs	Short	Staff Time

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
9	Include messaging about water monitoring and conservation in water bills. For example: Regularly checking for leaks to minimize water supply losses or installing low-flow water saving showerheads and toilets. Messaging should be provided in all languages relevant to the community.	All Municipalities	4	Education and Awareness	Drought	Municipal EMAs	Short	Staff Time
10	Install traffic calming measures along roads and intersections that have higher incident risk.	All Municipalities	1,2	Structure and Infrastructure	Transportation Incidents	Municipal Public Works Departments	Long	Public Works Budgets, PennDOT
11	Organize outreach to vulnerable populations to inform them of resources available during power outages and periods of extreme wetaher, including establishing and promoting accessible heating or cooling centers in the community.	All Municipalities	1,2,4,5	Structure and Infrastructure	Extreme Temperatures; Winter Storm; Utility Interruption	Municipal EMAs	Long	FEMA HMGP, Non-Disaster funds; Operating Budget
12	Stormwater Infrastructure Upgrades: Upgrade drainage, add retention basins, and implement green infrastructure.	Atglen Borough	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Atglen Borough	Long	FEMA Non-Disaster Funding, HMGP; PA DCED FMP, H2O PA; Capital Improvement Budget; Operating

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Budget; Chester County DCD (CDBG, CRP)
13	The municipal FPA will work with the Atglen Borough Sewer Plant facility owner/operator to protect the facility to at least the 0.2% chance flood level.	Atglen Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	Operating Budget
14	Work with the property owner to determine what flood protection measures can be taken to protect the structure to the 0.2% annual chance flood level.	Atglen Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
15	The municipal FPA will work with the Avondale Sewer Authority facility owner/operator to protect the facility to at least the 0.2% chance flood level.	Avondale Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
16	Work with property owners within the FEMA-designated SFHA to determine what flood protection measures can be taken to protect those structures to the 1% or 0.2% annual chance flood level.	Avondale Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
17	Build an access road to Masters Way to Webb Rd.	Birmingham Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Birmingham Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
18	Work with PennDOT to reengineer intersection at Street Road (PA 926) bridge over Brandywine Creek.	Birmingham Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Birmingham Township	Long	PennDOT, Municipal Budget
19	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Brinton's Mill, Lenape Bridge, and Painter, Joseph, Farm.	Birmingham Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams, Dam Failure	FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
20	Address roadway closure gates and signage at all Amtrak/SEPTA underpasses in the Township, as identified in the Brandywine Flood Study	Caln Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding; PennDOT; Capital Improvement Budget
21	Acquire/Elevate the building located on 135 Seltzer Road.	Caln Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
22	Caln Township has major businesses that are vulnerable to dam failure and will work with	Caln Township	1,2,4	Structure and Infrastructure	Dam Failure	EMC	Short	Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	management to protect the buildings.							
23	Protect the Caln Radio Tower to the 0.2% annual chance flood level and from a potential dam failure.	Caln Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams, Dam Failure	FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
24	Organize and complete stormwater assessments and maintenance program, including any needed stormwater system repairs.	Caln Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Caln Township	Long	FEMA Non-Disaster Funding, HMGP; PA DCED FMP, H2O PA; Capital Improvement Budget; Operating Budget; Chester County DCD (CDBG, CRP)
25	Work with Downingtown Middle School to determine specific vulnerability to dam failure and determine appropriate mitigation measures.	Caln Township	1,2,4	Structure and Infrastructure	Dam Failure	EMC	Short	Operating Budget
26	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance	Charlestown Township	1,2,4	Structure and Infrastructure	Dam Failure	EMC	Short	FEMA HMGP, PDM, FMA; PA DCED FMP; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	flood level: Pennsylvania Railroad Bridge (No.205), Pickering Dam.							
27	Upgrade or repair stormwater infrastructure in areas of concern for flooding.	Charlestown Township, East Caln Township, East Goshen Township, East Nantmeal Township, East Nottingham Township, Highland Township, Honey Brook Borough, New London Township, Upper Oxford Township, Uwchlan Township, West Caln Township, West Grove Borough, Oxford Borough	2	Education and Awareness	Environmental Hazards - Hazardous Materials	DES, Municipal EMAs	Short	FEMA Non-Disaster Funding, HMGP; PA DCED FMP, H2O PA; Capital Improvement Budget; Operating Budget; Chester County DCD (CDBG, CRP)
28	As opportunities arise, elevate, or acquire properties within flood-prone areas. In addition, wet and dry proof commercial structures if they cannot be elevated or acquired.	Chester County	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams	Municipalities	Short	FEMA HMGP

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
29	Create a website to assist landowners and municipalities to navigate FEMA resources.	Chester County	4	Education and Awareness	All Hazards	DES	Short	Operating Budget
30	Develop a countywide Debris Management Plan.	Chester County	2,6	Local Plans and Regulations	Tornado and Windstorms	DES	Short	Operating Budget
31	Develop a plan to stagger traffic and implement delays/early releases for schools, government, and private sector during a disaster.	Chester County	2	Local Plans and Regulations	Transportation Accidents	DES	Long	Operating Budget
32	Develop an outreach and awareness program and provide to municipalities, where residents and potential homeowners could access to identify any risks they might have to address.	Chester County	2, 4	Education and Awareness	All Hazards	DES	Short	Operating Budget
33	Educate county residents on the NFIP following flood events.	Chester County	2, 4	Education and Awareness	Flood, Flash Flood, and Ice Jams	DES	Ongoing	Staff Time
34	Educate the public about resources available to combat the opioid abuse/addiction.	Chester County	1,4	Education and Awareness	Opioid Addiction Response	Health Department	Short	Operating Budget
35	Educate the public on all the hazards they face.	Chester County	2, 4	Education and Awareness	All Hazards	DES	Short	Staff Time, Operating Budget
36	Encourage municipal Code Enforcement Officials to become trained in Floodplain Management and NFIP Programs.	Chester County	2, 4	Education and Awareness	Flood, Flash Flood, and Ice Jam	Municipal FPA	Short	Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
37	Encourage municipalities to adopt an ordinance outlining the process to implement a snow emergency declaration.	Chester County	2, 4,6	Local Plans and Regulations	Winter Storms	Municipalities	Short	Staff Time
38	Encourage municipalities to require radon testing at the time sale of homes.	Chester County	2, 4	Local Plans and Regulations	Radon Exposure	DES	Short	Staff Time, Operating Budget
39	Encourage new development planning to include burying of utility cables.	Chester County	2,4,6	Structure and Infrastructure	Utility Interruption	Municipalities	Ongoing	Staff Time, Operating Budget
40	Encourage upgrades and improvements to stormwater runoff capabilities when reconstructing roads.	Chester County	2,6	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams	DES	Ongoing	FEMA HMGP, Non-Disaster Funding; Operating Budget
41	Enhance the household hazard waste program to reduce post-event hazardous debris.	Chester County	2	Education and Awareness	Environmental Hazards Hazardous Material Releases, Tornado and Windstorms	DES	Short	Operating Budget
42	Ensure that the municipal EMAs have COOP/COG plans.	Chester County	1,6	Local Plans and Regulations	All Hazards	DES	Short	SEPA RTF Funding

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
43	Identify snow emergency routes in all municipalities to increase clearing efforts and travel ability of residents.	Chester County	2,4,5	Local Plans and Regulations	Winter Storms	DES	Ongoing	Staff Time, Operating Budget, FEMA HMGP
44	Improve storm drains throughout the county to handle snow melt.	Chester County	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams, Winter Storms	DES	Long	FEMA Non-Disaster Funding, HMGP; PA DCED FMP, H2O PA; Capital Improvement Budget; Operating Budget; Chester County DCD (CDBG, CRP)
45	Improve telecommunications infrastructure, including accessibility of high-speed Internet connectivity, throughout the county.	Chester County	1	Structure and Infrastructure	Pandemic and Infectious Disease; Utility Interruption	CCPC	Long	PA DCED; Operating Budget
46	Increase cell coverage and telecommunications bandwidth in areas with poor coverage.	Chester County	4	Structure and Infrastructure	Utility Interruption	DES	Short	FEMA HMGP, Non-Disaster Funding, PA DCED, Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
47	Install back-up power sources for traffic signals (generator, battery, solar).	Chester County	2	Structure and Infrastructure	Transportation Accidents	DES, Municipalities, PennDOT	Short	Agency Budgets, FEMA HMGP
48	Install roadway gates to close off flood-prone intersections/ roads during flood incidents and signage to warn motorists of the closed road.	Chester County	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams	DES, Municipalities	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
49	Investigate the interaction of public agencies and camera data from private companies/citizens.	Chester County	1,2	Education and Awareness	Terrorist Attacks	Sheriff's Office, DA's Office, DES	Long	Operating Budget
50	Maintain a GIS layer of the location of all permitted dams within the County, categorized by priority concern. Utilize dam location layer, inundation data, building footprints, and tax parcel information to develop potential evacuation measures in the event of a breach or failure.	Chester County	7	Local Plans and Regulations	Dam Failure	Chester County DES	Long	Staff Time
51	Obtain and compile updated Department of Environmental Protection inundation data and Emergency Action Plan vulnerability data as it becomes available to inform plan update.	Chester County	7	Local Plans and Regulations	Dam Failure	Chester County DES	Long	Staff Time
52	Plant bushes/other vegetation to stop drifting snow in known problem areas.	Chester County	2, 4	Structure and Infrastructure	Winter Storms	Municipalities	Short	Capital Funding

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
53	Provide education to the municipalities on flood gauges.	Chester County	2,3	Education and Awareness	Flood, Flash Flood, and Ice Jam	DES	Short	Operating Budget
54	Provide education to the municipalities on resident evacuation processes and need.	Chester County	4,5	Education and Awareness	All Hazards	DES	Short	Staff Time, Operating Budget
55	Provide public education on traffic accident reduction.	Chester County	2,4	Education and Awareness	Transportation Accidents	DES, Planning Department	Ongoin g	Staff Time, County Budget
56	Provide public information on debris management.	Chester County	1,4	Education and Awareness	Tornado and Windstorms	DES, Health Department, Planning Department	Short	Operating Budget
57	Purchase backup generators and explore microgrid solutions for critical infrastructure/ key resources.	Chester County	2	Structure and Infrastructure	Utility Interruption	DES	Short	Agency Budgets, FEMA HMGP
58	Pursue local mitigation efforts to improve areas that are vulnerable to flooding including both repetitive and non-repetitive loss structures within floodplains.	Chester County	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams	Municipalities	Ongoing	FEMA HMGP, FMA, Non-Disaster Funding, CDBG
59	Retrofit critical public facilities with safe rooms.	Chester County	1,2	Structure and Infrastructure	Tornado and Windstorms	DES	Long	FEMA HMGP, Operating Budget
60	Study traffic control boxes that would be exposed to riverine or stormwater flooding to determine	Chester County	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam,	DES	Long	FEMA HMGP, Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	if they are able to withstand the water.				Transportation Accident			
61	Sustain tree management programs around power lines.	Chester County	2,6	Structure and Infrastructure	Utility Interruption	Municipalities, private sector	Ongoing	Staff Time, Agency Budget
62	The county and all municipalities will work with their major businesses to ensure they have continuity plans in place.	Chester County	2	Local Plans and Regulations	Environmental Hazard Hazardous Material Releases, Environmental Hazard Gas and Liquid Pipelines	DES	Short	Operating Budget
63	The county and all municipalities with a dam will work with dam operators to ensure they are protected to the 0.2% annual chance flood level.	Chester County	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	DPW	Long	FEMA HMGP; FEMA HPPD; Operating Budget
64	The county and municipalities will work with the higher education facility operators to discuss the hazards they face and ensure their emergency plans address those hazards.	Chester County	1	Local Plans and Regulations	Environmental Hazard Hazardous Material Releases, Environmental Hazard Gas and Liquid Pipelines, Nuclear Incident	County DES	Short	Operating Budget
65	The county and municipalities will work with the intermediate care facility operators to discuss the hazards they face and ensure	Chester County	1	Local Plans and Regulations	Environmental Hazard Hazardous Material	County DES	Short	Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	their emergency plans address those hazards.				Releases, Environmental Hazard Gas and Liquid Pipelines			
66	The county and municipalities will work with the long-term care facility operators to discuss the hazards they face and ensure their emergency plans address those hazards.	Chester County	1	Local Plans and Regulations	Dam Failure, Environmental Hazard Hazardous Releases, Environmental Hazard Gas and Liquid Pipelines, Nuclear Incident	County DES	Short	Operating Budget
67	The county and municipalities will work with the senior living facility operators to discuss the hazards they face and ensure their emergency plans address those hazards.	Chester County	1	Local Plans and Regulations	Environmental Hazard Hazardous Material Releases, Environmental Hazard Gas and Liquid Pipelines, Nuclear Incident	County DES	Short	Operating Budget
68	The county will assess their bridges to determine what measures can be taken to protect them to the 0.2% annual chance flood level.	Chester County	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams, Dam Failure	DES	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
69	The county will work with all municipalities that have a child care facility exposed to any of the hazards to work with the child care facility operators to discuss hazards they face and ensure their emergency plans address those hazards.	Chester County	1	Local Plans and Regulations	Dam Failure, Environmental Hazards- Hazmat Release, Environmental Hazards- Pipeline, Flood, Flash Flood, and Ice Jams, Nuclear Incident	County DES	Short	Operating Budget
70	When provided by FEMA, evaluate and apply FEMA non-regulatory electronic floodplain mapping and mitigation tools, where appropriate.	Chester County	2,3,4	Local Plans and Regulations	Flood, Flash Flood, and Ice Jams	DES, CCWRA	Short	Operating Budget
71	Work with district courts to ensure they have plans in place for off-site hazmat releases that can affect the courts.	Chester County	2	Local Plans and Regulations	Environmental Hazard Hazardous Material Releases	DES	Short	Operating Budget, Act 165 funds
72	Work with hazmat facilities to inform them of the hazards they face and ensure emergency plans are current.	Chester County	1,2	Local Plans and Regulations	Environmental Hazard Hazardous Material Releases	DES	Short	Operating Budget, Act 165 funds

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
73	Work with hospitals to ensure they have plans in place for off-site hazmat releases that can affect hospitals.	Chester County	2	Local Plans and Regulations	Environmental Hazard Hazardous Material Releases	DES	Short	Operating Budget, Act 165 funds
74	Work with schools and school districts to inform them of the hazards they face and ensure emergency plans are current.	Chester County	1	Local Plans and Regulations	Environmental Hazard Hazardous Material Releases, Environmental Hazard Gas and Liquid Pipelines	County DES	Short	Operating Budget, Act 165 funds
75	Work with the municipalities to develop a map of the stormwater system, including intakes and outflows.	Chester County	2,4	Local Plans and Regulations	Flood, Flash Flood, and Ice Jams	CCWRA, Planning Department, DES, Municipalities	Short	Operating Budget
76	Work with the railroad industry to address safety concerns and aging rail infrastructure.	Chester County	1,6	Structure and Infrastructure	Transportation Accidents	DES	Short	Operating Budget, PHMSA

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
77	Work with the USPS on options for protecting the post offices from flooding and possible inundation from dam failure.	Chester County	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams, Dam Failure	DPW	Short	Operating Budget, Act 165 funds
78	Work with Verizon to protect the facilities from flood or dam failure.	Chester County	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams, Dam Failure	DES	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
79	Work with FEMA to obtain the latest repetitive loss property data.	Chester County	1,2	Education and Awareness	Flood, Flash Flood, and Ice Jams	DES	Short	Staff Time
80	Coordinate with PEMA and power plants on updated public information materials and a public information campaign to inform people in the 10-mile EPZ about evacuation plans and people in the 50-mile EPZ about their risks and preparations they can make. Make sure to provide materials in all languages relevant to the community.	Chester County, All Municipalities	4,5	Education and Awareness	Substance Use Disorder	DES, Municipal EMAs	Short	Staff Time
81	Encourage municipalities and operators of critical facilities to reduce their vulnerability to wildfires by: increasing buffers and introducing defensible spaces; identifying farm roads, service roads, and other private	Chester County, All Municipalities	1,2	Education and Awareness	Wildfire	DES, Municipal EMAs	Medium	Staff Time

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	access corridors in high hazard areas that could be used as fire breaks; and providing assistance to the County Emergency Management to identify vulnerable structures. Ensure outreach is completed to critical facilities that serve socially vulnerable populations such as elder care facilities and retirement homes, schools, youth and adult correctional facilities, hospitals, mental health treatment facilities, shelters, and youth and adult daycare facilities.							
82	Work with local fire departments to conduct fire prevention seminars for schools and other critical facilities. Topics may include the proper use of fire extinguishers, fire evacuation procedures, common fire code violations, and specific concerns for cageteria personnel.	Chester County, All Municipalities	1,4	Education and Awareness	Wildfire; Urban Fire and Explosion	DES, Municipal EMAs	Short	Staff Time
83	Work with Pennsylvania Department of Health to increase awareness about treating and preventing substance use disorde, including using county	Chester County, All Municipalities	1,4,6	Education and Awareness	Substance Use Disorder	Chester County DOH, Municipal EMCs	Short	Staff Time

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	and municipal websites to share resources.							
84	Build partnerships with dam owners. For dams with poor condition assessments, work with dam owners to identify and prioritize the repairs needed to bring the dams into compliance with dam safety standards.	Chester County, Atglen Borough, Avondale Borough, Birmingham Township, Caln Township, Charlestown Township, Coatesville City, Downingtown Borough, East Bradford Township, East Brandywine Township, East Caln Township, East Coventry Township, East Fallowfield Township, East Goshen Township, East Marlborough	1,2,4	Structure and Infrastructure	Dam Failure	Chester County DES	Long	Staff Time

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
		Township, East Nantmeal Township, East Nottingham Township, East Pikeland Township, Easttown Township, East Vincent Township, East Whiteland Township, Highland Township, Honey Brook Township, Kennett Township, London Britain Township, Londonderry Township, London Grove Township, Lower Oxford Township, Malvern Borough, Modena Borough, New Garden Township, Newlin						

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
		Township, North Coventry Township, Parkesburg Borough, Penn Township, Pennsbury Township, Phoenixville Borough, Pocopson Township, Schuylkill Township, South Coatesville Borough, South Coventry Township, Spring City Borough, Thornbury Township, Tredyffrin Township, Upper Oxford Township, Upper Uwchlan Township, Uwchlan Township, Valley Township, Wallace						

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
		Township, Warwick Township, West Bradford Township, West Caln Township, West Fallowfield Township, West Goshen Township, West Marlborough Township, West Nantmeal Township, West Nottingham Township, West Pikeland Township, West Vincent Township, West Whiteland Township, Westtown Township, Willistown Township						
85	Once structures in dam hazard areas are identified, support mitigation projects that will result in the projection of public and	Chester County, Downingtown Borough, East Brandywine	7	Structure and Infrastructure	Dam Failure	Municipal EMAs	Long	FEMA HHPD, PA DCED PDFAP

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	private property from floods of specific magnitudes. Eligible projects include but are not limited to: 1) acquisition of hazard-prone structures 2) Elevation of flood-prone structures. 3) Minor structural flood control projects 4) Relocation of structures from hazard-prone areas 5) Retrofitting of existing buildings, facilities, and infrastructure.	Township, East Goshen Township, East Marlborough Township, East Nantmeal Township, Easttown Township, Honey Brook Township, Lower Oxford Township, New Garden Township, Schuylkill Township, Tredyffrin Township, Upper Uwchlan Township, Uwchlan Township, Wallace Township, West Caln Township, West Caln Township, West Goshen Township, West						

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
		Nottingham Township						
86	Once dam hazard areas are identified, consider updating land use ordinances and the implications of recognizing dam inundation areas as sensitive areas in zoning ordinances.	Chester County, Downingtown Borough, East Brandywine Township, East Goshen Township, East Marlborough Township, East Nantmeal Township, Easttown Township, Honey Brook Township, Lower Oxford Township, New Garden Township, Schuylkill Township, Tredyffrin Township, Upper Uwchlan Township, Uwchlan Township, Wallace Township, West	7	Local Plans and Regulations	Dam Failure	Municipal Planning and Zoning Departments	Medium	Staff Time

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
		Caln Township, West Caln Township, West Goshen Township, West Nottingham Township						
87	Participate in the development and continued update of Emergency Action Plans.	Chester County, Downingtown Borough, East Brandywine Township, East Goshen Township, East Marlborough Township, East Nantmeal Township, Easttown Township, Honey Brook Township, Lower Oxford Township, New Garden Township, Schuylkill Township, Tredyffrin Township, Upper Uwchlan	7	Structure and Infrastructure	Dam Failure	Chester County DES	Long	Staff Time

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
		Township, Uwchlan Township, Wallace Township, West Caln Township, West Caln Township, West Goshen Township, West Nottingham Township						
88	Provide HHPD notice of funding opportunity and supporting documentation from the County HMP to EMCs, municipalities, and dam owners to promote rehabilitation and safety in Chester County.	Chester County, Downingtown Borough, East Brandywine Township, East Goshen Township, East Marlborough Township, East Nantmeal Township, Easttown Township, Honey Brook Township, Lower Oxford Township, New Garden Township,	7	Structure and Infrastructure	Dam Failure	Chester County DES	Long	Staff Time

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
		Schuylkill Township, Tredyffrin Township, Upper Uwchlan Township, Uwchlan Township, Wallace Township, West Caln Township, West Caln Township, West Goshen Township, West Nottingham Township						
89	Rehabilitate and/or remove HHPDs.	Chester County, Downingtown Borough, East Brandywine Township, East Goshen Township, East Marlborough Township, East Nantmeal Township, Easttown Township, Honey	7	Structure and Infrastructure	Dam Failure	Chester County DES	Long	FEMA HHPD, PA DCED PDFAP

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
		Brook Township, Lower Oxford Township, New Garden Township, Schuylkill Township, Tredyffrin Township, Upper Uwchlan Township, Uwchlan Township, Wallace Township, West Caln Township, West Caln Township, West Goshen Township, West Nottingham Township						
90	63 S. 5th Ave. Property Protection - protect the existing grocery store on the corner of Olive St. and S 5th Ave.	Coatesville City	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams	City of Coatesville Public Works Department	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
91	Amtrak Keystone Corridor Underpass Flooding – evaluate and improve drainage and eroding areas along the corridor.	Coatesville City	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams	City of Coatesville Public Works Department	Long	FEMA Non-Disaster Funding, HMGP; PA DCED FMP, Water and Sewers Program, H2O PA; Capital Improvement Budget; Operating Budget; Chester County DCD (CDBG, CRP)
92	Ash Park Stormwater Improvements - improve infiltration and mitigate floodwaters that pose a threat for travelers during/after storm events.	Coatesville City	2,3	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams	City of Coatesville Public Works Department	Long	FEMA Non-Disaster Funding, HMGP; PA DCED FMP, Water and Sewers Program, H2O PA; Capital Improvement Budget; Operating Budget; Chester County DCD (CDBG, CRP)

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
93	Create a Capital Improvements Plan.	Coatesville City	2,4,6	Local Plans and Regulations	Flood, Flash Flood, and Ice Jams	City of Coatesville Public Works Department	Short	Operating Budget, Chester County Vision Partnership Program; PADCED Municipal Assistance Program
94	Downtown Stormwater Improvements - upgrade Coatesville's existing stormwater infrastructure in the downtown business district.	Coatesville City	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams	City of Coatesville Public Works Department	Long	FEMA Non-Disaster Funding, HMGP; PA DCED Water and Sewers Program, H2O PA; Capital Improvement Budget; Operating Budget; Chester County DCD (CDBG, CRP)
95	Emergency Alert System - the City of Coatesville will implement an emergency alert system that will inform residents in the event of an emergency in an effort to improve public safety.	Coatesville City	4,5	Education and Awareness	All Hazards	City of Coatesville Office of Emergency Management	Short	Capital Improvement Budget; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
96	Gibbons Run Culvert Flooding and Structural Stability – evaluate the culverts and repair, rehabilitate, or replace them as necessary.	Coatesville City	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	City of Coatesville Public Works Department	Long	FEMA Non-Disaster Funding, HMGP; PA DCED FMP, H2O PA; Capital Improvement Budget; Operating Budget; Chester County DCD (CDBG, CRP)
97	Install gates to be closed during flood incidents and signage at 11th Avenue and railroad underpass.	Coatesville City	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Coatesville City	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
98	Millview Basin - restore proper stormwater detention basin function with added water quality improvements.	Coatesville City	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams	City of Coatesville Public Works Department	Short	FEMA Non-Disaster Funding, HMGP; PA DCED FMP, H2O PA, WRPP; Capital Improvement Budget; Operating Budget; Chester County DCD (CDBG, CRP)

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
99	Pre-Plan Emergency Access Routes.	Coatesville City	1,2,4,5	Local Plans and Regulations	Dam Failure; Earthquake; Environmental Hazards; Flood, Flash Flood, and Ice Jams; Hurricane, Tropical Storm; Nuclear Incidents; Terrorism	City of Coatesville Public Works Department	Short	Operating Budget
100	Protect ArcelorMital Emergency Services to the 0.2% annual chance flood level.	Coatesville City	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams, Dam Failure	FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
101	Provide backup power at the City's traffic signals, including developing a plan for implementation and refueling.	Coatesville City	1,2,4	Local Plans and Regulations; Structure and Infrastructure	Dam Failure; Earthquake; Environmental Hazards; Flood, Flash Flood, and Ice Jams; Hurricane, Tropical Storm; Nuclear Incidents; Terrorism; Transportation Accident; Utility	City of Coatesville Public Works Department	Short	Capital Improvement Budget; Operating Budget; PADOT ARLE; PADOT Green Light Go; PADCED Municipal Assistance Program

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
					Interruption; Winter Storms			
102	Public Information Programs - develop education packages, classes, meetings, programs, etc. with the goal of improving public knowledge of potential hazards are dealt with within the City.	Coatesville City	4	Education and Awareness	All hazards	City of Coatesville Office of Emergency Management	Short	Operating Budget
103	Route 82 Slope Stability - ensure the stability of the slopes along the eastern side of Route 82 in order to maintain unimpeded direct access into and out of the City.	Coatesville City	1,2,4	Structure and Infrastructure	Dam Failure; Earthquake; Environmental Hazards; Flood, Flash Flood, and Ice Jams; Hurricane, Tropical Storm; Nuclear Incidents; Terrorism; Transportation Accident; Utility Interruption; Winter Storms	City of Coatesville Public Works Department	Short	PennDOT; FEMA Non-Disaster Funding, HMGP; Capital Improvement Budget; Operating Budget; Chester County DCD (CDBG, CRP).
104	S. 5th Avenue Stormwater Improvements.	Coatesville City	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams	City of Coatesville Public Works Department	Long	FEMA Non-Disaster Funding, HMGP; PA DCED FMP, H2O PA; Capital

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Improvement Budget; Operating Budget; Chester County DCD (CDBG, CRP)
105	The municipal FPA will work with the Martin- Brower facility owner/operator to protect the facility to the 0.2% annual chance flood level and dam failure.	Coatesville City	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams, Dam Failure	FPA	Short	Operating Budget
106	Upgrade City Hall Command Center - these upgrades include upgrades to the existing generator to allow for increased functionality of City Hall, the Police Station and the Emergency Command Center during a power outage and upgrades to the communication utilities to permit full functionality during an emergency.	Coatesville City	2	Structure and Infrastructure	Tornado, Windstorm; Utility Interruption; Winter Storm	City Office of Emergency Management	Short	FEMA Non-Disaster Funding, HMGP; Capital Improvement Budget; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
107	West End Fire Station Generator - obtain a backup generator in order ensure that emergency operations are maintained during a power outage.	Coatesville City	2	Structure and Infrastructure	Tornado, Windstorm; Utility Interruption; Winter Storm	City of Coatesville Office of Emergency Management	Short	FEMA HMGP, Non-Disaster Funding; Capital Improvement Budget; Operating Budget
108	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: High Bridge, Huston, Abram, House & Carriage House, Lukens Main Office Building.	Coatesville City	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams, Dam Failure	FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
109	Install emergency alerting systems.	Coatesville City, East Coventry Township, East Marlborough Township, London Grove Township, Londonderry Township, New Garden Township, Willistown Township	4,5	Education and Awareness; Structure and Infrastructure	All Hazards	Municipalities	Short	FEMA Non-Disaster Funding, HMGP; Operating Budget; Chester County DCD (CDBG, CRP)

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
110	Determine the specific vulnerability of the Downingtown Borough Building to dam failure and determine appropriate mitigation measures.	Downingtown Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
111	Downingtown Borough has major businesses that are vulnerable to dam failure and will work with management to protect the buildings.	Downingtown Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC	Short	Operating Budget
112	Protect Alert FC Fire Station from dam failure.	Downingtown Borough	1,2,4,5	Structure and Infrastructure	Dam Failure	EMC	Short	Operating Budget
113	Protect Downingtown - Jefferson Ave Electrical Substation to the 0.2% annual chance flood level and from the vulnerability to dam failure.	Downingtown Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams, Dam Failure	EMC	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
114	Protect Downingtown Boro PD from potential dam failure.	Downingtown Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC	Short	Operating Budget
115	Protect Minquas Ambulance Fire Station from dam failure and determine appropriate mitigation measures.	Downingtown Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC	Short	Operating Budget
116	Protect Minquas FC from potential dam failure.	Downingtown Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC	Short	Operating Budget
117	Protect the Downingtown Municipal Waste from dam failure.	Downingtown Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC	Short	Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
118	The municipal FPA will work with AT&T Mobility Downingtown - USID53712 facility owner/operator to protect the facility from its vulnerability to dam failure.	Downingtown Borough	1,2,4	Education and Awareness	Dam Failure	EMC	Short	Operating Budget
119	The Municipal FPA will work with the Downingtown Municipal Water Authority owner/operator to the 0.2% annual chance flood level and from vulnerability to dam failure.	Downingtown Borough	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jams, Dam Failure	FPA, EMC	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
120	The municipal FPA will work with the Inland Flexo, LLC facility owner/operator to protect the facility from its vulnerability to dam failure.	Downingtown Borough	1,2,4	Education and Awareness	Dam Failure	FPA, EMC	Short	Operating Budget
121	The municipal FPA will work with the Johnson Matthey AGT facility owner/operator to protect the facility from vulnerability to dam failure.	Downingtown Borough	1,2,4	Education and Awareness	Dam Failure	FPA, EMC	Short	Operating Budget
122	The municipal FPA will work with the Verizon Downingtown CO owner/operator to protect the facility from vulnerability to dam failure.	Downingtown Borough	1,2,4	Education and Awareness	Dam Failure	FPA, EMC	Short	Operating Budget
123	The municipal FPA will work with the Victory Brewing Company, LLC owner/operator to protect	Downingtown Borough	1,2,4	Education and Awareness	Dam Failure	FPA, EMC	Short	Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	the facility from vulnerability to dam failure.							
124	Work with Beaver Creek Elementary School to determine specific vulnerability to dam failure and determine appropriate mitigation measures.	Downingtown Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	Operating Budget
125	Work with Downingtown High School West to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	Downingtown Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	Operating Budget
126	Work with East Ward Elementary School to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	Downingtown Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	Operating Budget
127	Work with Lori Petrie's Pre School to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	Downingtown Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	Operating Budget
128	Work with Regina Luminis Academy to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	Downingtown Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	Operating Budget
129	Work with SEPTA and Amtrak to protect the station from dam failure.	Downingtown Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
130	Work with St. Joseph School to determine specific vulnerability to dam failure and determine appropriate mitigation measures.	Downingtown Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	Operating Budget
131	Work with STEM Academy to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	Downingtown Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	Operating Budget
132	Work with Step by Step Children's House to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	Downingtown Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	Operating Budget
133	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect the, to the 0.2% annual chance flood level and vulnerability to dam failure: Downingtown Log House, Hunt, Roger, and Mill Complex.	Downingtown Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
134	Work with the United States Marine Recruiting Office to protect the structure from the vulnerabilities of dam failure.	Downingtown Borough	1,2,4	Local Plans and Regulations	Dam Failure	EMC, FPA	Short	Operating Budget
135	Replace the Manor Avenue Bridge over Beaver Creek to reduce upstream flooding, as	Downingtown Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding;

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	identified in the Brandywine Flood Study							Operating Budget
136	Determine what flood protection measures can be taken to protect the structures on Mary Street to the 1% or 0.2% annual chance flood level, as identified in the Brandywine Flood Study.	Downingtown Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
137	Complete the Downingtown Area Regional Authority (DARA) Modernization Project.	Downingtown Borough, East Caln Township, Uwchlan Township, West Whiteland Township, Caln Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jams, Dam Failure	Municipal EMCs	Long	PennVEST, FEMA HMGP, FEMA Non-Disaster Funding
138	Acquisition/elevation of structure at 414 Cottage Lane.	East Bradford Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
139	Acquisition/elevation of structure located at 402 Cottage Lane.	East Bradford Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
140	Acquisition/elevation of structure located at 406 Cottage Lane.	East Bradford Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
141	Acquisition/elevation of structure located at 418 Cottage Lane.	East Bradford Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
142	Acquisition/Elevation of structure located at 502 River Bed Lane.	East Bradford Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
143	Acquisition/Elevation of structure located at 530 River Bend Lane.	East Bradford Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
144	Acquisition/Elevation of structure located at 550 River Bend Lane.	East Bradford Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
145	Acquisition/Elevation of structure located at 558 River Bend Lane.	East Bradford Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
146	Install battery back-up and/or generator hookup on traffic signal on South Bradford Avenue and West Nields Street.	East Bradford Township	2	Structure and Infrastructure	Utility Interruption	Department of Public Works	Short	Operating budget
147	Install gates to be closed during flood incidents and signage on Allerton Road between North Creek Road and Lucky Hill Road.	East Bradford Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	East Bradford Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
148	Install gates to be closed during flood incidents and signage on North Creek Road between Jefferis Bridge Road and Hillsdale Road.	East Bradford Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	East Bradford Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
149	Install gates to be closed during flood incidents and signage on South Creek Road between Cottage Lane and Withers Way.	East Bradford Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	East Bradford Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
150	Install gates to be closed during flood incidents and signage on Valley Creek Road between Harmony Hill Road and Ravine Road.	East Bradford Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	East Bradford Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
151	Property protection of structure located at 1010 Valley Creek Road.	East Bradford Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
152	Protect East Bradford Electrical Substation from vulnerability to dam failure.	East Bradford Township	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	Operating Budget
153	Protect Good Fellowship Ambulance (Sub-Station) from the vulnerabilities from dam failure.	East Bradford Township	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	Operating Budget
154	The municipal FPA to work with the PECO Bradford Substation facility owner/operator to protect the facility from vulnerabilities to dam failure.	East Bradford Township	1,2,4	Education and Awareness	Dam Failure	EMC, FPA	Short	Operating Budget
155	Complete McQueen structure removal process.	East Brandywine Township	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam	East Branydwine Township	Ongoing	State Gaming Fund, Chester County C2P2
156	Complete Old Horsehoe Pike Culvert Replacement.	East Brandywine Township	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam	East Branydwine Township	Ongoing	FEMA Non-Disaster Funding, HMGP, FMA, Capital Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
157	Remediate and repair Bondsville Mill South Bridge.	East Brandywine Township	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam; Transportation Incidents	East Branydwine Township	Ongoing	FEMA Non-Disaster Funding, HMGP, FMA Capital Budget
158	Determine the specific vulnerability to dam failure and determine appropriate mitigation measures for the Downingtown Sewer Authority.	East Caln Township	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	Operating Budget
159	The municipal FPA to work with the D.R.W.P.C.C facility owner/operator to protect the facility from vulnerabilities to flooding.	East Caln Township	1,2,4	Education and Awareness	Dam Failure	FPA, EMC	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
160	Acquisition/elevation of structure located at 285 Linfield Road.	East Coventry Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
161	Project East Coventry - Linfield Road Electrical Substation from the vulnerabilities of dam failure.	East Coventry Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
162	The municipal FPA to work with Taylor Industries Inc facility owner/operator to protect the	East Coventry Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding;

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	facility to at least the 0.2% chance flood level and from the vulnerabilities to dam failure.				Jam, Dam Failure			Operating Budget
163	Work with property owners to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level and from the vulnerabilities to dam failure.	East Coventry Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
164	Improve drainage to reduce flooding along Mortonville Road including intersection of Mortonville Road and Sawmill Road.	East Fallowfield Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	East Fallowfield Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Operating Budget
165	Improve drainage to reduce flooding on Timacula Road.	East Fallowfield Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	East Fallowfield Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Operating Budget
166	Protect East Fallowfield - Spring Dell Road Electrical Substation to the 0.2% annual chance flood event.	East Fallowfield Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam; Utility Interruption	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
167	Work with the property owners of the following facilities to determine what flood protection	East Fallowfield Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	EMA	Short	FEMA HMGP, Non-Disaster Funding;

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	measures can be taken to protect them to the 0.2% annual chance flood level: Strasburg Rd Bridge, Speakman No.2, and the Gorden Farm.							Operating Budget
168	Work with the Goodwin Acres owner to determine what protection measures can be taken to protect them from vulnerabilities to dam failure.	East Goshen Township	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
169	Address French Creek flooding that impacts access and use of Rapps Dam Road, Hares Hill Road, Mary Snowden Bridge, and local trail system.	East Pikeland Township	2	Structure and Infrastructure; Natural Systems Protection	Flood, Flash Flood, Ice Jam	East Pikeland Township	Long	FEMA Non-Disaster Funding, HMGP, FMA
170	Address stormwater pipe erosion and sinkhole issues along 450 linear foot section of Spring Hollow Road.	East Pikeland Township	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam; Transportation Incident	East Pikeland Township	Ongoing	FEMA Non-Disaster Funding, HMGP, FMA
171	Conduct power assessment for critical infrastructure/key resources to determine emergency generator needs and coordinate information with the Army Corps of Engineers.	East Pikeland Township	2	Structure and Infrastructure	Utility Interruption	Department of Public Works	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
172	Develop tree maintenance program that identifies and addresses potential problem trees on public property.	East Pikeland Township	2	Structure and Infrastructure	Tornado, Windstorm; Winter Storms; Utility Interruption	East Pikeland Township	Medium	Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
173	Install new bridge on Pickering Road that crosses Piegon Run Creek to restore emergency service access.	East Pikeland Township	2,5	Structure and Infrastructure	All Hazards	East Pikeland Township	Long	FEMA Non-Disaster Funding, HMGP, FMA
174	Monitor and manage reservoirs and stream flows to sustain water sources needed to meet public water supply needs.	East Pikeland Township	1,2	Structure and Infrastructure	Drought	East Pikeland Township	Short	Operating Funds
175	Plant bushes/other vegetation to stop drifting snow in known problem areas.	East Pikeland Township	2	Structure and Infrastructure	Winter Storms	Department of Public Works	Short	General Fund
176	Purchase temporary mobile camera to set up for events and use to monitor safety and security.	East Pikeland Township	5	Structure and Infrastructure	Terrorism	East Pikeland Township	Short	General Fund
177	Repair and potentially expand stormwater basin along Seven Stars Road.	East Pikeland Township	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam	East Pikeland Township	Medium	FEMA Non-Disaster Funding, HMGP, FMA
178	Repair section of Pickering Road impacted by flooding and strembank erosion, install rip-rap along Pickering Road to stablize streambank.	East Pikeland Township	2,3	Structure and Infrastructure; Natural Systems Protection	Flood, Flash Flood, Ice Jam; Transportation Incident	East Pikeland Township	Long	FEMA Non-Disaster Funding, HMGP, FMA
179	Replace Camp Council Road Bridge and culvert.	East Pikeland Township	2,5	Structure and Infrastructure	All Hazards	East Pikeland Township	Long	FEMA Non-Disaster Funding, HMGP, FMA

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
180	Retrofit critical public facilities with safe rooms.	East Pikeland Township	2	Structure and Infrastructure	Tornado, Windstorm; Terrorism	East Pikeland Township	Long	FEMA HMGP, Non-Disaster funds; Operating Budget
181	The municipal FPA to work with the Cromby Generating Station facility owner/operator to protect the facility to at least the 0.2% chance flood level and from vulnerabilities to dam failure.	East Pikeland Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
182	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and vulnerabilities to dam failure: Bernard Property, Hare's Hill Road Bridge, Hartman, Peter, Residence, Kimberton Historic District, and Rapp's Covered Bridge.	East Pikeland Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
183	Work with the railroad industry to address safety concerns and aging rail infrastructure.	East Pikeland Township	1	Structure and Infrastructure	Transportation Incident; Environmental Hazards - Hazardous Materials	East Pikeland Township	Long	FEMA HMGP, Non-Disaster funds; Operating Budget
184	Protect the Shady Lane Water Treatment Plant from dam failure.	East Vincent Township	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
185	The municipal FPA to work with the Columbia Gas Transmission/Birdsboro Heater facility owner/operator to protect the facility to at least the 0.2% chance flood level and from the vulnerabilities of potential dam failure.	East Vincent Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
186	The municipal FPA to work with the Oehlert Bros., Inc facility owner/operator to protect the facility to at least the 0.2% chance flood level.	East Vincent Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
187	The municipal FPA to work with the Shady Lane Plant-Royersford facility owner/operator to protect the facility from the vulnerabilities of dam failure.	East Vincent Township	1,2,4	Education and Awareness	Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
188	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to dam failure: Kennedy Covered Bridge and Parker's Ford.	East Vincent Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
189	Complete streambank restoration projects at Valley Creek Park, the	East Whiteland Township	2,3	Natural Systems Protection	Flood, Flash Flood, Ice Jam	East Whiteland Township	Medium	PA DCED, FEMA Non-Disaster

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	Township Building, and Ecology Park.							Funding, HMGP, FMA
190	Install a generator at the Meadowview pump station.	East Whiteland Township	2	Structure and Infrastructure	Utility Interruption	East Whiteland Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
191	Work with Aqua to address the vulnerability of the pump station on Flat Road, potentially installing a generator.	East Whiteland Township	2	Structure and Infrastructure	Utility Interruption	East Whiteland Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
192	Install gates to be closed during flood incidents and signage at Church Road.	East Whiteland Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	East Whiteland Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
193	Install gates to be closed during flood incidents and signage at Old Morehall Road.	East Whiteland Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	East Whiteland Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
194	Install generator at Frazer Mennonite Church, which serves as a comfort care center.	East Whiteland Township	2,5	Structure and Infrastructure	Utility Interruption	East Whiteland Township	Medium	FEMA HMGP, Non-Disaster Funding; Capital Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
195	Repair sinkholes impacting road usage.	East Whiteland Township	2	Structure and Infrastructure	Transportation Incident	East Whiteland Township	Short	FEMA HMGP, Non-Disaster Funding; PennDOT; Capital Budget
196	Work with management of major businesses to protect the buildings to the 0.2% annual chance flood level.	East Whiteland Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding; Capital Budget
197	Work with the Spring Mill Complex owner to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood event.	East Whiteland Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding; Capital Budget
198	Construct new stormwater management systems to address uncontrolled water runoff creating flooding of Darby Creek and its tributaries at Darby Creek Watershed.	Easttown Township	2,3	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA
199	Work with Sugartown Road Bridge owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	Easttown Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding; Capital Budget
200	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect	Elk Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding; Capital Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	them to the 0.2% annual chance flood level: Glen Hope Covered Bridge, Rudolph & Arthur Covered Bridge, and Stephens, Linton Covered Bridge.							
201	Address flooding along Conestoga Road & South Brick Lane.	Elverson Borough	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam	Elverson Borough	Long	FEMA Non-Disaster Funding, HMGP, FMA
202	Implement updated pipeline annex in Borough Emergency Operations Plan.	Elverson Borough	2,6	Local Plans and Regulations	Emvironmental Hazards - Gas and Liquid Pipelines	Elverson Borough	Medium	Operating Budget
203	Update threat assessment and implement security recommendations for Twin Valley Elementary Center.	Elverson Borough	2,5,6	Local Plans and Regulations	Terrorism	Elverson Borough	Medium	Operating Budget, School District Funding, PEMA
204	Complete improvements to Walker Road Bridge to address flooding.	Franklin Townhip	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam	Franklin Townhip	Long	FEMA HMGP, Non-Disaster Funding; Capital Budget
205	Complete road improvements to address flooding along North Clay Creek Road.	Franklin Townhip	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam	Franklin Townhip	Long	FEMA HMGP, Non-Disaster Funding; Capital Budget
206	Improve drainage on North Clay Creek and Churchill Road.	Franklin Townhip	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Franklin Townhip	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP;

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Operating Budget
207	Work with PennDOT to improve US-322 corridors to mitigate traffic accidents.	Honey Brook Borough	2	Structure and Infrastructure	Transportation Incidents	Honey Brook Borough	Long	PennDOT, Operating Budget
208	The municipal FPA to work with the Honey Brook Borough Authority facility owner/operator to protect the facility to at least the 0.2% chance flood level.	Honey Brook Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam	FPA, EMC	Short	FEMA HMGP, Non-Disaster Funding; Capital Budget
209	Advise residents to help keep storm drains clear of debris during storms through borough communication channels as appropriate (including Ready ChesCo).	Kennett Square Borough	4	Education and Awareness	Flood, Flash Flood, Ice Jam	Kennett Square Borough	Short	FEMA HMGP, Non-Disaster Funding; Capital Budget
210	Develop "master list" of infrastructure projects to address flooding to share with borough grant consultant so they can monitor funding opportunities to implement projects. Present list to borough Infrastructure Committee.	Kennett Square Borough	2,6	Local Plans and Regulations	Flood, Flash Flood, Ice Jam	Kennett Square Borough	Long	FEMA HMGP, Non-Disaster Funding; Capital Budget
211	Improve drainage on D Street to address flooding.	Kennett Square Borough	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam	Kennett Square Borough	Long	Flood Mitigation Program (Commonwealth Financing Authority), Flood Mitigation

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Program (PA or Federal Emergency Management Agency), PA Small Water and Sewer Program (Commonwealth Financing Authority), Watershed Restoration and Protection Program (Commonwealth Financing Authority), FEMA non-disaster funding
212	Improve drainage on E. South Street between S. Walnut and Broad Street.	Kennett Square Borough	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam	Kennett Square Borough	Long	Flood Mitigation Program (Commonwealth Financing Authority), Flood Mitigation Program (PA or Federal Emergency Management

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Agency), PA Small Water and Sewer Program (Commonwealth Financing Authority), Watershed Restoration and Protection Program (Commonwealth Financing Authority), FEMA non-disaster funding
213	Improve drainage on South Street at Lafayette and Grant Way.	Kennett Square Borough	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Kennett Square Borough	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Operating Budget
214	Improve drainage on W. South Street between Lafayette Street and Grant Way.	Kennett Square Borough	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam	Kennett Square Borough	Long	Flood Mitigation Program (Commonwealth Financing Authority), Flood Mitigation Program (PA or Federal

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Emergency Management Agency), PA Small Water and Sewer Program (Commonwealth Financing Authority), Watershed Restoration and Protection Program (Commonwealth Financing Authority), FEMA non-disaster funding
215	Improve drainage on Walnut Street between Birch and E. South Streets.	Kennett Square Borough	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam	Kennett Square Borough	Long	Flood Mitigation Program (Commonwealth Financing Authority), Flood Mitigation Program (PA or Federal Emergency Management Agency), PA Small Water

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								and Sewer Program (Commonwealth Financing Authority), Watershed Restoration and Protection Program (Commonwealth Financing Authority), FEMA non-disaster funding
216	Improve or install drainage systems along Cypress Street to Cedar Street.	Kennett Square Borough	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam	Kennett Square Borough	Long	Flood Mitigation Program (Commonwealth Financing Authority), Flood Mitigation Program (PA or Federal Emergency Management Agency), PA Small Water and Sewer Program (Commonwealth Financing

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Authority), Watershed Restoration and Protection Program (Commonwealth Financing Authority), FEMA non-disaster funding
217	Improve/install drainage systems to handle rain to reduce localized flooding from Cypress St to Cedar St, west of Union St.	Kennett Square Borough	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Kennett Square Borough	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Operating Budget
218	The municipal FPA will work with Comcast Cable- Kennett Square Hubsite owner/operator to protect the facility to the 0.2% annual chance flood level.	Kennett Square Borough	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam	FPA, EMC	Short	FEMA HMGP, Non-Disaster Funding; Capital Budget
219	Acquisition/elevation of structure located at 611 Creek Road.	Kennett Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
220	Acquisition/elevation of structure located at 903 Creek Road.	Kennett Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
221	Acquisition/elevation of structure located at 909 Creek Road.	Kennett Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
222	Assess and determine the best action to prevent East Hillendale Rd from flooding.	Kennett Township	1,5	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Kennett Township	Mediu m	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
223	Assess and determine the best action to prevent flooding of Kaolin Rd from stream.	Kennett Township	1,5	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Kennett Township	Mediu m	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
224	Assess and determine the best action to prevent flooding of Marshall Bridge a Route 82 South.	Kennett Township	1,5	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Kennett Township	Mediu m	FEMA HMGP, Non-Disaster Funding, FMA;

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								PA DCED FMP, Operating Budget
225	Assess and determine the best action to prevent flooding of the West Hillendale stream from Chandler Mill to Scarlet.	Kennett Township	1,5	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Kennett Township	Mediu m	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
226	Assess and determine the best action to prevent further erosion of Bucktoe Road stream banks and prevent flooding of the road.	Kennett Township	1,5	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Kennett Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
227	Assess and determine the best action to prevent Rosedale Road stream from overflowing onto the road.	Kennett Township	1,5	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Kennett Township	Mediu m	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
228	Assess and determine the best action to prevent the stream on Center Mill Road from overflowing.	Kennett Township	1,5	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Kennett Township	Mediu m	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
229	Install gates to be closed during flood incidents and signaled at flood intersections within the township.	Kennett Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Kennett Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
230	Install warning signs to be utilized during flood incidents at flood-prone bridges within the township.	Kennett Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Kennett Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
231	The municipal FPA to work with the AT&T SBA Kennett Square facility owner/operator to protect the facility to at least the 0.2% chance flood level	Kennett Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding; Capital Budget
232	The municipal FPA to work with the Kennett Square Borough Sewage Treatment Plant facility owner/operator to protect the facility to at least the 0.2% chance flood level.	Kennett Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam	FPA, EMC	Short	FEMA HMGP, Non-Disaster Funding; Capital Budget
233	Work with county to improve drainage on Bayard Road.	Kennett Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Kennett Township	Short	FEMA HMGP, Non-Disaster Funding; Capital Budget
234	Work with the county to improve drainage on Pemberton Road Bridge from Mill Road to Cedar Springs to prevent flooding.	Kennett Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Kennett Township	Short	FEMA HMGP, Non-Disaster Funding; Capital Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
235	Work with the county to improve drainage on South Street from Scarlet to Chandler Mill.	Kennett Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Kennett Township	Short	FEMA HMGP, Non-Disaster Funding; Capital Budget
236	Install a snow fence during snow season to prevent snow drifting on South Bank Rd.	London Britain Township	2	Structure and Infrastructure	Winter Storms	London Britain Township	Short	General Fund
237	Install a snow fence during snow season to prevent snow drifting on Strickersville Rd.	London Britain Township	2	Structure and Infrastructure	Winter Storms	London Britain Township	Short	General Fund
238	Install gates to be closed during flood incidents and signage at Flint Hill Rd & Mercer Mill Rd.	London Britain Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	London Britain Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
239	Install gates to be closed during flood incidents and signage at Good Hope & London Tract Rd/Broad Run Rd.	London Britain Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	London Britain Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
240	Install gates to be closed during flood incidents and signage at London Tract Rd & New Peltier Rd.	London Britain Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	London Britain Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
241	Install gates to be closed during flood incidents and signage at Mercer Mill Rd and N. Creek Rd.	London Britain Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	London Britain Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
242	Install gates to be closed during flood incidents and signage at Yeatmans Station Rd.	London Britain Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	London Britain Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
243	Install alerting system/public notification system to profiteering/notification of potentially dangerous and damaging weather. Area is populated with outdoor activities and large population.	London Grove Township	4,5	Structure and Infrastructure	All Hazards	EMC	Short	FEMA Non-Disaster Funding, HMGP; Operating Budget; Chester County DCD (CDBG, CRP)
244	Install gates and signage within flood-prone areas to reduce the risk of motorist and other traveling public from becoming entrapped in the flood waters.	London Grove Township	2,3	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	London Grove Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
245	Protect West Grove Sewage Treatment Plant to the 0.2% annual chance flood level.	London Grove Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA, EMC	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget, Sewer Grant; Sewer Fees
246	Reconfigure stream channel at Sullivan Rd & Clay Creek Rd.	London Grove Township	3	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	London Grove DPW	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP;

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Operating Budget
247	Reconstruct stream and roadway elevations to reduce the ability of flooding during rain and flash flood events.	London Grove Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Department of Public Works	Long	FEMA HMGP, Non-Disaster funds; Operating Budget
248	Supply electrical connections for a portable generator at each of the wastewater facilities. Providing alternative power during power outages utilizing a portable until as opposed to three permanent generators providing additional costs savings.	London Grove Township	2	Structure and Infrastructure	Utility Interruption	Department of Public Works	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
249	The municipal FPA to work with the West Grove Wastewater Treatment facility owner/operator to protect the facility to at least the 0.2% chance flood level.	London Grove Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam	FPA, EMC	Short	FEMA HMGP, Non-Disaster Funding; Capital Budget
250	To remove an existing failed culvert and replace it with a new structure to span the base flood elevation. Portions or all of structure removal and replacement could be completed utilizing Municipal Public Works Resources.	London Grove Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Department of Public Works	Short	FEMA HMGP, Non-Disaster funds; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
251	To remove an existing narrow culvert and replace with a structure to span the base flood elevations. Portions or all the structure removal and replacements could be completed utilizing Municipal Public Works.	London Grove Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Department of Public Works	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
252	Widen bridge and bridge approaches at Indian Run Rd.	London Grove Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Department of Public Works	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Operating Budget
253	Improve and enhance culverts on Jackson Rd and Faggs Manor Rd.	Londonderry Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Londonderry Township	Short	FEMA HMGP, Non-Disaster Funding; Capital Budget
254	Improve plans and communication in case of emergency.	Londonderry Township	1,4,5	Local Plans and Regulations	Environmental Hazards - Gas and Liquid Pipelines	ESNG	Short	ESNG
255	Increase the height of the bridge at Whitehorse Rd near Creek Rd.	Londonderry Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Londonderry Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
256	Install a generator in the Township Building.	Londonderry Township	2	Structure and Infrastructure	Utility Interruption	Londonderry Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
257	Obtain approximately 1 mile of snow fencing or install natural landscapes to stop snow drifting along White Horse Rd by Power Station.	Londonderry Township	2	Structure and Infrastructure	Winter Storms	Department of Public Works	Short	General Fund
258	Purchase 2-way radios to assist in communication during emergency events in the township.	Londonderry Township	2	Structure and Infrastructure	All Hazards	Londonderry Township	Short	CCPC; SEPA RTF
259	Purchase and install a backup generator at the Municipal Building.	Londonderry Township	2	Structure and Infrastructure	Utility Interruption	Londonderry Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
260	Work with PennDOT to clear the brush in roadway lines of sight at Rt 796 and Rt 41.	Londonderry Township	2	Structure and Infrastructure	Transportation Incidents	Londonderry Township	Short	Operating Budget; PA DEP
261	Work with PennDOT to construct a roundabout at the intersection of PA Route 41 and PA route 926.	Londonderry Township	1,2	Structure and Infrastructure	Transportation Incidents	Londonderry Township	Short	PennDOT, Londonderry Township
262	Work with PennDOT to reconstruct the intersection to allow for better water drainage and strength the road at Fernwood Rd and Jackson Rd.	Londonderry Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Londonderry Township	Long	PennDOT, Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
263	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to dam failure: Octoraro Water Company and Pine Grove Covered Bridge.	Lower Oxford Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
264	Elevation/Acquisition of structure located at 135 Powelton Ave.	Malvern Borough	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
265	Elevation/Acquisition of structure located at 145 Powelton Ave.	Malvern Borough	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
266	Elevation/Acquisition of structures 10 through 142 W First Ave.	Malvern Borough	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
267	Elevation/Acquisition of structures 193 through 323 Paoli Pike.	Malvern Borough	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
268	Elevation/Acquisition of structures 2 through 10 Remington Ln.	Malvern Borough	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
269	Elevation/Acquisition of structures 217 through 545 S. Warren Ave.	Malvern Borough	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
270	Increase culvert size at 313 S Warren Ave.	Malvern Borough	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Malvern Borough	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
271	Work with management of Malvern Preparatory School to protect the buildings to the 0.2% annual chance flood level.	Malvern Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
272	Determine the specific vulnerability of the Modena Borough Building to dam failure and determine appropriate mitigation measures.	Modena Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
273	Protect Modena Ambulance EMS Station from vulnerabilities to dam failure.	Modena Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
274	Protect Modena FC Fire Station from a potential dam failure.	Modena Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
275	The Municipal FPA will work with the Mahoney- Modena owner/operator to protect the facility to the 0.2% annual chance flood level and from the vulnerabilities to dam failure.	Modena Borough	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
276	The Municipal FPA will work with the Sealed Air Corporation owner/operator to protect the facility to the 0.2% annual chance	Modena Borough	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds;

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	flood level and from the vulnerabilities to dam failure.							Operating Budget
277	Work with the Mode Paper Mill owner to determine what flood protection measures can be taken to protect it from the vulnerabilities of dam failure.	Modena Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
278	Construct larger culvert at Cedar Springs Rd at Pemberton Rd.	New Garden Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	New Garden Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
279	Construct larger culvert at Egypt Run Road.	New Garden Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	New Garden Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
280	Purchase portable generator for traffic signal at Chambers Rd and Baltimore Pike.	New Garden Township	2	Structure and Infrastructure	Transportation Incident; Utility Interruption	Department of Public Works	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
281	Purchase portable generator for traffic signal at Newark Rd and Baltimore Pike.	New Garden Township	2	Structure and Infrastructure	Transportation Incident; Utility Interruption	Department of Public Works	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
282	Purchase portable generator for traffic signal at Newark Rd and Rt 41.	New Garden Township	2	Structure and Infrastructure	Transportation Incident; Utility Interruption	Department of Public Works	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget, PennDOT
283	Purchase portable generator for traffic signal at Penn Green Rd and Rt 41.	New Garden Township	2	Structure and Infrastructure	Transportation Incident; Utility Interruption	Department of Public Works	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget, PennDOT
284	Purchase portable generator for traffic signal at Scarlett Rd and Baltimore Pike.	New Garden Township	2	Structure and Infrastructure	Transportation Incident; Utility Interruption	Department of Public Works	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget, PennDOT
285	Purchase portable generator for traffic signal at Southwood Rd and Rt 7.	New Garden Township	2	Structure and Infrastructure	Transportation Incident; Utility Interruption	Department of Public Works	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget, PennDOT

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
286	Work with To-jo Mushrooms Inc. management to protect the building to the 0.2% annual chance flood level.	New Garden Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
287	Determine the specific vulnerability of the Newlin Township Building to dam failure and determine appropriate mitigation measures.	Newlin Township	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
288	Fix and pave road that has been destroyed on Laurel Road including three driveways.	Newlin Township	2	Structure and Infrastructure	Transportation Incidents	DES	Long	Operating Budget
289	Protect the Embreeville Sewage Treatment from dam failure and protect it to the 0.2% annual chance flood event and from vulnerabilities to dam failure.	Newlin Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam; Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget, Sewer Grant; Sewer Fees
290	Replant Ash Trees that were lost to the Ash Borer and determine the best actions to prevent invasive species in the future.	Newlin Township	2,3	Natural Systems Protection	Invasive Species	Newlin Township	Short	Operating budget
291	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance	Newlin Township	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	flood level: Embreeville Historic District, House at Upper Laurel Iron Works, Marlborough Village Historic District, Spruce Groce School House, Worker's House at Lower Laurel Iron Works.							
292	Protect the North Coventry Municipal Authority from dam failure and to the 0.2% annual chance flood level.	North Coventry Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
293	The municipal FPA to work with the North Coventry Municipal Authority facility owner/operator to protect the facility to at least the 0.2% chance flood level and from the vulnerabilities to dam failure.	North Coventry Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
294	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Schuylkill Navigation Company Canal and historic structure located on SR 7046.	North Coventry Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
295	Construct and gain permit for Well #14 in the Sycamore Crossing development, including	Oxford Borough	2	Structure and Infrastructure	Drought; Utility Interruption	Oxford Borough	Medium	PA DCED, PENNVEST, Oxford Borough

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	the construction of a new raw waterline to the treatment plant.							
296	Develop and execute a street trees planting program within the public right of way to increase tree canopy coverage, reduce temperatures and improve urban environment.	Oxford Borough	2,3	Structure and Infrastructure	Extreme Temperatures; Flood, Flash Flood, Ice Jam	Oxford Borough	Long	Operating and Capital Budget, GRANTS
297	Expand Borough water treatment plant to increase capacity, improve filtration capabilities, and enhance property security.	Oxford Borough	2	Structure and Infrastructure	Drought; Flood, Flash Flood, Ice Jam; Terrorism; Utility Interruption	Oxford Borough	Medium	PA DCED, PENNVEST, Oxford Borough
298	Improve/upgrade water system interconnect with Chester Water Authority to ensure efficient and safe operations and improve reliability.	Oxford Borough	2	Structure and Infrastructure	Drought; Utility Interruption	Oxford Borough	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
299	Rain gardens to be installed in recently created bump- outs on Broad Street at intersection with 8th Street.	Oxford Borough	3	Natural Systems Protection	Flood, Flash Flood, and Ice Jam	Oxford Borough	Short	Operating Budget; Chester County DCD (CDBG, CRP)
300	Reconstruct ~700 linear feet of grey stormwater infrastructure along Broad Street to Whitehall Way, incoprating green infrastructure where possible.	Oxford Borough	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam	Oxford Borough	Short	FEMA Non-Disaster Funding, HMGP; PA DCED Water and Sewers Program, H2O

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								PA; Capital Improvement Budget; Operating Budget; Chester County DCD (CDBG, CRP)
301	The municipal FPA will work with the Hayes Heating and Cooling Bulk owner/operator to protect the facility to the 0.2% annual chance flood level.	Parkesburg Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
302	Work with power company to protect Parkesburg - N Church St Electrical Substation to the 0.2% annual chance flood level.	Parkesburg Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
303	Enhance stormwater management regulations.	Penn Township	1,2	Local Plans and Regulations	Flood, Flash Flood, and Ice Jam	FPA	Short	Staff Time
304	Work with power company to protect Penn - Neward Road Electrical Substation to the 0.2% annual chance flood level.	Penn Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
305	Install warning signals at unguarded railroad crossing at	Pennsbury Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Pennsbury Township	Short	PennDOT, Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	US Rt 1 at the railroad tracks by Fairville Rd.							
306	Install warning signals for times when road is closed due to flooding on US Rt 1 in the area of the Brandywine creek.	Pennsbury Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Pennsbury Township	Short	PennDOT, Operating Budget
307	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to dam failure: Bissel/Hill Girt/Beverly Rural Historic District and Delaware Boundary Makers.	Pennsbury Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
308	Improve drainage at the intersection of Bridge and Church St.	Phoenixville Borough	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Borough	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Operating Budget
309	Protect the District Court 15-2-01 to the 0.2% annual chance flood level.	Phoenixville Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
310	Protect the Phoenixville Boro PD to the 0.2% annual chance flood level.	Phoenixville Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
311	Protect the Phoenixville Water Treatment to the 0.2% annual chance flood event and from dam failure.	Phoenixville Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
312	The municipal FPA to work with the Phoenixville Water Plant facility owner/operator to protect the facility to at least the 0.2% chance flood level and from the vulnerabilities to dam failure.	Phoenixville Borough	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
313	Work with the management of major businesses to protect the buildings from dam failure and to the 0.2% annual chance flood level and from the vulnerabilities to dam failure.	Phoenixville Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
314	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the	Phoenixville Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	vulnerabilities to dam failure: Black Rock Bridge, Lobok, John, Property, Mansion House, and Phoenixville Canal Spur.							
315	Assess and determine the best action to prevent flooding around Brandywine Creek on Northbrook Road, one lane historical bridge.	Pocospon Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Pocospon Township	Short	Operating Budget
316	Create a Capital Improvement Plan (CIP) for the Township to forecast the needed funds for flood mitigation projects.	Pocospon Township	1,2,6	Local Plans and Regulations	Flood, Flash Flood, Ice Jam	Pocospon Township	Short	Operating Budget
317	Increase floodplain restoration/management and flood mitigation controls across the township.	Pocospon Township	1,2	Local Plans and Regulations, Structure and Infrastructure	Flood, Flash Flood, Ice Jam	Pocospon Township	Long	Operating and Capital Budget, PA DCED, PENNVEST, FEMA HMA
318	Provide ongoing Public Education to Township residents regarding disasters/emergency management. Public education for flood prevention and mitigation.	Pocospon Township	4	Education and Awareness	Flood, Flash Flood, Ice Jam	Pocospon Township	Ongoing	Operating Budget
319	Stabilize existing roadway in danger of collapse from damage due to frequent flooding of Brandywine Creek, with retaining wall and guide rail system. This will improve traffic safety for local residents, allow for better access	Pocospon Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam; Transportation Incidents	Pocospon Township	Short	PennDOT, CCPC, FEMA Non-Disaster Funding

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	by EMS vehicles, and mitigate the damage from future flooding.							
320	The municipal FPA to work with the Lenape Forged Products Corp facility owner/operator to protect the facility from the vulnerabilities of dam failure.	Pocospon Township	1,2,4	Education and Awareness	Dam Failure	FPA, EMC	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
321	Work with power company to protect the Pocopson - Lenape Unionville Road Electrical Substation to the 0.2% annual chance flood level.	Pocospon Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
322	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Pocopson Station, State Route 3027, and Wilkinson House.	Pocospon Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam; Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
323	Assess and determine the best action to improve drainage and reduce flooding on Greenbelt Drive.	Sadsbury Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Sadsbury Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Operating Budget
324	Install gates to be closed during flood incidents and signage on sections of Old Mill Road.	Sadsbury Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Sadsbury Township	Short	FEMA HMGP, Non-Disaster Funding;

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Operating Budget
325	Remove rock obstruction causing stream flow and flooding issues along Old Mill Road, north of Route 30.	Sadsbury Township	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam	Sadsbury Township	Short	Capital, Storm Water Funds, ARPA funding, DCNR grants, FEMA/PEMA FMA and HMGP, Non-Disaster Funding, Waterway and Watershed Grants, Operating Budget, LSA
326	Replace bridge over Buck Run along Octara Road & Old Mill Road.	Sadsbury Township	2,5	Structure and Infrastructure	All Hazards	Sadsbury Township	Long	Operating and Capital Budget, PA DCED, PENNVEST, FEMA HMA
327	Acquisition/Elevation of the structure located at 493 State Creek Road.	Schuylkill Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
328	Construct Larger Culvert at East Phillip Drive.	Schuylkill Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Schuylkill Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
329	Construct larger culvert at S Whitehorse Road.	Schuylkill Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Schuylkill Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
330	Determine specific vulnerability to dam failure and determine appropriate mitigation measures for the Valley Forge Sewage Treatment Plant.	Schuylkill Township	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	Operating Budget
331	Plant bushes/other vegetation to stop drifting snow in known problem areas.	Schuylkill Township	2	Structure and Infrastructure	Winter Storms	Department of Public Works	Short	General Fund
332	Protect Structure with Barrier at Creek Road Bridge.	Schuylkill Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Schuylkill Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
333	Retrofit critical public facilities with safe rooms.	Schuylkill Township	2	Structure and Infrastructure	Tornado, Windstorm; Terrorism	Schuylkill Township	Long	FEMA HMGP, Non-Disaster funds; Operating Budget
334	The municipal FPA to work with the Aqua Pickering Water Treatment facility owner/operator to protect the facility to at least the 0.2% chance flood level.	Schuylkill Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
335	The municipal FPA to work with the Valley Forge Sewer Authority facility owner/operator to protect the facility to at least the 0.2% chance flood level.	Schuylkill Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
336	Work with power company to protect Schuylkill - Valley Forge Road to the 0.2% annual chance flood level.	Schuylkill Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
337	Work with YMCA management to protect the building to the 0.2% annual chance flood level.	Schuylkill Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
338	Investigate stormwater management options and identify mitigation or structural projects to reduce vulnerability to stormwater	South Coatesville Borough	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	South Coatesville Borough	Long	FEMA HMGP, Non-Disaster Funding;

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	flooding incidents throughout the borough.							Operating Budget
339	Protect the Coatesville Sewer Authority from dam failure and to the 0.2% annual chance flood level.	South Coatesville Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget, Sewer Grant; Sewer Fees
340	The municipal FPA will work with the Scrap Metal Services owner/operator to protect the facility to the 0.2% annual chance level.	South Coatesville Borough	1,2,4	Education and Awareness	Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
341	Construct larger culvert at Bealor Road.	South Coventry Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	South Coventry Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
342	Determine the best action to prevent downhill flooding on Coventryville Rd & Harmonyville Road, close to North Cov. Border.	South Coventry Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	South Coventry Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
343	Install flood water collection boxes and piping on Schoolhouse Road and Porter's Mill Road.	South Coventry Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	South Coventry Township	Short	Capital, Storm Water Funds, ARPA funding, DCNR grants, FEMA/PEMA FMA and HMGP, Non-Disaster Funding, Waterway and Watershed Grants, Operating Budget, LSA
344	Purchase and install a backup generator for the Woodridge Sewer Plant at 190 Ridgeview Drive.	South Coventry Township	2	Structure and Infrastructure	Utility Interruption	Department of Public Works	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
345	Work with power company to protect South Coventry - Porters Mill Road Electrical Substation to the 0.2% annual chance flood level.	South Coventry Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
346	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance	South Coventry Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	flood level: Coventryville Historic District and Coventryville Historic District (1975)- HAD.							
347	Protect the Spring City Sewer Plan from the vulnerably to dam failure and to the 0.2% annual chance flood level.	Spring City Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget, Sewer Grant; Sewer Fees
348	The municipal FPA will work with the Hydromotion owner/operator to protect the facility from the vulnerabilities of dam failure.	Spring City Borough	1,2,4	Education and Awareness	Dam Failure	FPA, EMC		FEMA HMGP, Non-Disaster funds; Operating Budget
349	Work with management of major businesses to protect the buildings from the vulnerably to dam failure and to the 0.2% annual chance flood level.	Spring City Borough	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
350	Work with the Textile Mill owner to determine what flood protection measures can be taken to protect the facility from the vulnerabilities from dam failure.	Spring City Borough	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
351	Install gates to be closed during flood incidents and signage at Rt 926 and Creek Road.	Thornbury Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	PennDOT	Short	FEMA HMGP, Non-Disaster Funding;

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Operating Budget
352	Install gates to be closed during flood incidents and signage at Rt 926 and S. Westtown Rd.	Thornbury Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	PennDOT	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
353	Install gates to be closed during flood incidents and signage at Rt 926 and Westtown-Thornton Rd.	Thornbury Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	PennDOT	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
354	Install gates to be closed during flood incidents and signage at Westtown- Thornton Rd south of Railroad Bridge.	Thornbury Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	PennDOT	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
355	Install gates to be closed during flood incidents and signage at Westtown-Thornton Rd north of Railroad Bridge.	Thornbury Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	PennDOT	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
356	Work with PennDOT to conduct an assessment of flood-prone areas along roadway Rt 926 from Rt 202 to Cheyney Rd.	Thornbury Township	1,2,5	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	PennDOT	Short	PennDOT, Municipal Budget
357	Work with power company to protect Thornbury - Westtown Road Electrical Substation to the 0.2% annual chance flood level	Thornbury Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP,

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	and from the vulnerabilities to dam failure.							Operating Budget
358	Clogged inverts throughout the township causing flooding.	Tredyffrin Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Tredyffrin Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
359	Improve drainage to reduce flooding on Hadwick Road and Upper Weedly Road.	Tredyffrin Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Tredyffrin Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
360	Improve drainage to reduce flooding on Wills Lane, Woodcrest Drive, and Saunders Drive.	Tredyffrin Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Tredyffrin Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
361	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Cedar Hollow Industrial Track: Bridge, County Bridge No. 171, Great Valley Mill, Jerman, Thomas, Property, and historic structure on SR 7015.	Tredyffrin Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
362	Acquisition/elevation of the structure located at 2 Kiloran Wynd.	Upper Uwchlan Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
363	Acquisition/elevation of the structure located at 80 Saint Andrews Ln.	Upper Uwchlan Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
364	Protect Larkins Bridge with barrier.	Upper Uwchlan Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	EMC	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
365	Protect structure with barrier on Dorothy Lane.	Upper Uwchlan Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	EMC	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
366	Protect structure with barrier on Font Road.	Upper Uwchlan Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	EMC	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP;

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Capital Improvement Budget
367	Protect structure with barrier on Lyndell Road.	Upper Uwchlan Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	EMC	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
368	Protect structure with barrier on Moore Road and Turnstone Way.	Upper Uwchlan Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	EMC	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
369	Protect structure with barrier on St Andrews Lane.	Upper Uwchlan Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	EMC	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
370	Raise Fellowship Road roadway at Red Bone Road.	Upper Uwchlan Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Upper Uwchlan Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Improvement Budget
371	Stormwater culvert and basin re-sizing on Krauser Rd.	Upper Uwchlan Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Upper Uwchlan Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
372	Assess and determine the best action to protect Wagontown Road near the West Branch of the Brandywine Creek, and implement the action..	Valley Township	1, 2,5	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam; Hurricane and Tropical Storm; Utility Interruption	EMC	Short	Capital Improvement Program; CDBG; Non-Disaster Funding
373	Assess drainage into Sucker Run near South Park Avenue and PA-372 to identify the best action to prevent flooding during heavy rainfall events, and implement the action.	Valley Township	2, 3,5	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	Capital Improvement Program; CDBG; Non-Disaster Funding
374	Complete stormwater improvements and upgrades to address issues identified in 2009 study.	Valley Township	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam; Transportation Incidents	Valley Township	Long	Capital, Storm Water Funds, ARPA funding, DCNR grants, FEMA/PEMA FMA and HMGP, Non-

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Disaster Funding, Waterway and Watershed Grants, Operating Budget, LSA
375	Develop and deploy a dam failure alert system to automatically notify the affected area.	Valley Township	1,2,4,5	Education and Awareness	Dam Failure; Flood, Flash Flood, Ice Jam	Valley Township	Long	FEMA Non-Disaster Funding, HMGP; Operating Budget; Chester County DCD (CDBG, CRP)
376	Develop plan to address stormwater issues identified in 2009 study.	Valley Township	2,6	Local Plans and Regulations	Flood, Flash Flood, Ice Jam; Transportation Incidents	Valley Township	Medium	Capital, Storm Water Funds, ARPA funding, DCNR grants, FEMA/PEMA FMA and HMGP, Non-Disaster Funding, Waterway and Watershed Grants, Operating Budget, LSA

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
377	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from vulnerabilities to dam failure: County Bridge No. 101 and Scott Farm Property.	Valley Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	FPA, EMC	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
378	Protect Glenmoore FC Fire Station from a potential dam failure.	Wallace Township	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
379	The municipal FPA to work with the Verizon Glenmoore ESS Bldg. facility owner/operator to protect the facility from the vulnerabilities to dam failure.	Wallace Township	1,2,4	Education and Awareness	Dam Failure	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
380	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to dam failure: Glenmoore Historic District and Steels Bridge.	Wallace Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
381	Complete Barneston Dam Rehabilitation Project	Wallace Township	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Medium	Chester County Commissioners and USDA Natural Resources Conservation Service
382	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Hockley Mill Farm, Knauer Patent Thematic District, North Warwick Historic & Archaeological District (HDA), North Warwick HDA, and historic structure located on SR 7015.	Warwick Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
383	Acquire and install back-up generator at Wastewater Treatment Plant.	West Bradford Township	2	Structure and Infrastructure	Utility Interruption	Department of Public Works	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
384	Improve drainage on Broad Run Road between Beacon Hill.	West Bradford Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	West Bradford Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
385	Install 4 gates to be closed during flood incidents and signage at Downingtown Pike between Harmony Hill Rd and Skelp Level Rd.	West Bradford Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	West Bradford Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
386	Protect the Broad Run Sewage Treatment Plant from dam failure and to the 0.2% annual chance flood level.	West Bradford Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget, Sewer Grant; Sewer Fees
387	Work with the management of Ram-t Construction Specialist to protect the buildings from dam failure.	West Bradford Township	1,2,4	Structure and Infrastructure	Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
388	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to flooding: Derbydown Homestead, Northbrook Historic District, Pennsylvania Railroad: Morrisville Lien: Viaduct.	West Bradford Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam, Dam Failure	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
389	Work with the Grow, James, House property owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	West Brandywine Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
390	Provide a generator-capable facility, likely Wagontown Fire Department, as a safe space for residents experiencing decreasing home temperatures as a result of a prolonged power outage. Develop emergency food source and sleeping capabilities.	West Caln Township	1,2,4,5	Local Plans and Regulations	Extreme Temperatures; Winter Storm; Utility Interruption	West Caln Township	Short	General Fund
391	Eliminate hyrdaulic bottnecks that are causing flooding along Goose Creek.	West Chester Borough	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam	West Chester Borough	Medium	Operating Budget; Chester County DCD (CDBG, CRP)
392	The municipal FPA to work with the National Foam facility owner/operator to protect the facility to at least the 0.2% chance flood level.	West Chester Borough	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
393	Work with the Ross Fording Road Bridge property owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	West Fallowfield Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
394	Improve culvert at 103 Oak Lane.	West Goshen Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	West Goshen Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
395	Install 3 gates to be closed during flood incidents and signage at East Chestnut and Montgomery.	West Goshen Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	West Goshen Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
396	The municipal FPA to work with the A. Duie Plye Bolmar Street Warehouse facility owner/operator to protect the facility to at least the 0.2% chance flood level.	West Goshen Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
397	The municipal FPA to work with the A. Duie Plye PB II Warehouse facility owner/operator to protect the facility to at least the 0.2% chance flood level.	West Goshen Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
398	The municipal FPA to work with the A. Duie Pyle West Chester Truck Terminal facility owner/operator to protect the facility to at least the 0.2% chance flood level.	West Goshen Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
399	The municipal FPA to work with the Wire and Cable Specialties facility owner/operator to protect the facility to at least the 0.2% chance flood level.	West Goshen Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
400	Work with the Greystone Hall property owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	West Goshen Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
401	Assess and determine the best actions to prevent flooding on bridges along Rt 82 from Unionville to Coatesville.	West Marlborough Township	1,5	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	West Marlborough Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Operating Budget
402	Complete PennDOT bridge repair for failing bridge in the township.	West Marlborough Township	2,5	Structure and Infrastructure	All Hazards	West Marlborough Township	Short	PennDOT Funds
403	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: House at Springdell, Pennock, Martha House & Industrial Site, and Speakman No.1 Covered Bridge.	West Marlborough Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
404	Coordinate with Pennsylvania Department of Transportation (PennDOT) with stormwater management, addressing flooding and washout problems along state-owned roads such as Route 401 and Chestnut Tree Road.	West Nantmeal Township	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam; Transportation Incidents	West Nantmeal Township	Long	PennDOT Funds, PA DCED, Capital, Storm Water Funds, ARPA funding, DCNR grants, FEMA/PEMA FMA and HMGP, Non-Disaster Funding, Waterway and Watershed Grants, Operating Budget, LSA
405	Implement strategies identified in Pipeline Emergency Annex is Township Emergency Operations Plan, including annual trainings for local emergency responders and pipelines operations and the development of community awareness programs.	West Nantmeal Township	2,6	Education and Awareness	Environmental Hazards - Gas and Liquid Pipelines	West Nantmeal Township	Ongoing	Staff Time
406	Work with the Isabella Furnace owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	West Nantmeal Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
407	Install gates to be closed during flood incidents and signage at Fremont Road between Willow Road and King Pen Road.	West Nottingham Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	West Nottingham Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
408	Install gates to be closed during flood incidents and signage at Park Road between Veteran's Drive and Sand Hill Road.	West Nottingham Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	West Nottingham Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
409	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Anselma Mill District-HDA, Clinger- Moses Mill Complex, Lightfoot Mill, and Vitale House.	West Pikeland Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
410	Replace undersized culverts in the Township to address flooding and road damage.	West Sadsbury Township	2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam; Transportation Incidents	West Sadsbury Township	Long	PA DCED, PENNVEST, General Fund
411	Backup Generators (2) Acquisition and Installation at Matthews Meadows Sewer Plant.	West Vincent Township	2	Structure and Infrastructure	Utility Interruption	Department of Public Works	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
412	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Halls Covered Bridge, Tyson's Bridge, and historic structure on Kimberton Road.	West Vincent Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
413	Develop and deliver a Township Open House for the public to receive resources and information on erosion hazards in the township.	West Whiteland Township	4	Education and Awareness	Subsidence, Sinkhole; Landslide	West Whiteland Township	Medium	Staff Time
414	Elevation/acquisition of structure located at 116 N. Locust Lane.	West Whiteland Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
415	Elevation/acquisition of structure located at 117 N. Locust Lane.	West Whiteland Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
416	Elevation/acquisition of structure located at 117 Valley Road.	West Whiteland Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP,

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Operating Budget
417	Elevation/acquisition of structure located at 118 Valley Road.	West Whiteland Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
418	Elevation/acquisition of structure located at 120 Valley Road.	West Whiteland Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
419	Elevation/Acquisition of structure located at 510 Winding Way.	West Whiteland Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
420	Elevation/acquisition of structure located at 512 Winding Way.	West Whiteland Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
421	Elevation/acquisition of structure located at 513 Winding Way.	West Whiteland Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP,

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Operating Budget
422	Remove silt/clean Valley Creek bed.	West Whiteland Township	2	Natural Systems Protection	Flood, Flash Flood, and Ice Jam	West Whiteland Township	Short	Operating Budget; PA DEP
423	The municipal FPA to work with the Verizon Exton ESS Bldg. facility owner/operator to protect the facility to at least the 0.2% chance flood level.	West Whiteland Township	1,2,4	Education and Awareness	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
424	Work with power company to protect West Whiteland - S Whitford Road Electrical Substation to the 0.2% annual chance flood event.	West Whiteland Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
425	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Colebrook Manor, Exton Hotel, Thomas, John Roberts, Tennant Farmstead, Turnpike Station House, Whitford Station House, and William's Deluxe Cabins.	West Whiteland Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
426	Conduct a wildlands/forestry survey of township-owned forested areas, to determine need for strategies for mitigating invasive species risks.	Westtown Township	2,3	Natural Systems Protection	Invasive Species	Westtown Township	Short	FEMA HMGP, PA DCNR Grants, Staff Time
427	Encourage regular offerings of the American Red Cross Citizen's Disaster Course and other relevant classes.	Westtown Township	2,4	Education and Awareness	All Hazards	Westtown Township	Short	Operating Budget
428	Enhance public outreach to residents in areas subject to flooding to inform them of annual grant opportunities; this may include distributing periodic articles and including handouts in the annual newsletter.	Westtown Township	2,4	Education and Awareness	Flood, Flash Flood, Ice Jam	Westtown Township	Short	Operating Budget
429	Post flyers and other readily available informational materials at municipal hall or distribute at regular civic meetings.	Westtown Township	2,4	Education and Awareness	All Hazards	Westtown Township	Short	Operating Budget
430	Protect critical infrastructures (Schools, daycare, apartment buildings, and nursing home) on Rt. 202 around Skiles Blvd from HAZMAT transportation accidents.	Westtown Township	1	Local Plans and Regulations	Environment Hazards - Hazardous Materials, Transportation Incidents	EMC	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
431	Protect the following properties from a potential pipeline incident: Pipeline - Avonlea and Overhill neighborhoods, Sts. Simon and	Westtown Township	1	Local Plans and Regulations	Environmental Hazard Gas and Liquid Pipelines	EMC	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP,

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	Jude Church and School (8 Cavanaugh Ct West Chester, PA 19382) . Advent Lutheran Church at Green Lane on 352, Chesterfield Condominiums at Rt. 3 and 352.							Operating Budget
432	Provide general hazard risk preparedness and mitigation information in regular newsletters and mailings.	Westtown Township	2,4	Education and Awareness	All Hazards	Westtown Township	Short	Operating Budget
433	Work with PennDOT to conduct an assessment to improve the design of Route 202 at 926 intersection and High Street/202 merge.	Westtown Township	1	Structure and Infrastructure	Transportation Incidents	Westtown Township	Long	PennDOT, Municipal Budget
434	Work with the County Bridge No. 148 owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	Westtown Township	1,2,4	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	EMC, FPA	Short	FEMA HMGP, Non-Disaster funds; Operating Budget
435	Enhance public outreach and education to residents, Homeowners Associations (HOAs) and businesses in areas subject to pipeline hazards. Promote "Call Before You Dig" programs.	Westtown Township	1,2	Education and Awareness	Environmental Hazards – Gas and Liquid Pipelines	Westtown Township	Short	Staff Time

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
436	Develop cyber security awareness training and require all municipal staff to complete it on an annual basis.	Westtown Township	1,2	Education and Awareness		Westtown Township	Short	Staff Time
437	Evaluate opportunities for stormwater management infrastructure to reduce the risks of localized flooding.	Westtown Township	1,2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter	Westtown Township	Short	Staff Time
438	Evaluate opportunities for traffic calming measures along roads and intersections that have higher incident risk.	Westtown Township	1,2	Structure and Infrastructure	Transportation Incidents	Westtown Township	Short	Staff Time
439	Create a Capital Improvements Plan.	Westtown Township	1,2,6	Local Plans and Regulations	All Hazards	Westtown Township	Long	Staff Time
440	Enforce all executed stormwater management operation and maintenance agreements to ensure all stormwater management facilities are functioning as designed.	Westtown Township	2	Local Plans and Regulations	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter	Westtown Township	Long	Staff Time
441	Consider land use regulations to maintain appropriate setbacks from pipelines for new construction and to address	Westtown Township	1	Local Plans and Regulations	Environmental Hazards – Gas and Liquid Pipelines	Westtown Township	Short	Staff Time

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	excavation and grading near pipeline right-of-ways. Require developers or contractors to coordinate with pipeline operators before construction near pipelines.							
442	Develop and maintain a pipeline emergency response plan that integrates with the Township Emergency Operations Plan (EOP), local fire departments and Emergency Management Services, and County and state emergency management agencies.	Westtown Township	2,5,6	Local Plans and Regulations	Environmental Hazards – Gas and Liquid Pipelines	Westtown Township	Long	Staff Time
443	Consider mutual aid agreements with neighboring municipalities and pipeline operators.	Westtown Township	2,5,6	Local Plans and Regulations	Environmental Hazards – Gas and Liquid Pipelines	Westtown Township	Short	Staff Time
444	Maintain riparian buffers within the Township-owned open spaces to slow runoff and filter sedimentation.	Westtown Township	3	Natural Systems Protection	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter	Westtown Township	Long	Staff Time, Capital Budget
445	Support and implement stream restoration projects that aim to restore natural floodplains to absorb excess water.	Westtown Township	3	Natural Systems Protection	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter	Westtown Township	Long	Staff Time, Capital Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
446	Support reforestation projects and tree planting initiatives to reduce runoff volumes	Westtown Township		Natural Systems Protection	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter	Westtown Township	Long	Staff Time, Capital Budget
447	Complete feasibility study of drainage improvements at the intersection of Industrial Boulevard and Jacqueline Drive, including integrating solutions with ongoing project at Jacqueline Drive.	Willistown Township	2,6	Structure and Infrastructure	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter, Winter Storm, Utility Interruption	Willistown Township	Long	Capital, Storm Water Funds, ARPA funding, DCNR grants, FEMA/PEMA FMA and HMGP, Non-Disaster Funding, Waterway and Watershed Grants, Operating Budget, LSA
448	Complete feasibility study of drainage improvements throughout the contributory drainage basin, such as new storm sewer infrastructure rate control structures or in line storage, along Bryan Avenue.	Willistown Township	2,6	Structure and Infrastructure	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter, Winter Storm, Utility Interruption	Willistown Township	Long	Capital, Storm Water Funds, ARPA funding, DCNR grants, FEMA/PEMA FMA and HMGP, Non-Disaster Funding, Waterway and Watershed

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Grants, Operating Budget, LSA
449	Complete feasibility study of drainage improvements throughout the contributory drainage basin, such as new storm sewer infrastructure rate control structures, in line storage, concrete swale removal and replacement with bioinfiltration swale, along Chetwynd Road.	Willistown Township	2,6	Structure and Infrastructure	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter, Winter Storm, Utility Interruption	Willistown Township	Long	Capital, Storm Water Funds, ARPA funding, DCNR grants, FEMA/PEMA FMA and HMGP, Non-Disaster Funding, Waterway and Watershed Grants, Operating Budget, LSA
450	Elevation/Acquisition of the structure located at 1 Eisenhower Dr.	Willistown Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget
451	Elevation/Acquisition of the structure located at 116 Davis Rd.	Willistown Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	FPA	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP, Operating Budget

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
452	Increase Culvert Size on Hillview Rd between Fox Chase and Bar Rd.	Willistown Township	2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Willistown Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Capital Improvement Budget
453	Increase drainage basin size at Rustmont Homeowners Association.	Willistown Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Willistown Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Operating Budget
454	Increase drainage basin size behind Malvern Fire Company.	Willistown Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Willistown Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Operating Budget
455	Increase drainage basin size of the Family Life Basin.	Willistown Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Willistown Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Operating Budget
456	Increase size of drainage pipe crossing under road at Paoli Pike west of Rustin Ln and Devon Rd.	Willistown Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Willistown Township	Short	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP;

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
								Operating Budget
457	Install gates to be closed during flood incidents and signage on Jaffery Rd over Crum Creek.	Willistown Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Willistown Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
458	Install gates to be closed during flood incidents and signage on Whitehorse Rd between Rabbit Run Rd and Grubbs Mill Rd.	Willistown Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Willistown Township	Short	FEMA HMGP, Non-Disaster Funding; Operating Budget
459	Installation of a storm water management system in Ronnie Park section of the Township to mitigate surface water runoff impacts during severe weather events that have resulted in past flooding of the neighborhood; and prevent damage to property, housing, and infrastructure in the project area.	Willistown Township	1,2	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Public Works	Medium	Capital, Storm Water Funds, ARPA funding, DCNR grants, FEMA/PEMA FMA and HMGP, Non-Disaster Funding, Waterway and Watershed Grants, Operating Budget, LSA

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
460	Replacement of existing double-barrel culvert with a reinforced concrete single-cell box culvert to address 100 year storm events and mitigate flooding along Forest Lane at the crossing of Crum Creek.	Willistown Township	1,2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter, Winter Storm, Utility Interruption	Willistown Township	Short	Capital, Storm Water Funds, ARPA funding, DCNR grants, FEMA/PEMA FMA and HMGP, Non-Disaster Funding, Waterway and Watershed Grants, Operating Budget, LSA
461	Replacement of existing double-barrel culvert with a reinforced concrete single-cell box culvert to address 100 year storm events and mitigate flooding along Spring Road at the crossing.	Willistown Township	1,2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam; Hurricane, Tropical Storm, Nor'easter, Winter Storm, Utility Interruption	Willistown Township	Short	Capital, Storm Water Funds, ARPA funding, DCNR grants, FEMA/PEMA FMA and HMGP, Non-Disaster Funding, Waterway and Watershed Grants, Operating Budget, LSA
462	Replacement of existing double-barrel culvert with a reinforced	Willistown Township	1,2	Structure and Infrastructure	Flood, Flash Flood, Ice Jam;	Willistown Township	Long	Capital, Storm Water Funds,

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	concrete single-cell box culvert to address 50 year storm events and mitigate flooding along Hillview Road at the crossing of Crum Creek.				Hurricane, Tropical Storm, Nor'easter, Winter Storm, Utility Interruption			ARPA funding, DCNR grants, FEMA/PEMA FMA and HMGP, Non-Disaster Funding, Waterway and Watershed Grants, Operating Budget, LSA
463	Strengthen Bridge/Re-engineer bridge approaches at Jaffery Rd over Crum Creek.	Willistown Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Public Works	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Operating Budget
464	Strengthen Bridge/Re-engineer bridge approaches at Whitehorse Rd between Davis Rd and Fox Chase Rd.	Willistown Township	1	Structure and Infrastructure	Flood, Flash Flood, and Ice Jam	Public Works	Long	FEMA HMGP, Non-Disaster Funding, FMA; PA DCED FMP; Operating Budget
465	Implement procedural improvements and structural upgrades to protect essential assets and building systems, ensuring the continual operation of critical electrical and control	Downingtown Area Regional Authority	1	Local Plans and Regulations, Structure and Infrastructure	All-Hazards	Downingtown Area Regional Authority	Short	FEMA HMGP, Non-Disaster Funding, FMA, Staff Time

Table 6.4-1 Chester County 2026 Mitigation Action Plan

#	MITIGATION INITIATIVE	MUNICIPALITY	GOALS	CATEGORY	HAZARD(S) MITIGATED	LEAD AGENCY	TIMELINE	FUNDING SOURCES
	components during and after hazard events and impacts.							

Many of these mitigation actions will require substantial time commitments from staff at the County and local municipalities. While all these activities will be pursued over the next five years, the reality of limited time and resources requires the identification of the feasibility and priority level of mitigation actions. Prioritization allows the individuals and organizations involved to focus their energies and ensure progress on mitigation activities.

Evaluating mitigation actions involves judging each action against certain criteria to determine its feasibility and potential impact. Actions evaluated and prioritized by applying the Multi-Objective Mitigation Action Prioritization criteria. This method includes considerations for cost vs benefit as the efficiency metric addresses costs while the other four metrics analyze the benefits for each action. For each action, scores were assigned to each criterion using the following weighted, multi-objective mitigation action prioritization criteria.

- Effectiveness (weight: 20% of score): The extent to which an action reduces the vulnerability of people and property.
- Efficiency (weight: 30% of score): The extent to which time, effort, and cost is well used as a means of reducing vulnerability.
- Multi-Hazard Mitigation (weight: 20% of score): The action reduces vulnerability for more than one hazard.
- Addresses High Risk Hazard (weight: 15% of score): The action reduces vulnerability for people and property from a hazard(s) identified as high risk.
- Addresses Critical Communications/Critical Infrastructure (weight: 15% of score): The action pertains to the maintenance of critical functions and structures such as transportation, supply chain management, data circuits, etc.

Scores of 1, 2, or 3 were assigned for each multi-objective mitigation action prioritization criterion where 1 is a low score and 3 is a high score. The Efficiency criterion, which considers the cost and effort of each action versus its overall vulnerability reduction benefit, is the most highly weighted criterion as part of the total prioritization score. Actions were prioritized using the cumulative score assigned to each. Each mitigation action was then given a priority ranking (Low, Medium, and High) based on the following:

- Low Priority: 1.0 – 1.8
- Medium Priority: 1.9 – 2.4
- High Priority: 2.5 – 3.0

Table 6.4-2 presents the cumulative results of the prioritization of mitigation actions. 82 actions were ranked High Priority, 323 are ranked Medium Priority, with the remaining 55 ranked as Low Priority.

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
1	Adopt the latest published editions of relevant consensus-based codes and standards, such as the International Building Code (IBC), International Residential Code (IRC), and International Existing Building Code (IEBC).	2	3	3	3	3	2.8
2	Coordinate with county and state officials on invasive species of concern, including the development of messaging and outreach materials for how residents can mitigate risks on their property. Materials should be created in all languages relevant to the community.	2	2	1	3	1	1.8
3	Coordinate with county, state and federal agencies to stay up-to-date on training and exercise opportunities and coordinating potential mitigation actions for terrorist activities.	3	2	1	2	3	2.15
4	Develop and maintain a stockpile of PPE for distribution during pandemic or infectious disease events.	3	2	1	3	2	2.15
5	Develop and maintain adequate road clearing capabilities.	2	2	1	3	2	1.95
6	Develop/maintain a hazard risk management webpage on the municipal website where information and mapping can be posted, including property-level mitigation measures that homeowners and other residents can take. Materials will be posted in all languages relevant to the community.	1	3	3	3	1	2.3
7	Identify or develop cyber security awareness training and require all municipal staff to complete yearly. Develop certificate and tracking database to ensure all employees are up to date on trainings.	2	3	1	1	3	2.1

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
8	Improve coordination to reduce risk from hazardous material incidents and conduct information sessions and trainings to educate and prepare local officials and first responders.	2	1	1	3	1	1.5
9	Include messaging about water monitoring and conservation in water bills. For example: Regularly checking for leaks to minimize water supply losses or installing low-flow water saving showerheads and toilets. Messaging should be provided in all languages relevant to the community.	2	2	1	3	1	1.8
10	Install traffic calming measures along roads and intersections that have higher incident risk.	3	2	1	3	2	2.15
11	Organize outreach to vulnerable populations to inform them of resources available during power outages and periods of extreme wetaher, including establishing and promoting accessible heating or cooling centers in the community.	3	2	3	3	2	2.55
12	Stormwater Infrastructure Upgrades: Upgrade drainage, add retention basins, and implement green infrastructure.	3	2	1	3	2	2.15
13	The municipal FPA will work with the Atglen Borough Sewer Plant facility owner/operator to protect the facility to at least the 0.2% chance flood level.	3	2	1	3	3	2.3
14	Work with the property owner to determine what flood protection measures can be taken to protect the structure to the 0.2% annual chance flood level.	3	2	1	3	1	2
15	The municipal FPA will work with the Avondale Sewer Authority facility owner/operator to protect the facility to at least the 0.2% chance flood level.	3	2	1	3	3	2.3

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
16	Work with property owners within the FEMA-designated SFHA to determine what flood protection measures can be taken to protect those structures to the 1% or 0.2% annual chance flood level.	3	2	2	2	3	2.35
17	Build an access road to Masters Way to Webb Rd.	3	1	1	3	2	1.85
18	Work with PennDOT to reengineer intersection at Street Road (PA 926) bridge over Brandywine Creek.	3	2	1	3	3	2.3
19	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Brinton's Mill, Lenape Bridge, and Painter, Joseph, Farm.	3	2	2	3	1	2.2
20	Address roadway closure gates and signage at all Amtrak/SEPTA underpasses in the Township, as identified in the Brandywine Flood Study.	3	2	2	2	3	2.35
21	Acquire/Elevate the building located on 135 Seltzer Road.	3	1	1	3	1	1.7
22	Caln Township has major businesses that are vulnerable to dam failure and will work with management to protect the buildings.	3	1	2	2	3	2.05
23	Protect the Caln Radio Tower to the 0.2% annual chance flood level and from a potential dam failure.	3	2	2	3	3	2.5
24	Organize and complete stormwater assessments and maintenance program, including any needed stormwater system repairs.	3	1	1	3	3	2
25	Work with Downingtown Middle School to determine specific vulnerability to dam failure and determine appropriate mitigation measures.	3	2	2	2	3	2.35

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
26	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Pennsylvania Railroad Bridge (No.205), Pickering Dam.	3	2	2	2	3	2.35
27	Upgrade or repair stormwater infrastructure in areas of concern for flooding.	3	2	1	3	2	2.15
28	As opportunities arise, elevate, or acquire properties within flood-prone areas. In addition, wet and dry proof commercial structures if they cannot be elevated or acquired.	3	1	1	3	1	1.7
29	Create a website to assist landowners and municipalities to navigate FEMA resources.	1	3	3	3	1	2.3
30	Develop a countywide Debris Management Plan.	2	1	1	3	2	1.65
31	Develop a plan to stagger traffic and implement delays/early releases for schools, government, and private sector during a disaster.	2	1	2	3	2	1.85
32	Develop an outreach and awareness program and provide to municipalities, where residents and potential homeowners could access to identify any risks they might have to address.	1	3	3	3	1	2.3
33	Educate county residents on the NFIP following flood events.	1	3	1	3	1	1.9
34	Educate the public about resources available to combat the opioid abuse/addiction.	1	3	1	3	1	1.9
35	Educate the public on all the hazards they face.	1	3	3	3	1	2.3
36	Encourage municipal Code Enforcement Officials to become trained in Floodplain Management and NFIP Programs.	2	2	1	3	2	1.95
37	Encourage municipalities to adopt an ordinance outlining the process to implement a snow emergency declaration.	1	3	1	3	2	2.05

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
38	Encourage municipalities to require radon testing at the time sale of homes.	1	3	1	2	1	1.75
39	Encourage new development planning to include burying of utility cables.	3	1	3	3	3	2.4
40	Encourage upgrades and improvements to stormwater runoff capabilities when reconstructing roads.	1	3	1	3	2	2.05
41	Enhance the household hazard waste program to reduce post-event hazardous debris.	2	2	2	3	1	2
42	Ensure that the municipal EMAs have COOP/COG plans.	3	2	3	3	3	2.7
43	Identify snow emergency routes in all municipalities to increase clearing efforts and travel ability of residents.	2	2	1	3	2	1.95
44	Improve storm drains throughout the county to handle snow melt.	2	2	2	3	2	2.15
45	Improve telecommunications infrastructure, including accessibility of high-speed Internet connectivity, throughout the county.	2	1	2	3	3	2
46	Increase cell coverage and telecommunications bandwidth in areas with poor coverage.	3	1	3	3	3	2.4
47	Install back-up power sources for traffic signals (generator, battery, solar).	3	3	1	3	2	2.45
48	Install roadway gates to close off flood-prone intersections/ roads during flood incidents and signage to warn motorists of the closed road.	3	2	1	3	2	2.15
49	Investigate the interaction of public agencies and camera data from private companies/citizens.	1	1	1	2	3	1.45
50	Maintain a GIS layer of the location of all permitted dams within the County, categorized by priority concern. Utilize dam location layer, inundation data, building	2	3	2	2	3	2.45

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
	footprints, and tax parcel information to develop potential evacuation measures in the event of a breach or failure.						
51	Obtain and compile updated Department of Environmental Protection inundation data and Emergency Action Plan vulnerability data as it becomes available to inform plan update.	1	2	2	2	3	1.95
52	Plant bushes/other vegetation to stop drifting snow in known problem areas.	2	2	1	3	1	1.8
53	Provide education to the municipalities on flood gauges.	1	3	1	3	2	2.05
54	Provide education to the municipalities on resident evacuation processes and need.	2	3	3	3	2	2.65
55	Provide public education on traffic accident reduction.	1	3	1	3	1	1.9
56	Provide public information on debris management.	1	3	1	3	1	1.9
57	Purchase backup generators and explore microgrid solutions for critical infrastructure/ key resources.	3	3	3	3	3	3
58	Pursue local mitigation efforts to improve areas that are vulnerable to flooding including both repetitive and non-repetitive loss structures within floodplains.	2	1	1	3	1	1.5
59	Retrofit critical public facilities with safe rooms.	2	1	1	3	3	1.8
60	Study traffic control boxes that would be exposed to riverine or stormwater flooding to determine if they are able to withstand the water.	2	2	2	3	2	2.15
61	Sustain tree management programs around power lines.	2	1	3	3	3	2.2
62	The county and all municipalities will work with their major businesses to ensure they have continuity plans in place.	2	2	3	3	3	2.5

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
63	The county and all municipalities with a dam will work with dam operators to ensure they are protected to the 0.2% annual chance flood level.	3	2	1	3	3	2.3
64	The county and municipalities will work with the higher education facility operators to discuss the hazards they face and ensure their emergency plans address those hazards.	2	2	3	3	3	2.5
65	The county and municipalities will work with the intermediate care facility operators to discuss the hazards they face and ensure their emergency plans address those hazards.	2	2	3	3	3	2.5
66	The county and municipalities will work with the long-term care facility operators to discuss the hazards they face and ensure their emergency plans address those hazards.	2	2	3	3	3	2.5
67	The county and municipalities will work with the senior living facility operators to discuss the hazards they face and ensure their emergency plans address those hazards.	2	2	3	3	3	2.5
68	The county will assess their bridges to determine what measures can be taken to protect them to the 0.2% annual chance flood level.	2	2	2	3	3	2.3
69	The county will work with all municipalities that have a child care facility exposed to any of the hazards to work with the child care facility operators to discuss hazards they face and ensure their emergency plans address those hazards.	2	2	3	3	3	2.5
70	When provided by FEMA, evaluate and apply FEMA non-regulatory electronic floodplain mapping and mitigation tools, where appropriate.	2	2	1	3	2	1.95
71	Work with district courts to ensure they have plans in place for off-site hazmat releases that can affect the courts.	2	2	1	3	2	1.95
72	Work with hazmat facilities to inform them of the hazards they face and ensure emergency plans are current.	2	2	1	3	3	2.1

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
73	Work with hospitals to ensure they have plans in place for off-site hazmat releases that can affect hospitals.	2	2	1	3	3	2.1
74	Work with schools and school districts to inform them of the hazards they face and ensure emergency plans are current.	2	2	3	3	3	2.5
75	Work with the municipalities to develop a map of the stormwater system, including intakes and outflows.	1	2	1	3	2	1.75
76	Work with the railroad industry to address safety concerns and aging rail infrastructure.	3	2	1	3	3	2.3
77	Work with the USPS on options for protecting the post offices from flooding and possible inundation from dam failure.	1	3	2	3	2	2.25
78	Work with Verizon to protect the facilities from flood or dam failure.	2	1	2	3	3	2
79	Work with FEMA to obtain the latest repetitive loss property data.	2	3	1	3	2	2.25
80	Coordinate with PEMA and power plants on updated public information materials and a public information campaign to inform people in the 10-mile EPZ about evacuation plans and people in the 50-mile EPZ about their risks and preparations they can make. Make sure to provide materials in all languages relevant to the community.	2	2	1	3	1	1.8
81	Encourage municipalities and operators of critical facilities to reduce their vulnerability to wildfires by: increasing buffers and introducing defensible spaces; identifying farm roads, service roads, and other private access corridors in high hazard areas that could be used as fire breaks; and providing assistance to the County Emergency Management to identify vulnerable structures. Ensure outreach is completed to critical	1	3	1	3	3	2.2

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
	facilities that serve socially vulnerable populations such as elder care facilities and retirement homes, schools, youth and adult correctional facilities, hospitals, mental health treatment facilities, shelters, and youth and adult daycare facilities.						
82	Work with local fire departments to conduct fire prevention seminars for schools and other critical facilities. Topics may include the proper use of fire extinguishers, fire evacuation procedures, common fire code violations, and specific concerns for cafeteria personnel.	2	2	2	3	3	2.3
83	Work with Pennsylvania Department of Health to increase awareness about treating and preventing substance use disorder, including using county and municipal websites to share resources.	2	3	1	3	1	2.1
84	Build partnerships with dam owners. For dams with poor condition assessments, work with dam owners to identify and prioritize the repairs needed to bring the dams into compliance with dam safety standards.	2	1	2	2	3	1.85
85	Once structures in dam hazard areas are identified, support mitigation projects that will result in the projection of public and private property from floods of specific magnitudes. Eligible projects include but are not limited to: 1) acquisition of hazard-prone structures 2) Elevation of flood-prone structures. 3) Minor structural flood control projects 4) Relocation of structures from hazard-prone areas 5) Retrofitting of existing buildings, facilities, and infrastructure.	3	2	2	2	3	2.35
86	Once dam hazard areas are identified, consider updating land use ordinances and the implications of recognizing dam inundation areas as sensitive areas in zoning ordinances.	3	1	2	2	3	2.05

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
87	Participate in the development and continued update of Emergency Action Plans.	1	2	2	2	3	1.95
88	Provide HHPD notice of funding opportunity and supporting documentation from the County HMP to EMCs, municipalities, and dam owners to promote rehabilitation and safety in Chester County.	2	3	2	2	3	2.45
89	Rehabilitate and/or remove HHPDs.	3	2	2	3	3	2.5
90	63 S. 5th Ave. Property Protection - protect the existing grocery store on the corner of Olive St. and S 5th Ave.	3	2	1	3	3	2.3
91	Amtrak Keystone Corridor Underpass Flooding – evaluate and improve drainage and eroding areas along the corridor.	3	2	1	3	3	2.3
92	Ash Park Stormwater Improvements - improve infiltration and mitigate floodwaters that pose a threat for travelers during/after storm events.	3	2	1	3	2	2.15
93	Create a Capital Improvements Plan.	3	3	3	3	3	3
94	Downtown Stormwater Improvements - upgrade Coatesville's existing stormwater infrastructure in the downtown business district.	3	2	1	3	2	2.15
95	Emergency Alert System - the City of Coatesville will implement an emergency alert system that will inform residents in the event of an emergency in an effort to improve public safety.	2	2	3	3	3	2.5
96	Gibbons Run Culvert Flooding and Structural Stability – evaluate the culverts and repair, rehabilitate, or replace them as necessary.	3	2	1	3	3	2.3

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
97	Install gates to be closed during flood incidents and signage at 11th Avenue and railroad underpass.	3	2	1	3	2	2.15
98	Millview Basin - restore proper stormwater detention basin function with added water quality improvements.	3	2	1	3	2	2.15
99	Pre-Plan Emergency Access Routes.	2	3	3	3	2	2.65
100	Protect ArcelorMital Emergency Services to the 0.2% annual chance flood level.	3	2	2	3	3	2.5
101	Provide backup power at the City's traffic signals, including developing a plan for implementation and refueling.	2	2	3	3	2	2.35
102	Public Information Programs - develop education packages, classes, meetings, programs, etc. with the goal of improving public knowledge of potential hazards are dealt with within the City.	1	3	3	3	1	2.3
103	Route 82 Slope Stability - ensure the stability of the slopes along the eastern side of Route 82 in order to maintain unimpeded direct access into and out of the City.	2	1	3	3	3	2.2
104	S. 5th Avenue Stormwater Improvements.	3	2	1	3	2	2.15
105	The municipal FPA will work with the Martin- Brower facility owner/operator to protect the facility to the 0.2% annual chance flood level and dam failure.	3	2	2	3	1	2.2
106	Upgrade City Hall Command Center - these upgrades include upgrades to the existing generator to allow for increased functionality of City Hall, the Police Station and the Emergency Command Center during a power outage and upgrades to the communication utilities to permit full functionality during an emergency.	3	3	3	3	3	3

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
107	West End Fire Station Generator - obtain a backup generator in order ensure that emergency operations are maintained during a power outage.	3	3	3	3	3	3
108	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: High Bridge, Huston, Abram, House & Carriage House, Lukens Main Office Building.	3	2	2	3	1	2.2
109	Install emergency alerting systems.	2	2	3	3	3	2.5
110	Determine the specific vulnerability of the Downingtown Borough Building to dam failure and determine appropriate mitigation measures.	3	2	2	2	3	2.35
111	Downingtown Borough has major businesses that are vulnerable to dam failure and will work with management to protect the buildings.	2	2	2	2	3	2.15
112	Protect Alert FC Fire Station from dam failure.	3	2	2	2	3	2.35
113	Protect Downingtown - Jefferson Ave Electrical Substation to the 0.2% annual chance flood level and from the vulnerability to dam failure.	3	2	2	3	3	2.5
114	Protect Downingtown Boro PD from potential dam failure.	3	2	2	2	3	2.35
115	Protect Minquas Ambulance Fire Station from dam failure and determine appropriate mitigation measures.	3	2	2	2	3	2.35
116	Protect Minquas FC from potential dam failure.	3	2	2	2	3	2.35
117	Protect the Downingtown Municipal Waste from dam failure.	3	2	2	2	3	2.35

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
118	The municipal FPA will work with AT&T Mobility Downingtown - USID53712 facility owner/operator to protect the facility from its vulnerability to dam failure.	3	2	2	2	3	2.35
119	The Municipal FPA will work with the Downingtown Municipal Water Authority owner/operator to the 0.2% annual chance flood level and from vulnerability to dam failure.	3	2	2	3	3	2.5
120	The municipal FPA will work with the Inland Flexo, LLC facility owner/operator to protect the facility from its vulnerability to dam failure.	3	2	2	2	2	2.2
121	The municipal FPA will work with the Johnson Matthey AGT facility owner/operator to protect the facility from vulnerability to dam failure.	3	2	2	2	2	2.2
122	The municipal FPA will work with the Verizon Downingtown CO owner/operator to protect the facility from vulnerability to dam failure.	3	2	2	2	3	2.35
123	The municipal FPA will work with the Victory Brewing Company, LLC owner/operator to protect the facility from vulnerability to dam failure.	3	2	2	2	2	2.2
124	Work with Beaver Creek Elementary School to determine specific vulnerability to dam failure and determine appropriate mitigation measures.	3	2	2	2	3	2.35
125	Work with Downingtown High School West to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	3	2	2	2	3	2.35
126	Work with East Ward Elementary School to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	3	2	2	2	3	2.35
127	Work with Lori Petrie's Pre School to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	3	2	2	2	3	2.35

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
128	Work with Regina Luminis Academy to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	3	2	2	2	3	2.35
129	Work with SEPTA and Amtrak to protect the station from dam failure.	3	2	2	2	3	2.35
130	Work with St. Joseph School to determine specific vulnerability to dam failure and determine appropriate mitigation measures.	3	2	2	2	3	2.35
131	Work with STEM Academy to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	3	2	2	2	3	2.35
132	Work with Step by Step Children's House to determine specific vulnerability to dam failure and determine appropriate mitigation actions.	3	2	2	2	3	2.35
133	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect the, to the 0.2% annual chance flood level and vulnerability to dam failure: Downingtown Log House, Hunt, Roger, and Mill Complex.	3	2	2	3	1	2.2
134	Work with the United States Marine Recruiting Office to protect the structure from the vulnerabilities of dam failure.	3	2	2	2	2	2.2
135	Replace the Manor Avenue Bridge over Beaver Creek to reduce upstream flooding, as identified in the Brandywine Flood Study	3	2	2	3	3	2.5
136	Determine what flood protection measures can be taken to protect the structures on Mary Street to the 1% or 0.2% annual chance flood level, as identified in the Brandywine Flood Study.	3	2	2	2	3	2.35
137	Complete the Downingtown Area Regional Authority (DARA) Modernization Project.	3	2	2	3	3	2.5

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
138	Acquisition/elevation of structure at 414 Cottage Lane.	3	2	1	3	1	2
139	Acquisition/elevation of structure located at 402 Cottage Lane.	3	2	1	3	1	2
140	Acquisition/elevation of structure located at 406 Cottage Lane.	3	2	1	3	1	2
141	Acquisition/elevation of structure located at 418 Cottage Lane.	3	2	1	3	1	2
142	Acquisition/Elevation of structure located at 502 River Bed Lane.	3	2	1	3	1	2
143	Acquisition/Elevation of structure located at 530 River Bend Lane.	3	2	1	3	1	2
144	Acquisition/Elevation of structure located at 550 River Bend Lane.	3	2	1	3	1	2
145	Acquisition/Elevation of structure located at 558 River Bend Lane.	3	2	1	3	1	2
146	Install battery back-up and/or generator hookup on traffic signal on South Bradford Avenue and West Nields Street.	2	3	1	3	2	2.25
147	Install gates to be closed during flood incidents and signage on Allerton Road between North Creek Road and Lucky Hill Road.	3	2	1	3	2	2.15
148	Install gates to be closed during flood incidents and signage on North Creek Road between Jefferis Bridge Road and Hillsdale Road.	3	2	1	3	2	2.15
149	Install gates to be closed during flood incidents and signage on South Creek Road between Cottage Lane and Withers Way.	3	2	1	3	2	2.15
150	Install gates to be closed during flood incidents and signage on Valley Creek Road between Harmony Hill Road and Ravine Road.	3	2	1	3	2	2.15
151	Property protection of structure located at 1010 Valley Creek Road.	3	2	1	3	1	2
152	Protect East Bradford Electrical Substation from vulnerability to dam failure.	3	2	2	2	3	2.35

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
153	Protect Good Fellowship Ambulance (Sub-Station) from the vulnerabilities from dam failure.	3	2	2	2	3	2.35
154	The municipal FPA to work with the PECO Bradford Substation facility owner/operator to protect the facility from vulnerabilities to dam failure.	3	2	2	2	3	2.35
155	Complete McQueen structure removal process.	3	3	1	3	1	2.3
156	Complete Old Horsehoe Pike Culvert Replacement.	3	2	1	3	3	2.3
157	Remediate and repair Bondsville Mill South Bridge.	3	2	2	3	3	2.5
158	Determine the specific vulnerability to dam failure and determine appropriate mitigation measures for the Downingtown Sewer Authority.	3	2	2	2	3	2.35
159	The municipal FPA to work with the D.R.W.P.C.C facility owner/operator to protect the facility from vulnerabilities to flooding.	3	2	2	2	3	2.35
160	Acquisition/elevation of structure located at 285 Linfield Road.	3	1	1	3	1	1.7
161	Project East Coventry - Linfield Road Electrical Substation from the vulnerabilities of dam failure.	3	2	2	3	3	2.5
162	The municipal FPA to work with Taylor Industries Inc facility owner/operator to protect the facility to at least the 0.2% chance flood level and from the vulnerabilities to dam failure.	3	2	2	3	1	2.2
163	Work with the property owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level and from the vulnerabilities to dam failure.	3	2	2	3	1	2.2

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
164	Improve drainage to reduce flooding along Mortonville Road including intersection of Mortonville Road and Sawmill Road.	3	2	1	3	2	2.15
165	Improve drainage to reduce flooding on Timacula Road.	3	2	1	3	2	2.15
166	Protect East Fallowfield - Spring Dell Road Electrical Substation to the 0.2% annual chance flood event.	3	2	2	3	3	2.5
167	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Strasburg Rd Bridge, Speakman No.2, and the Gorden Farm.	3	2	2	3	2	2.35
168	Work with the Goodwin Acres owner to determine what protection measures can be taken to protect them from vulnerabilities to dam failure.	3	2	2	2	2	2.2
169	Address French Creek flooding that impacts access and use of Rapps Dam Road, Hares Hill Road, Mary Snowden Bridge, and local trail system.	3	2	1	3	3	2.3
170	Address stormwater pipe erosion and sinkhole issues along 450 linear foot section of Spring Hollow Road.	3	2	2	3	2	2.35
171	Conduct power assessment for critical infrastructure/key resources to determine emergency generator needs and coordinate information with the Army Corps of Engineers.	3	3	1	3	3	2.6
172	Develop tree maintenance program that identifies and addresses potential problem trees on public property.	2	2	1	3	3	2.1
173	Install new bridge on Pickering Road that crosses Piegon Run Creek to restore emergency service access.	3	1	3	3	3	2.4

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
174	Monitor and manage reservoirs and stream flows to sustain water sources needed to meet public water supply needs.	3	2	1	3	3	2.3
175	Plant bushes/other vegetation to stop drifting snow in known problem areas.	1	2	1	3	1	1.6
176	Purchase temporary mobile camera to set up for events and use to monitor safety and security.	2	3	1	2	3	2.25
177	Repair and potentially expand stormwater basin along Seven Stars Road.	3	2	1	3	2	2.15
178	Repair section of Pickering Road impacted by flooding and strembank erosion, install rip-rap along Pickering Road to stablize streambank.	3	2	2	3	2	2.35
179	Replace Camp Council Road Bridge and culvert.	3	1	3	3	3	2.4
180	Retrofit critical public facilities with safe rooms.	3	2	2	3	3	2.5
181	The municipal FPA to work with the Cromby Generating Station facility owner/operator to protect the facility to at least the 0.2% chance flood level and from vulnerabilities to dam failure.	3	2	2	3	3	2.5
182	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and vulnerabilities to dam failure: Bernard Property, Hare's Hill Road Bridge, Hartman, Peter, Residence, Kimberton Historic District, and Rapp's Covered Bridge.	3	2	2	3	2	2.35
183	Work with the railroad industry to address safety concerns and aging rail infrastructure.	3	2	1	3	3	2.3
184	Protect the Shady Lane Water Treatment Plant from dam failure.	3	2	2	2	3	2.35

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
185	The municipal FPA to work with the Columbia Gas Transmission/Birdsboro Heater facility owner/operator to protect the facility to at least the 0.2% chance flood level and from the vulnerabilities of potential dam failure.	3	2	2	3	2	2.35
186	The municipal FPA to work with the Oehlert Bros., Inc facility owner/operator to protect the facility to at least the 0.2% chance flood level.	3	2	1	3	1	2
187	The municipal FPA to work with the Shady Lane Plant-Royersford facility owner/operator to protect the facility from the vulnerabilities of dam failure.	3	2	2	2	3	2.35
188	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to dam failure: Kennedy Covered Bridge and Parker's Ford.	3	2	2	3	2	2.35
189	Complete streambank restoration projects at Valley Creek Park, the Township Building, and Ecology Park.	3	2	1	3	1	2
190	Install a generator at the Meadowview pump station.	3	3	1	3	3	2.6
191	Install a generator at the pump station on Flat Road.	3	3	1	3	3	2.6
192	Install gates to be closed during flood incidents and signage at Church Road.	3	2	1	3	2	2.15
193	Install gates to be closed during flood incidents and signage at Old Morehall Road.	3	2	1	3	2	2.15
194	Install generator at Frazer Mennonite Church, which serves as a comfort care center.	3	3	1	3	3	2.6
195	Repair sinkholes impacting road usage.	3	2	1	3	2	2.15
196	Work with management of major businesses to protect the buildings to the 0.2% annual chance flood level.	3	2	1	3	2	2.15

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
197	Work with the Spring Mill Complex owner to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood event.	3	2	1	3	1	2
198	Construct new stormwater management systems to address uncontrolled water runoff creating flooding of Darby Creek and its tributaries at Darby Creek Watershed.	3	2	1	3	2	2.15
199	Work with Sugartown Road Bridge owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	3	2	1	3	2	2.15
200	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Glen Hope Covered Bridge, Rudolph & Arthur Covered Bridge, and Stephens, Linton Covered Bridge.	3	2	1	3	2	2.15
201	Address flooding along Conestoga Road & South Brick Lane.	3	2	1	3	2	2.15
202	Implement updated pipeline annex in Borough Emergency Operations Plan.	3	2	1	2	2	2
203	Update threat assessment and implement security recommendations for Twin Valley Elementary Center.	3	2	1	2	3	2.15
204	Complete improvements to Walker Road Bridge to address flooding.	3	2	1	3	2	2.15
205	Complete road improvements to address flooding along North Clay Creek Road.	3	2	1	3	2	2.15
206	Improve drainage on North Clay Creek and Churchill Road.	3	2	1	3	2	2.15
207	Work with PennDOT to improve US-322 corridors to mitigate traffic accidents.	3	2	1	3	3	2.3
208	The municipal FPA to work with the Honey Brook Borough Authority facility owner/operator to protect the facility to at least the 0.2% chance flood level.	3	2	1	3	3	2.3

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
209	Advise residents to help keep storm drains clear of debris during storms through borough communication channels as appropriate (including Ready ChesCo).	2	3	1	3	1	2.1
210	Develop "master list" of infrastructure projects to address flooding to share with borough grant consultant so they can monitor funding opportunities to implement projects. Present list to borough Infrastructure Committee.	3	2	1	3	3	2.3
211	Improve drainage on D Street to address flooding.	3	2	1	3	2	2.15
212	Improve drainage on E. South Street between S. Walnut and Broad Street.	3	2	1	3	2	2.15
213	Improve drainage on South Street at Lafayette and Grant Way.	3	2	1	3	2	2.15
214	Improve drainage on W. South Street between Lafayette Street and Grant Way.	3	2	1	3	2	2.15
215	Improve drainage on Walnut Street between Birch and E. South Streets.	3	2	1	3	2	2.15
216	Improve or install drainage systems along Cypress Street to Cedar Street.	3	2	1	3	2	2.15
217	Improve/install drainage systems to handle rain to reduce localized flooding from Cypress St to Cedar St, west of Union St.	3	2	1	3	2	2.15
218	The municipal FPA will work with Comcast Cable- Kennett Square Hubsite owner/operator to protect the facility to the 0.2% annual chance flood level.	3	2	1	3	2	2.15
219	Acquisition/elevation of structure located at 611 Creek Road.	3	1	1	3	1	1.7
220	Acquisition/elevation of structure located at 903 Creek Road.	3	1	1	3	1	1.7
221	Acquisition/elevation of structure located at 909 Creek Road.	3	1	1	3	1	1.7
222	Assess and determine the best action to prevent East Hillendale Rd from flooding.	1	3	1	3	2	2.05
223	Assess and determine the best action to prevent flooding of Kaolin Rd from stream.	1	3	1	3	2	2.05

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
224	Assess and determine the best action to prevent flooding of Marshall Bridge a Route 82 South.	1	3	1	3	2	2.05
225	Assess and determine the best action to prevent flooding of the West Hillendale stream from Chandler Mill to Scarlet.	1	3	1	3	2	2.05
226	Assess and determine the best action to prevent further erosion of Bucktoe Road stream banks and prevent flooding of the road.	1	3	1	3	2	2.05
227	Assess and determine the best action to prevent Rosedale Road stream from overflowing onto the road.	1	3	1	3	2	2.05
228	Assess and determine the best action to prevent the stream on Center Mill Road from overflowing.	1	3	1	3	2	2.05
229	Install gates to be closed during flood incidents and signaled at flood intersections within the township.	3	2	1	3	2	2.15
230	Install warning signs to be utilized during flood incidents at flood-prone bridges within the township.	2	2	1	3	2	1.95
231	The municipal FPA to work with the AT&T SBA Kennett Square facility owner/operator to protect the facility to at least the 0.2% chance flood level	3	2	1	3	3	2.3
232	The municipal FPA to work with the Kennett Square Borough Sewage Treatment Plant facility owner/operator to protect the facility to at least the 0.2% chance flood level.	3	2	1	3	3	2.3
233	Work with county to improve drainage on Bayard Road.	3	2	1	3	2	2.15
234	Work with the county to improve drainage on Pemberton Road Bridge from Mill Road to Cedar Springs to prevent flooding.	3	2	1	3	2	2.15

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
235	Work with the county to improve drainage on South Street from Scarlet to Chandler Mill.	3	2	1	3	2	2.15
236	Install a snow fence during snow season to prevent snow drifting on South Bank Rd.	1	2	1	3	1	1.6
237	Install a snow fence during snow season to prevent snow drifting on Strickersville Rd.	1	2	1	3	1	1.6
238	Install gates to be closed during flood incidents and signage at Flint Hill Rd & Mercer Mill Rd.	3	2	1	3	2	2.15
239	Install gates to be closed during flood incidents and signage at Good Hope & London Tract Rd/Broad Run Rd.	3	2	1	3	2	2.15
240	Install gates to be closed during flood incidents and signage at London Tract Rd & New Peltier Rd.	3	2	1	3	2	2.15
241	Install gates to be closed during flood incidents and signage at Mercer Mill Rd and N. Creek Rd.	3	2	1	3	2	2.15
242	Install gates to be closed during flood incidents and signage at Yeatmans Station Rd.	3	2	1	3	2	2.15
243	Install alerting system/public notification system to profiteering/notification of potentially dangerous and damaging weather. Area is populated with outdoor activities and large population.	2	2	3	3	3	2.5
244	Install gates and signage within flood-prone areas to reduce the risk of motorist and other traveling public from becoming entrapped in the flood waters.	3	2	1	3	2	2.15
245	Protect West Grove Sewage Treatment Plant to the 0.2% annual chance flood level.	3	2	1	3	3	2.3
246	Reconfigure stream channel at Sullivan Rd & Clay Creek Rd.	3	1	1	3	2	1.85

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
247	Reconstruct stream and roadway elevations to reduce the ability of flooding during rain and flash flood events.	3	1	1	3	2	1.85
248	Supply electrical connections for a portable generator at each of the wastewater facilities. Providing alternative power during power outages utilizing a portable until as opposed to three permanent generators providing additional costs savings.	3	3	1	3	3	2.6
249	The municipal FPA to work with the West Grove Wastewater Treatment facility owner/operator to protect the facility to at least the 0.2% chance flood level.	3	2	2	3	3	2.5
250	To remove an existing failed culvert and replace it with a new structure to span the base flood elevation. Portions or all of structure removal and replacement could be completed utilizing Municipal Public Works Resources.	3	2	1	3	3	2.3
251	To remove an existing narrow culvert and replace with a structure to span the base flood elevations. Portions or all the structure removal and replacements could be completed utilizing Municipal Public Works.	3	2	1	3	3	2.3
252	Widen bridge and bridge approaches at Indian Run Rd.	3	2	1	3	3	2.3
253	Improve and enhance culverts on Jackson Rd and Faggs Manor Rd.	3	2	1	3	3	2.3
254	Improve plans and communication in case of emergency.	2	2	1	2	2	1.8
255	Increase the height of the bridge at Whitehorse Rd near Creek Rd.	3	2	1	3	3	2.3
256	Install a generator in the Township Building.	3	3	1	3	3	2.6
257	Obtain approximately 1 mile of snow fencing or install natural landscapes to stop snow drifting along White Horse Rd by Power Station.	1	2	1	3	1	1.6

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
258	Purchase 2-way radios to assist in communication during emergency events in the township.	1	3	3	3	2	2.45
259	Purchase and install a backup generator at the Municipal Building.	3	3	1	3	3	2.6
260	Work with PennDOT to clear the brush in roadway lines of sight at Rt 796 and Rt 41.	3	2	1	3	3	2.3
261	Work with PennDOT to construct a roundabout at the intersection of PA Route 41 and PA route 926.	3	2	1	3	3	2.3
262	Work with PennDOT to reconstruct the intersection to allow for better water drainage and strength the road at Fernwood Rd and Jackson Rd.	3	2	1	3	2	2.15
263	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to dam failure: Octoraro Water Company and Pine Grove Covered Bridge.	3	2	2	3	3	2.5
264	Elevation/Acquisition of structure located at 135 Powelton Ave.	3	1	1	3	1	1.7
265	Elevation/Acquisition of structure located at 145 Powelton Ave.	3	1	1	3	1	1.7
266	Elevation/Acquisition of structures 10 through 142 W First Ave.	3	1	1	3	1	1.7
267	Elevation/Acquisition of structures 193 through 323 Paoli Pike.	3	1	1	3	1	1.7
268	Elevation/Acquisition of structures 2 through 10 Remington Ln.	3	1	1	3	1	1.7
269	Elevation/Acquisition of structures 217 through 545 S. Warren Ave.	3	1	1	3	1	1.7
270	Increase culvert size at 313 S Warren Ave.	3	2	1	3	3	2.3
271	Work with management of Malvern Preparatory School to protect the buildings to the 0.2% annual chance flood level.	3	2	2	3	3	2.5

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
272	Determine the specific vulnerability of the Modena Borough Building to dam failure and determine appropriate mitigation measures.	3	2	2	2	3	2.35
273	Protect Modena Ambulance EMS Station from vulnerabilities to dam failure.	3	2	2	2	3	2.35
274	Protect Modena FC Fire Station from a potential dam failure.	3	2	2	2	3	2.35
275	The Municipal FPA will work with the Mahoney- Modena owner/operator to protect the facility to the 0.2% annual chance flood level and from the vulnerabilities to dam failure.	3	2	2	3	1	2.2
276	The Municipal FPA will work with the Sealed Air Corporation owner/operator to protect the facility to the 0.2% annual chance flood level and from the vulnerabilities to dam failure.	3	2	2	3	1	2.2
277	Work with the Mode Paper Mill owner to determine what flood protection measures can be taken to protect it from the vulnerabilities of dam failure.	3	2	2	2	2	2.2
278	Construct larger culvert at Cedar Springs Rd at Pemberton Rd.	3	2	1	3	3	2.3
279	Construct larger culvert at Egypt Run Road.	3	2	1	3	3	2.3
280	Purchase portable generator for traffic signal at Chambers Rd and Baltimore Pike.	2	3	2	3	2	2.45
281	Purchase portable generator for traffic signal at Newark Rd and Baltimore Pike.	2	3	2	3	2	2.45
282	Purchase portable generator for traffic signal at Newark Rd and Rt 41.	2	3	2	3	2	2.45
283	Purchase portable generator for traffic signal at Penn Green Rd and Rt 41.	2	3	2	3	2	2.45
284	Purchase portable generator for traffic signal at Scarlett Rd and Baltimore Pike.	2	3	2	3	2	2.45
285	Purchase portable generator for traffic signal at Southwood Rd and Rt 7.	2	3	2	3	2	2.45
286	Work with To-jo Mushrooms Inc. management to protect the building to the 0.2% annual chance flood level.	3	2	2	3	1	2.2

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
287	Determine the specific vulnerability of the Newlin Township Building to dam failure and determine appropriate mitigation measures.	3	2	2	2	3	2.35
288	Fix and pave road that has been destroyed on Laurel Road including three driveways.	2	2	1	3	1	1.8
289	Protect the Embreeville Sewage Treatment from dam failure and protect it to the 0.2% annual chance flood event and from vulnerabilities to dam failure.	3	2	2	3	3	2.5
290	Replant Ash Trees that were lost to the Ash Borer and determine the best actions to prevent invasive species in the future.	2	1	1	3	1	1.5
291	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Embreeville Historic District, House at Upper Laurel Iron Works, Marlborough Village Historic District, Spruce Groce School House, Worker's House at Lower Laurel Iron Works.	3	2	2	2	2	2.2
292	Protect the North Coventry Municipal Authority from dam failure and to the 0.2% annual chance flood level.	3	2	2	3	3	2.5
293	The municipal FPA to work with the North Coventry Municipal Authority facility owner/operator to protect the facility to at least the 0.2% chance flood level and from the vulnerabilities to dam failure.	3	2	2	3	3	2.5
294	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Schuylkill Navigation Company Canal and historic structure located on SR 7046.	3	2	2	3	2	2.35
295	Construct and gain permit for Well #14 in the Sycamore Crossing development, including the construction of a new raw waterline to the treatment plant.	3	2	3	3	3	2.7

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
296	Develop and execute a street trees planting program within the public right of way to increase tree canopy coverage, reduce temperatures and improve urban environment.	2	1	2	3	1	1.7
297	Expand Borough water treatment plant to increase capacity, improve filtration capabilities, and enhance property security.	3	2	3	3	3	2.7
298	Improve/upgrade water system interconnect with Chester Water Authority to ensure efficient and safe operations and improve reliability.	3	2	3	3	3	2.7
299	Rain gardens to be installed in recently created bump- outs on Broad Street at intersection with 8th Street.	2	2	1	3	2	1.95
300	Reconstruct ~700 linear feet of grey stormwater infrastructure along Broad Street to Whitehall Way, incoprating green infrastructure where possible.	3	2	1	3	3	2.3
301	The municipal FPA will work with the Hayes Heating and Cooling Bulk owner/operator to protect the facility to the 0.2% annual chance flood level.	3	2	2	3	2	2.35
302	Work with power company to protect Parkesburg - N Church St Electrical Substation to the 0.2% annual chance flood level.	3	2	2	3	3	2.5
303	Enhance stormwater management regulations.	2	3	1	3	3	2.4
304	Work with power company to protect Penn - Neward Road Electrical Substation to the 0.2% annual chance flood level.	3	2	2	3	3	2.5
305	Install warning signals at unguarded railroad crossing at US Rt 1 at the railroad tracks by Fairville Rd.	2	2	1	3	2	1.95

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
306	Install warning signals for times when road is closed due to flooding on US Rt 1 in the area of the Brandywine creek.	2	2	1	3	1	1.8
307	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to dam failure: Bissel/Hill Girt/Beverly Rural Historic District and Delaware Boundary Makers.	3	2	2	3	1	2.2
308	Improve drainage at the intersection of Bridge and Church St.	3	2	1	3	2	2.15
309	Protect the District Court 15-2-01 to the 0.2% annual chance flood level.	3	2	2	3	3	2.5
310	Protect the Phoenixville Boro PD to the 0.2% annual chance flood level.	3	2	2	3	3	2.5
311	Protect the Phoenixville Water Treatment to the 0.2% annual chance flood event and from dam failure.	3	2	2	3	3	2.5
312	The municipal FPA to work with the Phoenixville Water Plant facility owner/operator to protect the facility to at least the 0.2% chance flood level and from the vulnerabilities to dam failure.	3	2	2	3	3	2.5
313	Work with the management of major businesses to protect the buildings from dam failure and to the 0.2% annual chance flood level and from the vulnerabilities to dam failure.	3	2	2	3	1	2.2
314	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to dam failure: Black Rock Bridge, Lobok, John, Property, Mansion House, and Phoenixville Canal Spur.	3	2	2	3	1	2.2

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
315	Assess and determine the best action to prevent flooding around Brandywine Creek on Northbrook Road, one lane historical bridge.	1	3	1	3	3	2.2
316	Create a Capital Improvement Plan (CIP) for the Township to forecast the needed funds for flood mitigation projects.	3	3	1	3	3	2.6
317	Increase floodplain restoration/management and flood mitigation controls across the township.	2	2	1	3	3	2.1
318	Provide ongoing Public Education to Township residents regarding disasters/emergency management. Public education for flood prevention and mitigation.	2	2	1	3	1	1.8
319	Stabilize existing roadway in danger of collapse from damage due to frequent flooding of Brandywine Creek, with retaining wall and guide rail system. This will improve traffic safety for local residents, allow for better access by EMS vehicles, and mitigate the damage from future flooding.	3	2	2	3	2	2.35
320	The municipal FPA to work with the Lenape Forged Products Corp facility owner/operator to protect the facility from the vulnerabilities of dam failure.	3	2	2	2	2	2.2
321	Work with power company to protect the Pocopson - Lenape Unionville Road Electrical Substation to the 0.2% annual chance flood level.	3	2	2	3	3	2.5
322	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Pocopson Station, State Route 3027, and Wilkinson House.	3	2	2	3	2	2.35

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
323	Assess and determine the best action to improve drainage and reduce flooding on Greenbelt Drive.	1	3	1	3	2	2.05
324	Install gates to be closed during flood incidents and signage on sections of Old Mill Road.	3	2	1	3	2	2.15
325	Remove rock obstruction causing stream flow and flooding issues along Old Mill Road, north of Route 30.	3	3	1	3	1	2.3
326	Replace bridge over Buck Run along Octara Road & Old Mill Road.	3	1	3	3	3	2.4
327	Acquisition/Elevation of the structure located at 493 State Creek Road.	3	1	1	3	1	1.7
328	Construct Larger Culvert at East Phillip Drive.	3	2	1	3	3	2.3
329	Construct larger culvert at S Whitehorse Road.	3	2	1	3	3	2.3
330	Determine specific vulnerability to dam failure and determine appropriate mitigation measures for the Valley Forge Sewage Treatment Plant.	3	2	2	2	3	2.35
331	Plant bushes/other vegetation to stop drifting snow in known problem areas.	1	2	1	3	1	1.6
332	Protect Structure with Barrier at Creek Road Bridge.	3	2	1	3	1	2
333	Retrofit critical public facilities with safe rooms.	3	2	2	3	3	2.5
334	The municipal FPA to work with the Aqua Pickering Water Treatment facility owner/operator to protect the facility to at least the 0.2% chance flood level.	3	2	2	3	3	2.5
335	The municipal FPA to work with the Valley Forge Sewer Authority facility owner/operator to protect the facility to at least the 0.2% chance flood level.	3	2	2	3	3	2.5
336	Work with power company to protect Schuylkill - Valley Forge Road to the 0.2% annual chance flood level.	3	2	2	3	3	2.5

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
337	Work with YMCA management to protect the building to the 0.2% annual chance flood level.	3	2	2	3	2	2.35
338	Investigate stormwater management options and identify mitigati Coatesville Boroughon or structural projects to reduce vulnerability to stormwater flooding incidents throughout South.	3	2	1	3	2	2.15
339	Protect the Coatesville Sewer Authority from dam failure and to the 0.2% annual chance flood level.	3	2	2	3	3	2.5
340	The municipal FPA will work with the Scrap Metal Services owner/operator to protect the facility to the 0.2% annual chance level.	3	2	2	2	2	2.2
341	Construct larger culvert at Bealor Road.	3	2	1	3	3	2.3
342	Determine the best action to prevent downhill flooding on Coventryville Rd & Harmonyville Road, close to North Cov. Border.	3	2	1	3	2	2.15
343	Install flood water collection boxes and piping on Schoolhouse Road and Porter's Mill Road.	3	2	1	3	2	2.15
344	Purchase and install a backup generator for the Woodridge Sewer Plant at 190 Ridgeview Drive.	3	3	1	3	3	2.6
345	Work with power company to protect South Coventry - Porters Mill Road Electrical Substation to the 0.2% annual chance flood level.	3	2	2	3	3	2.5
346	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Coventryville Historic District and Coventryville Historic District (1975)- HAD.	3	2	2	3	1	2.2

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
347	Protect the Spring City Sewer Plan from the vulnerably to dam failure and to the 0.2% annual chance flood level.	3	2	2	3	3	2.5
348	The municipal FPA will work with the Hydromotion owner/operator to protect the facility from the vulnerabilities of dam failure.	3	2	2	2	2	2.2
349	Work with management of major businesses to protect the buildings from the vulnerably to dam failure and to the 0.2% annual chance flood level.	3	2	2	3	3	2.5
350	Work with the Textile Mill owner to determine what flood protection measures can be taken to protect the facility from the vulnerabilities from dam failure.	3	2	2	2	2	2.2
351	Install gates to be closed during flood incidents and signage at Rt 926 and Creek Road.	3	2	1	3	2	2.15
352	Install gates to be closed during flood incidents and signage at Rt 926 and S. Westtown Rd.	3	2	1	3	2	2.15
353	Install gates to be closed during flood incidents and signage at Rt 926 and Westtown-Thornton Rd.	3	2	1	3	2	2.15
354	Install gates to be closed during flood incidents and signage at Westtown- Thornton Rd south of Railroad Bridge.	3	2	1	3	2	2.15
355	Install gates to be closed during flood incidents and signage at Westtown-Thornton Rd north of Railroad Bridge.	3	2	1	3	2	2.15
356	Work with PennDOT to conduct an assessment of flood-prone areas along roadway Rt 926 from Rt 202 to Cheyney Rd.	1	3	1	3	2	2.05
357	Work with power company to protect Thornbury - Westtown Road Electrical Substation to the 0.2% annual chance flood level and from the vulnerabilities to dam failure.	3	2	2	3	3	2.5

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
358	Clogged inverts throughout the township causing flooding.	3	2	1	3	3	2.3
359	Improve drainage to reduce flooding on Hadwick Road and Upper Weedly Road.	3	2	1	3	2	2.15
360	Improve drainage to reduce flooding on Wills Lane, Woodcrest Drive, and Saunders Drive.	3	2	1	3	2	2.15
361	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Cedar Hollow Industrial Track: Bridge, County Bridge No. 171, Great Valley Mill, Jerman, Thomas, Property, and historic structure on SR 7015.	3	2	2	3	2	2.35
362	Acquisition/elevation of the structure located at 2 Kiloran Wynd.	3	1	1	3	1	1.7
363	Acquisition/elevation of the structure located at 80 Saint Andrews Ln.	3	1	1	3	1	1.7
364	Protect Larkins Bridge with barrier.	3	2	1	3	2	2.15
365	Protect structure with barrier on Dorothy Lane.	3	2	1	3	1	2
366	Protect structure with barrier on Font Road.	3	2	1	3	1	2
367	Protect structure with barrier on Lyndell Road.	3	2	1	3	1	2
368	Protect structure with barrier on Moore Road and Turnstone Way.	3	2	1	3	1	2
369	Protect structure with barrier on St Andrews Lane.	3	2	1	3	1	2
370	Raise Fellowship Road roadway at Red Bone Road.	3	2	1	3	2	2.15
371	Stormwater culvert and basin re-sizing on Krauser Rd.	3	2	1	3	3	2.3
372	Assess and determine the best action to protect Wagontown Road near the West Branch of the Brandywine Creek, and implement the action..	2	3	3	3	2	2.65

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
373	Assess drainage into Sucker Run near South Park Avenue and PA-372 to identify the best action to prevent flooding during heavy rainfall events, and implement the action.	2	3	1	3	2	2.25
374	Complete stormwater improvements and upgrades to address issues identified in 2009 study.	3	2	3	3	2	2.55
375	Develop and deploy a dam failure alert system to automatically notify the affected area.	2	2	1	2	3	1.95
376	Develop plan to address stormwater issues identified in 2009 study.	3	2	2	3	2	2.35
377	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from vulnerabilities to dam failure: County Bridge No. 101 and Scott Farm Property.	3	2	2	3	2	2.35
378	Protect Glenmoore FC Fire Station from a potential dam failure.	3	2	2	2	3	2.35
379	The municipal FPA to work with the Verizon Glenmoore ESS Bldg. facility owner/operator to protect the facility from the vulnerabilities to dam failure.	3	2	2	2	3	2.35
380	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to dam failure: Glenmoore Historic District and Steels Bridge.	3	2	2	3	1	2.2
381	Complete Barneston Dam Rehabilitation Project.	3	2	2	2	3	2.35
382	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Hockley Mill Farm, Knauer Patent Thematic District, North Warwick Historic &	3	2	1	3	1	2

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
	Archaeological District (HDA), North Warwick HDA, and historic structure located on SR 7015.						
383	Acquire and install back-up generator at Wastewater Treatment Plant.	3	3	1	3	3	2.6
384	Improve drainage on Broad Run Road between Beacon Hill.	2	2	2	2	3	2.15
385	Install 4 gates to be closed during flood incidents and signage at Downingtown Pike between Harmony Hill Rd and Skelp Level Rd.	3	2	2	2	2	2.2
386	Protect the Broad Run Sewage Treatment Plant from dam failure and to the 0.2% annual chance flood level.	3	2	2	3	3	2.5
387	Work with the management of Ram-t Construction Specialist to protect the buildings from dam failure.	3	2	2	2	2	2.2
388	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level and from the vulnerabilities to flooding: Derbydown Homestead, Northbrook Historic District, Pennsylvania Railroad: Morrisville Lien: Viaduct.	3	2	2	3	3	2.5
389	Work with the Grow, James, House property owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	3	2	2	3	1	2.2
390	Provide a generator-capable facility, likely Wagontown Fire Department, as a safe space for residents experiencing decreasing home temperatures as a result of a prolonged power outage. Develop emergency food source and sleeping capabilities.	3	3	3	3	3	3
391	Eliminate hyrdaulic bottnecks that are causing flooding along Goose Creek.	3	2	1	3	2	2.15

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
392	The municipal FPA to work with the National Foam facility owner/operator to protect the facility to at least the 0.2% chance flood level.	3	2	2	3	1	2.2
393	Work with the Ross Fording Road Bridge property owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	3	2	2	3	2	2.35
394	Improve culvert at 103 Oak Lane.	3	2	1	3	3	2.3
395	Install 3 gates to be closed during flood incidents and signage at East Chestnut and Montgomery.	3	2	1	3	2	2.15
396	The municipal FPA to work with the A. Duie Plye Bolmar Street Warehouse facility owner/operator to protect the facility to at least the 0.2% chance flood level.	3	2	2	3	1	2.2
397	The municipal FPA to work with the A. Duie Plye PB II Warehouse facility owner/operator to protect the facility to at least the 0.2% chance flood level.	3	2	2	3	1	2.2
398	The municipal FPA to work with the A. Duie Pyle West Chester Truck Terminal facility owner/operator to protect the facility to at least the 0.2% chance flood level.	3	2	2	3	2	2.35
399	The municipal FPA to work with the Wire and Cable Specialties facility owner/operator to protect the facility to at least the 0.2% chance flood level.	3	2	2	3	1	2.2
400	Work with the Greystone Hall property owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	3	2	2	3	1	2.2
401	Assess and determine the best actions to prevent flooding on bridges along Rt 82 from Unionville to Coatesville.	1	3	1	3	2	2.05
402	Complete PennDOT bridge repair for failing bridge in the township.	3	1	3	3	3	2.4

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
403	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: House at Springdell, Pennock, Martha House & Industrial Site, and Speakman No.1 Covered Bridge.	3	2	2	3	2	2.35
404	Coordinate with Pennsylvania Department of Transportation (PennDOT) with stormwater management, addressing flooding and washout problems along state-owned roads such as Route 401 and Chestnut Tree Road.	3	2	2	3	2	2.35
405	Implement strategies identified in Pipeline Emergency Annex is Township Emergency Operations Plan, including annual trainings for local emergency responders and pipelines operations and the development of community awareness programs.	3	2	1	2	2	2
406	Work with the Isabella Furnace owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	3	2	2	3	1	2.2
407	Install gates to be closed during flood incidents and signage at Fremont Road between Willow Road and King Pen Road.	3	2	1	3	2	2.15
408	Install gates to be closed during flood incidents and signage at Park Road between Veteran's Drive and Sand Hill Road.	3	2	1	3	2	2.15
409	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Anselma Mill District-HDA, Clinger- Moses Mill Complex, Lightfoot Mill, and Vitale House.	3	2	2	3	1	2.2
410	Replace undersized culverts in the Township to address flooding and road damage.	3	2	1	3	3	2.3

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
411	Backup Generators (2) Acquisition and Installation at Matthews Meadows Sewer Plant.	3	3	1	3	3	2.6
412	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood level: Halls Covered Bridge, Tyson's Bridge, and historic structure on Kimberton Road.	3	2	2	3	2	2.35
413	Develop and deliver a Township Open House for the public to receive resources and information on erosion hazards in the township.	2	2	1	3	1	1.8
414	Elevation/acquisition of structure located at 116 N. Locust Lane.	3	1	1	3	1	1.7
415	Elevation/acquisition of structure located at 117 N. Locust Lane.	3	1	1	3	1	1.7
416	Elevation/acquisition of structure located at 117 Valley Road.	3	1	1	3	1	1.7
417	Elevation/acquisition of structure located at 118 Valley Road.	3	1	1	3	1	1.7
418	Elevation/acquisition of structure located at 120 Valley Road.	3	1	1	3	1	1.7
419	Elevation/Acquisition of structure located at 510 Winding Way.	3	1	1	3	1	1.7
420	Elevation/acquisition of structure located at 512 Winding Way.	3	1	1	3	1	1.7
421	Elevation/acquisition of structure located at 513 Winding Way.	3	1	1	3	1	1.7
422	Remove silt/clean Valley Creek bed.	2	2	1	3	2	1.95
423	The municipal FPA to work with the Verizon Exton ESS Bldg. facility owner/operator to protect the facility to at least the 0.2% chance flood level.	3	2	2	3	3	2.5
424	Work with power company to protect West Whiteland - S Whitford Road Electrical Substation to the 0.2% annual chance flood event.	3	2	2	3	3	2.5
425	Work with the property owners of the following facilities to determine what flood protection measures can be taken to protect them to the 0.2% annual chance flood	3	2	2	3	1	2.2

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
	level: Colebrook Manor, Exton Hotel, Thomas, John Roberts, Tennant Farmstead, Turnpike Station House, Whitford Station House, and William's Deluxe Cabins.						
426	Conduct a wildlands/forestry survey of township-owned forested areas, to determine need for strategies for mitigating invasive species risks.	2	2	1	3	1	1.8
427	Encourage regular offerings of the American Red Cross Citizen's Disaster Course and other relevant classes.	2	2	3	3	1	2.2
428	Enhance public outreach to residents in areas subject to flooding to inform them of annual grant opportunities; this may include distributing periodic articles and including handouts in the annual newsletter.	1	3	1	3	1	1.9
429	Post flyers and other readily available informational materials at municipal hall or distribute at regular civic meetings.	1	3	3	3	1	2.3
430	Protect critical infrastructures (Schools, daycare, apartment buildings, and nursing home) on Rt. 202 around Skiles Blvd from HAZMAT transportation accidents.	3	2	2	3	3	2.5
431	Protect the following properties from a potential pipeline incident: Pipeline - Avonlea and Overhill neighborhoods, Sts. Simon and Jude Church and School (8 Cavanaugh Ct West Chester, PA 19382) . Advent Lutheran Church at Green Lane on 352, Chesterfield Condominiums at Rt. 3 and 352.	3	2	2	3	3	2.5
432	Provide general hazard risk preparedness and mitigation information in regular newsletters and mailings.	1	3	3	3	1	2.3
433	Work with PennDOT to conduct an assessment to improve the design of Route 202 at 926 intersection and High Street/202 merge.	2	2	1	3	3	2.1

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
434	Work with the County Bridge No. 148 owner to determine what flood protection measures can be taken to protect it to the 0.2% annual chance flood level.	2	2	1	3	3	2.1
435	Enhance public outreach and education to residents, Homeowners Associations (HOAs) and businesses in areas subject to pipeline hazards. Promote "Call Before You Dig" programs.	1	3	1	3	1	1.9
436	Develop cyber security awareness training and require all municipal staff to complete it on an annual basis.	2	3	1	1	3	2.1
437	Evaluate opportunities for stormwater management infrastructure to reduce the risks of localized flooding.	3	2	2	2	2	2.2
438	Evaluate opportunities for traffic calming measures along roads and intersections that have higher incident risk.	3	2	2	2	2	2.2
439	Create a Capital Improvements Plan.	3	3	3	3	3	3
440	Enforce all executed stormwater management operation and maintenance agreements to ensure all stormwater management facilities are functioning as designed.	3	2	1	3	2	2.15
441	Consider land use regulations to maintain appropriate setbacks from pipelines for new construction and to address excavation and grading near pipeline right-of-ways. Require developers or contractors to coordinate with pipeline operators before construction near pipelines.	3	3	1	3	3	2.6

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
442	Develop and maintain a pipeline emergency response plan that integrates with the Township Emergency Operations Plan (EOP), local fire departments and Emergency Management Services, and County and state emergency management agencies.	3	2	1	3	3	2.3
443	Consider mutual aid agreements with neighboring municipalities and pipeline operators.	3	2	1	3	3	2.3
444	Maintain riparian buffers within the Township-owned open spaces to slow runoff and filter sedimentation.	3	2	1	3	2	2.15
445	Support and implement stream restoration projects that aim to restore natural floodplains to absorb excess water.	3	2	1	3	2	2.15
446	Support reforestation projects and tree planting initiatives to reduce runoff volumes	3	2	1	3	2	2.15
447	Complete feasibility study of drainage improvements at the intersection of Industrial Boulevard and Jacqueline Drive, including integrating solutions with ongoing project at Jacqueline Drive.	3	2	3	3	2	2.55
448	Complete feasibility study of drainage improvements throughout the contributory drainage basin, such as new storm sewer infrastructure rate control structures or in line storage, along Bryan Avenue.	3	2	3	3	2	2.55
449	Complete feasibility study of drainage improvements throughout the contributory drainage basin, such as new storm sewer infrastructure rate control structures, in line storage, concrete swale removal and replacement with bioinfiltration swale, along Chetwynd Road.	3	2	3	3	2	2.55

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
450	Elevation/Acquisition of the structure located at 1 Eisenhower Dr.	3	1	1	3	1	1.7
451	Elevation/Acquisition of the structure located at 116 Davis Rd.	3	1	1	3	1	1.7
452	Increase Culvert Size on Hillview Rd between Fox Chase and Bar Rd.	3	2	1	3	3	2.3
453	Increase drainage basin size at Rustmont Homeowners Association.	3	2	1	3	2	2.15
454	Increase drainage basin size behind Malvern Fire Company.	3	2	1	3	2	2.15
455	Increase drainage basin size of the Family Life Basin.	3	2	1	3	2	2.15
456	Increase size of drainage pipe crossing under road at Paoli Pike west of Rustin Ln and Devon Rd.	3	2	1	3	2	2.15
457	Install gates to be closed during flood incidents and signage on Jaffery Rd over Crum Creek.	3	2	1	3	2	2.15
458	Install gates to be closed during flood incidents and signage on Whitehorse Rd between Rabbit Run Rd and Grubbs Mill Rd.	3	2	1	3	2	2.15
459	Installation of a storm water management system in Ronnie Park section of the Township to mitigate surface water runoff impacts during severe weather events that have resulted in past flooding of the neighborhood; and prevent damage to property, housing, and infrastructure in the project area.	3	2	1	3	3	2.3
460	Replacement of existing double-barrel culvert with a reinforced concrete single-cell box culvert to address 100 year storm events and mitigate flooding along Forest Lane at the crossing of Crum Creek.	3	2	3	3	2	2.55

Table 6.4-2 2026 Mitigation Action Plan Prioritization

#	MITIGATION ACTION	MULTI-OBJECTIVE MITIGATION ACTION PRIORITIZATION CRITERIA					
		LOW = 0.0-1.8		MEDIUM = 1.9-2.4		HIGH = 2.5-3.0	
		EFFECTIVENESS	EFFICIENCY	MULTI-HAZARD MITIGATION	ADDRESSES HIGH RISK HAZARD	ADDRESSES COMMUNICATION W/ CRITICAL INFRASTRUCTURE	TOTAL SCORE
461	Replacement of existing double-barrel culvert with a reinforced concrete single-cell box culvert to address 100 year storm events and mitigate flooding along Spring Road at the crossing.	3	2	3	3	2	2.55
462	Replacement of existing double-barrel culvert with a reinforced concrete single-cell box culvert to address 50 year storm events and mitigate flooding along Hillview Road at the crossing of Crum Creek.	3	2	3	3	2	2.55
463	Strengthen Bridge/Re- engineer bridge approaches at Jaffery Rd over Crum Creek.	3	2	1	3	2	2.15
464	Strengthen Bridge/Re- engineer bridge approaches at Whitehorse Rd between Davis Rd and Fox Chase Rd.	3	2	1	3	2	2.15
465	Implement procedural and structural upgrades to protect essential assets and building systems, ensuring the continual operation of critical electrical and control components during and after hazard events and impacts.	3	3	3	3	3	3

6.5. Mitigation Strategy Equity Review

To ensure that mitigation actions and strategies in this plan serve the whole community, a robust equity review was conducted. This review identified ways that the plan can best serve socially vulnerable groups and underserved populations. Some methods identified include:

- Ensuring that outreach and engagement efforts are conducted in a variety of formats and in all languages relevant to each community participating in the plan. This will help residents who may have limited or no internet or computer access; those with limited or no access to transportation; community members who may have access and functional needs, including people with disabilities and people who may not speak English well or at all; and houseless residents.
- Keeping the needs of all community members at the forefront of mitigation action development. For example, an action such as "Develop brochures to communicate hazard risk to homeowners," could be updated to "Develop outreach and engagement materials in a variety of formats to communicate hazard risks to homeowners, renters, seasonal workers, visitors, and houseless individuals. Formats may include radio, social media, mailing inserts in utility bills, bus stop poster advertisements, and the jurisdiction's website. Make sure to develop all materials and communications in all languages relevant to the community." Making sure that the needs of socially vulnerable groups and underserved populations are met can improve risk reduction outcomes for the entire community.
- Expanding the definition of critical facilities to include facilities which serve vulnerable populations, such as schools, prisons, elder care facilities, hospitals, and homeless shelters. This will help to make sure facilities which serve the most vulnerable community members do not experience a gap in service delivery due to hazard events.
- Communicating early and often with residents in high-hazard areas such as floodplains, subsidence zones, and urban heat islands to empower community members with information needed to make informed decisions about lowering their hazard risk.
- Acknowledging the structural systems in place which have historically impacted, and which continue to impact, marginalized groups and socially vulnerable populations. By tailoring mitigation strategies in a way that acknowledges historical and ongoing systems of oppression, the plan can help to make sure vulnerable residents feel heard and seen. This could include transforming actions like, "Acquire and demolish private residences in floodplains," to "Consult with community members about their needs and limitations regarding community-driven relocation. Prioritize technical and financial assistance to low-income residents, people of color, people with disabilities, older adults, families with children, those living in group quarters, and residents who may not speak English. Residents within floodplains are more likely to belong to underserved groups and socially vulnerable populations, so acknowledging their needs will encourage buy-in to planned community-driven relocation initiatives while supporting more equitable relocation outcomes." Doing so helps to ensure that actions are equitable and spur positive outcomes for affected residents of all backgrounds, needs, and demographic.

7. PLAN MAINTENANCE

7.1. Update Process Summary

Once this plan has received approval from PEMA and FEMA, the plan will be adopted by the Chester County Board of Commissioners and all participating jurisdictions. This HMP Update is intended to be a 'living document.' Plan adoption is not considered the final step in the planning process, but rather as a first step to 'realization.' The plan monitoring and maintenance schedule is a cycle of events that involve periodic review, adjustments, and improvement. Plan monitoring also provides an opportunity to recognize other planning initiatives within the county that may benefit from the incorporation of risk and/or mitigation objectives detailed in this HMP. This section establishes a method to monitor how the plan will be evaluated and maintained in the future.

Monitoring, evaluating, and updating this plan is critical to maintaining its value and success in Chester County's hazard mitigation efforts. Ensuring effective implementation of mitigation activities paves the way for continued momentum in the planning process and gives direction for the future. This section explains who will be responsible for maintenance activities and what those responsibilities entail. It also provides a methodology and schedule of maintenance activities including a description of how the public will be involved on a continued basis. The county and municipalities will continue to put more emphasis on integrating the mitigation goals, objectives, and actions identified in the Mitigation Strategy into the other ongoing planning efforts to ensure implementation and tracking of actions throughout the five-year plan maintenance process.

7.2. Monitoring, Evaluating, and Updating the Plan

Chester County DES is designated to lead plan maintenance processes of monitoring, evaluation, and updating with support and representation from all participating municipalities. Chester County DES will coordinate maintenance efforts, but the input needed for effective periodic evaluations will come from community representatives, local emergency management coordinators and planners, the general public, and other stakeholders, including state agencies. Chester County DES will oversee the progress made on the implementation of action items identified in the 2026 HMP and modify actions, as needed, to reflect changing conditions. Chester County DES will meet with municipalities annually to discuss specific coordination efforts that may be needed with other stakeholders. A Chester County DES Emergency Planning Coordinator will lead the annual reviews.

Chester County DES will lead the effort to integrate mitigation goals, objectives, and actions into the county and regional comprehensive planning efforts. Specifically, Chester County DES will ensure risk assessments and applicable mitigation actions are included in the development of comprehensive planning documents. Chester County DES will review progress of these actions and will identify if there are changes that need to be made to the risk assessment or the mitigation strategy based on information developed during the comprehensive planning process.

Each municipality will designate a community representative to monitor mitigation activities and hazard events within their respective communities. The local Emergency Management Coordinator would be suitable for this role. This individual will be asked to work with Chester County DES to provide updates on applicable mitigation actions and feedback on changing hazard vulnerabilities within their community.

In addition, the community representative will be responsible for reviewing the planning and land use regulatory element of the municipality's capability assessment to identify potential opportunities for continued incorporation of the HMP into local planning mechanisms and will also identify locally generated plans, information, reports, etc. that may be capable of being incorporated into the update of the 2026 HMP.

Chester County DES will oversee the progress made on the implementation of action items at least annually, but also as deemed necessary based on the occurrence of a disaster or another occasion that necessitates the review of the HMP. Evaluation of the 2026 HMP will not only include an investigation of whether mitigation actions were completed, but also an assessment of how effective those actions were in mitigating losses. A review of the qualitative and quantitative benefits (or avoided losses) of mitigation activities will support this assessment. Results of the evaluation will then be compared to the goals and objectives established in the plan and decisions will be made regarding whether actions should be discontinued or modified in any way in light of new developments in the community. Progress will be documented by Chester County DES for use in the next HMP Update.

Upon each HMP evaluation, Chester County DES will consider whether applications should be submitted for existing mitigation grant programs. A decision to apply for funding will be based on appropriate eligibility and financial need requirements. All state and federal mitigation funding provided to the county or local municipalities will be reported in subsequent plan updates.

The 2026 HMP will be updated by the FEMA approved five-year anniversary date, as required by the Disaster Mitigation Act of 2000, or following a disaster event. This update will include working with both PEMA and FEMA on the development of a Scope of Work. Future plan updates will account for any new hazard vulnerabilities, special circumstances, or new information that becomes available. This may include additional data that can make hazard vulnerability analysis more detailed, leading to a better understanding of risk and how to both identify and prioritize mitigation actions. During the five-year review process, the following questions will be considered as criteria for assessing the effectiveness of the Chester County HMP:

- Has the nature or magnitude of hazards affecting the county changed?
- Are there new hazards that have the potential to impact the county?
- Is there updated, or more quantitative, risk assessment data available related to the identified hazards in the plan? Can this data be integrated into the analysis to better assess the vulnerability, and depict the risk, of communities to the hazards?

- Do the identified goals and actions address current and expected conditions?
- Have mitigation actions been implemented or completed?
- Has the implementation of identified mitigation actions resulted in expected outcomes?
- Are current resources adequate to implement the plan?
- Should additional local resources be committed to address identified hazards?
- Are there current or upcoming planning mechanisms or initiatives in which the mitigation strategy should be considered for integration?

Issues that arise during monitoring and evaluation which require changes to the risk assessment, mitigation strategy, and other components of the plan will be incorporated during future updates.

Comprehensive Plans, Capital Improvements Programs, Building Codes, Municipal Floodplain Management Regulations, Emergency Operations Plans, Zoning Ordinances, and other planning mechanisms are identified for incorporation of hazard mitigation actions once the 2026 HMP is adopted. Each of these mechanisms will continue to be used to meet the intent of this Plan, as appropriate. Likewise, as these planning mechanisms are updated, they will be considered for incorporation into the HMP during the annual review process and/or the five-year cycle update.

The county and participating jurisdictions may propose additional mitigation actions for inclusion throughout the five-year cycle but must submit new mitigation actions through Chester County DES, which will request an HMP amendment by contacting the PEMA State Hazard Mitigation Planner. FEMA must officially approve all additions and will amend the HMP by issuing an HMP Amendment Approval letter.

7.3. Continued Public Involvement

As was done during development of this 2026 HMP, Chester County DES plans to involve the public during annual review periods by providing an opportunity to review and submit feedback. The public will have access to the current HMP through their local municipal office or on the Chester County government website. Information on upcoming events related to the HMP or solicitation for comments, such as the annual plan review, will be announced via newsletters, newspapers, mailings, and the county website. The public will be informed of meetings and will be encouraged to submit comments on the HMP at any time. Chester County DES will incorporate all relevant comments during the next update of the hazard mitigation plan.

8. PLAN ADOPTION

The Plan was submitted to the Pennsylvania State Hazard Mitigation Planner on February 27, 2026. The Plan was forwarded to FEMA for final review and approval-pending-adoption on June 17, 2026. FEMA granted approval-pending-adoption on June 18, 2026. Full approval from FEMA was received after each jurisdiction adopted the plan.

This section of the plan includes copies of the local adoption resolutions passed by Chester County and its municipal governments as well as a completed Local Mitigation Plan Review Crosswalk. Adoption resolution templates are provided to assist the county and municipal governments with recommended language for future adoption of the HMP.

Chester County Hazard Mitigation Plan

County Adoption Resolution

Resolution No. _____

Chester County, Pennsylvania

WHEREAS, the municipalities of Chester County, Pennsylvania, are most vulnerable to natural and human-made hazards which may result in loss of life and property, economic hardship, and threats to public health and safety, and

WHEREAS, Section 322 of the Disaster Mitigation Act of 2000 (DMA 2000) requires state and local governments to develop and submit for approval to the President a mitigation plan that outlines processes for identifying their respective natural hazards, risks, and vulnerabilities, and

WHEREAS, Chester County acknowledges the requirement of Section 322 of DMA 2000 to have an approved Hazard Mitigation Plan as a prerequisite to receiving post-disaster Hazard Mitigation Grant Program funds, and

WHEREAS, the Chester County Hazard Mitigation Plan has been developed by the Chester County Department of Emergency Services, in cooperation with other County departments, local municipal officials, and the citizens of Chester County, and

WHEREAS, a public involvement process consistent with the requirements of DMA 2000 was conducted to develop the Chester County Hazard Mitigation Plan, and

WHEREAS, the Chester County Hazard Mitigation Plan recommends mitigation activities that will reduce losses to life and property affected by both natural and human-made hazards that face the county and its municipal governments,

NOW THEREFORE BE IT RESOLVED by the governing body for Chester County that:

- The Chester County Hazard Mitigation Plan is hereby adopted as the official Hazard Mitigation Plan of the county, and
- The respective officials and agencies identified in the implementation strategy of the Chester County Hazard Mitigation Plan are hereby directed to implement the recommended activities assigned to them.

ADOPTED, this _____ day of _____, 2026

ATTEST:

_____

CHESTER COUNTY COMMISSIONERS

By _____

By _____

By _____

Chester County Hazard Mitigation Plan

Municipal Adoption Resolution

Resolution No. _____

<Borough/Township of Municipality Name>, Chester County, Pennsylvania

WHEREAS, the *<Borough/Township of Municipality Name>*, Chester County, Pennsylvania, is most vulnerable to natural and human-made hazards which may result in loss of life and property, economic hardship, and threats to public health and safety, and

WHEREAS, Section 322 of the Disaster Mitigation Act of 2000 (DMA 2000) requires state and local governments to develop and submit for approval to the President a mitigation plan that outlines processes for identifying their respective natural hazards, risks, and vulnerabilities, and

WHEREAS, the *<Borough/Township of Municipality Name>* acknowledges the requirement of Section 322 of DMA 2000 to have an approved Hazard Mitigation Plan as a prerequisite to receiving post-disaster Hazard Mitigation Grant Program funds, and

WHEREAS, the Chester County Hazard Mitigation Plan has been developed by the Chester County Department of Emergency Services, in cooperation with other County departments, and officials and citizens of *<Borough/Township of Municipality Name>*, and

WHEREAS, a public involvement process consistent with the requirements of DMA 2000 was conducted to develop the Chester County Hazard Mitigation Plan, and

WHEREAS, the Chester County Hazard Mitigation Plan recommends mitigation activities that will reduce losses to life and property affected by both natural and human-made hazards that face the county and its municipal governments,

NOW THEREFORE BE IT RESOLVED by the governing body for the *<Borough/Township of Municipality Name>*:

- The Chester County Hazard Mitigation Plan is hereby adopted as the official Hazard Mitigation Plan of the *<Borough/Township>*, and
- The respective officials and agencies identified in the implementation strategy of the Chester County Hazard Mitigation Plan are hereby directed to implement the recommended activities assigned to them.

ADOPTED, this _____ day of _____, 2026

ATTEST: *<BOROUGH/TOWNSHIP OF MUNICIPALITY NAME>*

_____ By _____

By _____

By _____

Chester County Hazard Mitigation Plan

Special District Adoption Resolution

Resolution No. _____

<Special District Name>, Chester County, Pennsylvania

WHEREAS, the *<Special District Name>*, Chester County, Pennsylvania, is most vulnerable to natural and human-made hazards which may result in loss of life and property, economic hardship, and threats to public health and safety, and

WHEREAS, Section 322 of the Disaster Mitigation Act of 2000 (DMA 2000) requires state and local governments to develop and submit for approval to the President a mitigation plan that outlines processes for identifying their respective natural hazards, risks, and vulnerabilities, and

WHEREAS, the *<Special District Name>* acknowledges the requirement of Section 322 of DMA 2000 to have an approved Hazard Mitigation Plan as a prerequisite to receiving post-disaster Hazard Mitigation Grant Program funds, and

WHEREAS, the Chester County Hazard Mitigation Plan has been developed by the Chester County Department of Emergency Services, in cooperation with other County departments, and leaders and citizens within and/or serviced by *<Special District Name>*, and

WHEREAS, a public involvement process consistent with the requirements of DMA 2000 was conducted to develop the Chester County Hazard Mitigation Plan, and

WHEREAS, the Chester County Hazard Mitigation Plan recommends mitigation activities that will reduce losses to life and property affected by both natural and human-made hazards that face the county, its municipal governments, and its special districts,

NOW THEREFORE BE IT RESOLVED by the governing body for the *<Special District Name>*:

- The Chester County Hazard Mitigation Plan is hereby adopted as the official Hazard Mitigation Plan of the *<Special District Name>*, and
- The respective officials and agencies identified in the implementation strategy of the Chester County Hazard Mitigation Plan are hereby directed to implement the recommended activities assigned to them.

ADOPTED, this _____ day of _____, 2026

ATTEST: *<SPECIAL DISTRICT NAME>*

_____ By _____

By _____

By _____

BOROUGH OF WEST CHESTER COUNCIL POLICY: SPECIAL EVENT & SPECIAL EVENT PARKING POLICY

July 309th, 20265, Reiner

1. PURPOSE

To provide consistent standards and methods, as determined by Council, for "Special Event" parking in the Town Center District.

2. POLICY

SPECIAL EVENT: A parade, assembly, athletic event, street fair, art and craft show, carnival, soap box derby, rally, or other special event or activity that occurs in a public place or on a Borough street, sidewalk, alley or other street right-of-way and that obstructs, delays or interferes with the normal flow of pedestrian or vehicular traffic or does not comply with traffic laws and controls, but excluding a block party. The term "special event" shall also include indoor or outdoor concerts, displays, fairs and athletic events occurring on private property and designed to attract large crowds such that the event will interfere with normal traffic flow.

All Special Events that take place within the Town Center District, that require use of the main thoroughfare, will engage a $20 fee per car at all Borough owned garages and surface lots. The fee will begin two hours prior to the start of the event ~~at 8am~~ the day of the event and will end at the time the event ends. For Sunday events, event rates will begin at noon in both garages and lots. This does not include the Open-Air Market, which is not considered a standard Special Event, and is exempt from this requirement.

The Special Event Fee in garages and lots will commence at noon on the day of the Christmas Parade.

Vendors that participate in Special Events will be given one parking pass per vendor for free parking in either the garage or the lots.

Commented [RR1]: Recommendation to remove this item.

Monthly account holders at all garages will be permitted to park during their regular hours with no additional fee but will be required to pay the event fee if they park outside of their allotted garage hours. Garages will be posted with notice at least one month prior to the event.

For events that are not planned by the Borough of West Chester that generate a special event parking fee, fifty percent of the parking garage revenue will be credited back to the Special Event Applicant as a reduction in Borough-related costs. If the 50% of garage revenue exceeds the total cost for the special event no overage will be provided as a monetary contribution.

In order to receive a revenue-sharing cost-reduction, applicants and their events must adhere to the following criteria:

- Special event applicant must be a non-profit (501c3) licensed to operate in West Chester Borough.
- Applicant must demonstrate the benefit) to the Borough and surrounding community.

- Event is open to the public, all ages
- Event increases awareness of West Chester as a visitor destination
- West Chester Borough be given name/logo representation in tandem with organizer/sponsors

This request will be included in the special event application and revenue sharing request will be determined at the time the Special Event Permit Application is reviewed by Council at a public meeting.

Events that take place on Sundays will allow for church parking in neighboring lots with use of a Borough-generated parking pass until a specified time. All vehicles utilizing the lot after the specified time will be required to pay the event fee. Lots will be posted with signage designating the times. Churches will be notified by the Parking Services Department at least one month prior to the event.

3. PROCEDURE

All Special Events within the Town Center will be required to submit a Special Event Application with the Parks and Recreation Department and follow all procedures dictated by that process.

The Director of Parking Services, or designee thereof, shall notify the garage management company of any Special Events that have been approved by Council at least one month before the event takes place. All kiosks and software related to Special Event parking will be updated by the Director or designee at least one month before the event takes place. Signage will be posted in all lots at least 48 hours prior to the event.

4. DOCUMENT CONTROL INFORMATION

Document Name	2025 Council Policy: Special Event Parking Policy
Owner	Ramsey Reiner, Director of Parking Services
Version Number	Version 54
Proposal Date to Council	~~October 17th, 2025~~August 17, 2026
Approval Date	~~October 18th 2025~~
Approved By	Borough Council
Date of Commencement	~~December~~ Septemeber 1, 2026~~5~~
Date of Last Review	
Date for Next Review	
For Office Use – Keywords for search function	Policy, special event, garage, parking, church

DRAFT

Borough Municipal Lot #3

Parking Permit Lottery Request Form

Contact and Vehicle Information

Name:

Address:

City:

State:

Zip:

Best contact number:

License Plate Number:

Make:

Model:

Color:

Municipal Lot #3 is located on the South East corner of 300 West Gay Street and 50 North New Street. The lot contains 15 spaces that are reserved for permit holders Monday through Friday 8:00 am until 5:00 pm. I understand that all spaces will be allocated on a lottery basis and when approved payment must be made to the Borough of West Chester on or before July 29th or the spaces will be reallocated.

I am requesting authorization to an annual permit for the fee of $900.00.

Print:

Sign:

Date:

This form may be emailed to parkingdepartment@west-chester.com or mailed to our office located at 401 East Gay Street, West Chester, Pa 19380. Applications must be received at the Borough by July 10th. Any questions please call us at (610) 696-4521.

BOROUGH OF WEST CHESTER PARKING DEPARTMENT POLICY: NEW STREET LOT (Lot #3) PERMITS

July 30th, 2026, Reiner

1. PURPOSE

To provide consistent standards and methods for parking permits in the New Street Lot located at the corner of New Street and Gay Street. The lot contains 15 spaces available for permitted parking between the hours of 8am-5pm Monday through Friday.

2. POLICY

The Borough of West Chester Parking Services Department will provide fifteen (15) monthly parking permits through the online permitting system to be sold on a first-come, first-served basis. Spaces will be numbered and assigned to specific permits. Each permitholder may register up to 2 vehicles but may only park one vehicle in their assigned space at a time. The rate will be consistent with the fee for daily parking at Borough Garages per the Borough approved fee schedule. Two permits maximum per parcel will be sold. Permits will only be sold to individuals and managed by the individual themselves, not by a business. A permit is valid for only one vehicle. Once a permit is cancelled, permits will not be prorated and no refund for the remainder of the month will be given. Permits will be sold to the next individual that applies and not saved for the property that has cancelled their permit.

Vehicles may not be warehoused in the lot and must be kept registered, insured and drivable at all times. Vehicles that are considered abandoned will be towed at the owner's expense. If a vehicle is abandoned, it will be ticketed and the owner will be notified and given 48 hours' notice that it will be towed and the permit subsequently cancelled.

3. PROCEDURE

Beginning September 1, 2026, permits will be programmed into the online parking permit system and available for applicants.

Applicants must provide their driver's license, registration, a credit card any other required information through the online system. Permits will be renewed monthly and must be paid for before the 1st of the month or the permit will be cancelled. Timely payment for each month must be made.

Permits applications will be reviewed by the Parking Services Department for compliance with all requirements.

Once approved, the applicant will receive an email notification that their permit has been approved. The license plate of the vehicle will serve as the permit.

4. DOCUMENT CONTROL INFORMATION

Document Name	BOROUGH OF WEST CHESTER PARKING DEPARTMENT POLICY: NEW ST LOT

Owner	Ramsey Reiner, Director of Parking Services
Version Number	Version 1
Approval Date	
Approved By	
Date of Commencement	
Date of Last Review	
Date for Next Review	
For Office Use – Keywords for search function	Policy, permits, lots, parking

DRAFT

COUNTY OF CHESTER
Agreement for Contracted Services

THIS AGREEMENT is made and entered into this 21st day of August, 2024 and between the County of Chester (hereinafter referred to as "County) and The Borough of West Chester 401 East Gay Street West Chester PA 19380 (hereinafter referred to as "Borough").

WITNESS

County proposes to use services of Borough and Borough agrees to provide such services under and subject to the following terms and conditions:

1.0 Scope of Services:

1.1 Borough shall provide services to the County of Chester as an independent Contractor and not as a County employee for any purpose. Borough will diligently and conscientiously devote its time and attention and best efforts to render services as indicated.

1.2 Borough agrees to lease seventy-nine (79) parking spaces within the Hannum Avenue Parking Lot (Lot #6) to the County for use by County employees between the hours of 8:00 am and 5:00 pm, Monday through Friday, for the term beginning November l, 2024 and ending on October 31, 2026.

1.3 County employees authorized to park in the Lot will provide their vehicle information to the Parking Services Department, via a designated County liaison, to utilize a virtual parking permit system. Each employee may provide a maximum of two (2) vehicles per permit and may only utilize one space per employee permit at a time.

1.4 It is understood by the County that Borough Council may authorize up to thirty (30) neighborhood residents to park in the lot.

1.5 Borough will patrol the Lot to ensure only vehicles with County or Borough authorization are parked there. Unauthorized vehicles will be ticketed by the Borough.

1.6 Borough will perform major maintenance of the Lot such as pavement repair. County is responsible for cleaning, removal of weeds and clearing snow. Borough will ensure the Lot is cleared of unauthorized vehicles, so County is able to clean, remove weeds and clear snow.

2.0 Method of Payment:

2.1 County agrees to compensate Borough at a rate of $95.00 per space/per month for the period November l, 2024 through and including October 31, 2026. The total cost of this agreement is $180,120.

2.2 Payment shall be made in two (2) annual installments as follows:

July 1, 2025 $90,060.00

July 1, 2026 $90,060.00

2.3 Borough acknowledges that Internal Revenue Service (IRS) regulations may require that County withhold Social Security, Medicare or other taxes from payments due Borough. Such withholding shall not constitute a default under this Agreement. Borough shall not be entitled to receive any "employee" benefits from County including, for example, pension or health insurance.

3.0 Term and Termination:

3.1 The term of this Agreement shall begin November 1, 2024 and continue through and including October 31, 2026. The County reserves the sole right to extend this Agreement based upon the availability of funds and as deemed proper and/or necessary in the best interest of the County.

3.2 Extension of this Agreement shall be transmitted by Amendment to this Agreement with signature of an authorized official of the Borough and signature of County.

3.3 The County may terminate this Agreement at any time, upon 45 days written notice, In addition, the Borough may terminate this Agreement at any time, upon 60 days written notice, In the event of termination, County shall pay Borough for the rental amount owed by the County pro-rated on a monthly basis up to the effective date of the termination.

4.0 Notices:

For the County:	**For the Borough:**
George Martynick, Director of Facilities County of Chester 313 W Market St, Suite 5402 West Chester, PA 19380	Sean Metrick, Borough Manager Borough of West Chester 401 E. Gay Street West Chester, PA 19380

5.0 Contract Modification and Amendment: Any alteration, variation, modification or waiver of any provision of the Agreement shall be valid only when reduced to writing, duly acknowledged by the parties hereto by execution of an Amendment, which shall be attached to and become part of the Agreement.

6.0 Fiscal Records: Borough shall, for a period of four (4) years from termination or cancellation of this Agreement, maintain and preserve and make available accounting ledgers, journals, invoices, receipts, canceled checks and individual billings and all other documents which provide evidence reflecting all direct or indirect costs and expenses of whatever nature claimed to have been incurred in its performance of the services required by this Agreement and in accordance with the fiscal regulations and management guidelines of the Department and as interpreted by the County.

7.0 Hold Harmless: It is understood that the Borough is an independent Borough in respect to its performance under this Agreement and shall assume all risks and responsibilities for losses of every description in connection with the service, which can be attributed either directly or indirectly to the Borough. The Borough agrees to indemnify, defend, and hold harmless the County, its agents and employees for or on account of any damages or loss, including the cost of litigation or legal counsel resulting directly or indirectly from the actions of the Borough in fulfilling the terms of this Agreement.

8.0 Prohibition Against Assignment: Borough shall not assign, subcontract, or other transfer any portion of services covered by this Agreement without prior written consent of the County. In the event prior written notification is received an approved by the County for the subcontracting of services by someone other than the Borough, the Borough agrees to accept full responsibility for the performance of all terms of this Agreement regardless of any other approved subcontracting agreements.

9.0 Independent Contractor: Borough certifies that it is totally independent of any business or individual that will perform work for the County regarding this Agreement. Borough will not receive any remuneration of commission of any kind from any such business or individual as a result of the Borough's performance under this Agreement. Borough, its employees and agents are independent contractors under this Agreement and are not deemed employees of the County in any manner whatsoever.

10.0 Public Official and Employees Ethics Act: Borough certifies that to the best of its knowledge, no County official or employee has a vested interest, financial or otherwise in this Agreement. Borough agrees to comply in all respects with the Public Official and Employees Ethics Act (65 P.S. Section 1101 et seq.).

11.0 Conflict of Interest: Borough will inform the County in writing immediately if any potential conflict of interest mises during the performance of the Agreement. Conflict of interest may constitute grounds for termination of any Agreement with the Borough following notification by County to Borough where same is not corrected by Borough within the time period established by County in such notice.

12.0 Compliance with Law: Borough shall comply with all federal, state and local laws and regulations applicable to its performance.

13.0 Confidentiality:

13.1 Borough agrees that all information disclosed by the County to Borough shall be held confidence and used only in performance under this Agreement Borough shall exercise the same standard of care to protect such information as used to protect its own proprietary or trade secret information.

13.2 Borough agrees that all individuals diagnosed, counseled, treated, or placed, or receiving any services defmed in this Agreement, or fonner recipients of such services, shall be secure in the confidentiality of their names, identities, records, and the general informationcontained in their files except as disclosure is permitted by applicable laws and regulations and policies of the County, or by informed written consent signed by the individual or his/her legal representative, as required, or by court order.

13.3 Borough shall, to ensure confidentiality of individual information, make provisions for security of records and protection of individual privacy as required by applicable laws or regulations. Provider shall require that all subcontractors adhere to the applicable confidentiality laws and regulations and policies of the County.

14.0 Default/Resolution:

14.1 If the Borough or County defaults in its performance under the Terms and Conditions of this Agreement, the defaulting party shall be promptly notified in writing. If defaulting party fails to resolve a default within fourteen (14) days after notification or if the default requires more than fourteen (14) days to resolve and the defaulting party fails to begin resolution of the default within fourteen (14) days after notification, this Agreement will be terminated.

14.2 Borough agrees to replace any individual on their project team upon reasonable request of the County. The County has the sole right to accept and reject any individual assigned to this project by Borough.

14.3 The County reserves the right to suspend, revise or withhold funds in whole or part for reasons of noncompliance with the terms and provisions of the Agreement.

15.0 Right-To-Know Law: A). The Pennsylvania Right-to-Know Law, 65 P.S. 67, 101-3104, applies to this Contract. B). Unless the Borough provides the County, in writing, with the name and contact information of another person, the agency shall notify the Borough using the Borough information provided by the Borough herein if the agency needs the Borough's assistance in any matter arising out of the Right to Know Law ("RTKL"). The Borough shall notify the agency in writing of any change in the name or the contact information within a reasonable time prior to the change. C). Upon notification from the County or the Right to Know Requestor that the County requires the Borough's assistance in responding to a RTKL request for records in the Borough's possession, the Borough shall provide the County, within ten (10) calendar days after receipt of such notification, access to, and copies of, any document or information in the Borough's possession which arises out

of the Contract that the County requests ("Requested Information") to comply with the RTKL. If the Borough fails to provide the Requested Information within ten (10) calendar days after receipt of such request, the Borough shall indemnify and hold the County harmless for any damages, penalties, detriment or harm that the County may incur as a result of the Borough's failure, including any statutory damages assessed against the County. D). The County's determination as to whether the Requested Information is a public record is dispositive of the question as between the parties. Borough agrees not to challenge the County's decision to deem the Requested Information a Public Record. If the Borough considers the Requested Information to include a request for a Trade Secret or Confidential Proprietary Information, as those terms are defined by the RTKL, the Borough will immediately notify the County, and will provide a written statement signed by a representative of the Borough explaining why the requested material is exempt from public disclosure under the RTKL within seven (7) calendar days of receiving the request. If, upon review of the Borough's written statement, the County still decides to provide the Requested Information, Borough will not challenge or in any way hold the County liable for such a

decision. E). The County will not reimburse the Borough for any costs associated with complying with this provision. F). Borough agrees to abide by any decision to release a record to the public made by the Office of Open Records, or by the Pennsylvania Courts. The Borough agrees to waive all rights or remedies that may be available to it as a result of the County's disclosure of Requested Information pursuant to the RTKL. Borough's duties relating to the RTKL are continuing duties that survive the expiration of this Contract and shall continue as long as the Borough has Requested Information in its possession.

16.0 Laws of the Commonwealth: This Agreement shall be governed by the laws of the Commonwealth of Pennsylvania. Jurisdiction and venue shall lie within Chester County and the Commonwealth of Pennsylvania. The Borough has the responsibility and obligation to become aware of and comply with all applicable statutes, rules and regulations which affect this transaction in any regard.

IN WITNESS WHEREOF, the parties have entered their duly authorized signatures below on the date first set forth above.

BOROUGH:

Signature of Authorized Official

BOROUGH: WITNESS:

COUNTY OF CHESTER: WITNESS:

Chair, County Commissioners

Commissioner

Commissioner

A Dedicated EMS Tax for West Chester Borough

Stable, transparent funding for Good Fellowship Ambulance



Policy Discussion | Revised August 2026

Why a stand-alone EMS tax makes sense

- EMS is a core public-safety service with recurring staffing, medical, insurance, fleet, and 24/7 readiness costs.
- A dedicated levy prevents EMS from competing every year with police, roads, parks, debt service, salaries, and other General Fund priorities.
- Pennsylvania Borough Code expressly permits a dedicated ambulance/rescue/emergency-services real-estate tax of up to 0.5 mill.
- Good Fellowship sought $298,214 from West Chester for 2026; Borough minutes identify West Chester as the largest consumer of its services.
- A restricted EMS fund creates transparency and allows planned accumulation for future ambulance, equipment, and service-cost increases.

Sources: PA Borough Code, 8 Pa.C.S. §1302; West Chester Borough Council Minutes, Oct. 14, 2025.

How Good Fellowship calculates each municipality's funding share

The municipal contribution is a shared-cost formula - not the full cost of operating EMS.

50% Population + 50% Dispatched Call Volume

Each municipality pays a weighted share of Good Fellowship's requested municipal funding pool.

West Chester - approved 2026 formula

43.10% of BLS/ALS calls

31.73% of service-area population

2,281 dispatched calls and a population of 18,671 produce a 2026 BLS/ALS formula amount of $298,214.73 for West Chester.

What drives West Chester's share

- Population: West Chester represents 31.73% of the BLS/ALS service-area population.
- Usage: West Chester generated 43.10% of dispatched BLS/ALS calls in the 2026 formula.
- Annual need: Good Fellowship first determines the municipal funding pool needed to partially offset its operating deficit.
- Formula: the pool is allocated using the 50/50 population-and-call-volume weighting.

The proposed EMS tax would PARTIALLY fund Good Fellowship - not pay the full cost of EMS.

Good Fellowship continues to rely on insurance reimbursement, subscriptions, donations, grants, partnerships, and other revenue.

Source: Good Fellowship Ambulance, Approved 2026 Municipal Funding formula.

Good Fellowship Ambulance - Approved 2026 Municipal Funding

Good Fellowship Ambulance
APPROVED 2026 Municipal Funding

BLS & ALS

	Calls	%	Population	%		Calls (50%)	Population (50%)	
Birmingham	67	1.27%	1289	2.19%	Birmingham	$ 5,045.26	$ 8,727.90	$ 13,773.15
East Bradford	918	17.35%	10339	17.57%	East Bradford	$ 69,127.55	$ 70,021.29	$ 139,148.84
Newlin	35	0.66%	379	0.64%	Newlin	$ 2,635.58	$ 2,564.87	$ 5,200.45
Thornbury	166	3.14%	2725	4.63%	Thornbury	$ 12,500.19	$ 18,458.48	$ 30,958.67
West Bradford	340	6.42%	6642	11.29%	West Bradford	$ 25,602.80	$ 44,985.35	$ 70,588.15
West Chester	2281	43.10%	18671	31.73%	West Chester	$ 171,764.64	$ 126,450.09	$ 298,214.73
West Goshen	1039	19.63%	13997	23.79%	West Goshen	$ 78,239.13	$ 94,793.88	$ 173,033.02
Westtown	446	8.43%	4799	8.16%	Westtown	$ 33,584.85	$ 32,498.15	$ 66,082.99
	5,292	100%	58,841	100%		$ 398,500.00	$ 398,500.00	$ 797,000.00

BLS & ALS			
Calls	$ 398,500.00	50%	
Population	$ 398,500.00	50%	
Total	$797,000.00	100%	

Eastern ALS Area

	Calls	%	Population	%		Calls (50%)	Population (50%)	
East Goshen	642	42.83%	12358	44.52%	East Goshen	$ 40,901.27	$ 42,518.89	$ 83,420.16
West Goshen	680	45.36%	9043	32.58%	West Goshen	$ 43,322.21	$ 31,114.27	$ 74,436.48
Westtown	177	11.81%	6355	22.90%	Westtown	$ 11,276.52	$ 21,866.84	$ 33,143.36
	1,499	100%	27,757	100%		$ 95,500.00	$ 95,500.00	$ 191,000.00

East ALS Area			
Calls	$ 95,500.00	50%	
Population	$ 95,500.00	50%	
Total	$ 191,000.00	100%	

Western ALS Area

	Calls	%	Population	%		Calls (50%)	Population (50%)	
West Bradford	20	83.33%	1847	80.83%	West Bradford	$ 1,916.67	$ 1,859.09	$ 3,775.75
Newlin	4	16.67%	438	19.17%	Newlin	$ 383.33	$ 440.91	$ 824.25
	24	100%	2,285	100%		$ 2,300.00	$ 2,300.00	$ 4,600.00

West ALS Area			
Calls	$ 2,300.00	50%	
Population	$ 2,300.00	50%	
Total	$ 4,600.00	100%	

Total Municipal Funding

	Formula Amount	Facility Credit	Total Amount
Birmingham	$13,773.15	$0.00	$13,773.15
East Bradford	$139,148.84	$0.00	$139,148.84
East Goshen	$83,420.16	$0.00	$83,420.16
Newlin	$6,024.70	$0.00	$6,024.70
Thornbury	$30,958.67	$0.00	$30,958.67
West Bradford	$74,363.90	$0.00	$74,363.90
West Chester	$298,214.73	$0.00	$298,214.73
West Goshen	$247,469.50	$0.00	$247,469.50
West Whiteland	$401,574.00	($5,200.00)	$396,374.00
Westtown	$99,226.35	$0.00	$99,226.35
TOTAL:	$1,394,174.00	($5,200.00)	$1,388,974.00

West Chester receives substantial EMS service at a comparatively low municipal cost

West Chester Borough receives a substantial level of service from Good Fellowship at a relatively low cost compared with other municipalities across Chester County. This is made possible by Good Fellowship's strong fundraising efforts, volunteer involvement, regional service-delivery model that creates efficiencies and economies of scale, and diverse service lines that help strengthen and diversify revenue.

$136.48

West Chester cost per EMS dispatch

OVER $186

Chester County average per dispatch

2026 comparison; countywide municipal funding study is not yet complete.

The county average is expected to increase when the study is completed.

Source: Good Fellowship Ambulance 2026 municipal funding and dispatch data; Chester County municipal funding study (in progress).

West Chester: what 0.40, 0.45 and 0.50 mill would raise

.40 mill

$308K

Approximate annual revenue. Illustrative homeowner cost: $40 per $100K assessed.

.45 mill

$346K

Approximate annual revenue. Illustrative homeowner cost: $45 per $100K assessed.

.50 mill

$385K

Approximate annual revenue. Illustrative homeowner cost: $50 per $100K assessed.

Current Good Fellowship request

$298,214

At the approximate 2026 tax base, all three scenarios would cover the current request; the difference determines how much remains for reserve/capital planning.

Implied taxable assessed value used for estimates: approximately $0.8 million.

Calculation based on West Chester's 2026 current-year real-estate tax levy of about $6.229M and 8.09-mill rate. Actual collections vary with assessment changes, discounts, delinquencies and exemptions.

Dedicated EMS millage in Chester County

Peer municipalities already use stand-alone property-tax millage to support ambulance and emergency medical services.

Downingtown Borough	**0.370 mill**	Dedicated EMS component within its Fire/EMS tax structure.
Valley Township	**0.500 mill**	Emergency Services (Ambulance/EMS) millage; proceeds are earmarked for operations and capital replacement.
Schuylkill Township	**0.1481 mill**	Dedicated ambulance, rescue and emergency-services millage.
Honey Brook Township	**0.150 mill**	Dedicated ambulance/EMS millage, separate from fire funding.
East Marlborough Township	**0.500 mill**	Dedicated EMS millage documented in municipal budget action/reporting.
Uwchlan Township	**0.300 mill**	Dedicated EMS millage supporting emergency medical services.

West Chester would not be creating an unusual funding mechanism.

A dedicated EMS millage is already used by multiple Chester County municipalities.

Sources: municipal tax/budget materials for Downingtown, Valley, Schuylkill, Honey Brook and Uwchlan; local budget reporting for East Marlborough. Verify adopted rates before ordinance introduction.

A dedicated fund can earn interest while building EMS reserves

Dedicated revenue

Restricted EMS fund

Keep tax proceeds separate from the General Fund and use them only for authorized EMS purposes.

Interest-bearing cash

Municipal deposit account

Hold unneeded near-term cash in an interest-bearing/high-yield bank deposit or other permitted municipal investment.

Interest stays with EMS

Compounding benefit

Investment earnings can remain in the EMS fund to help offset future equipment and service-cost growth.

- The investment structure should comply with Pennsylvania municipal investment law, Borough policy, collateralization/FDIC requirements, liquidity needs, and the Solicitor/Treasurer's guidance.
- Honey Brook and Schuylkill Township budgets already show interest earnings inside their dedicated EMS funds, demonstrating the practical benefit of keeping restricted cash productive.
- A reserve is especially useful because an equipped ambulance can cost hundreds of thousands of dollars and may have a multi-year procurement lead time.

Policy analysis; investment authority and permitted instruments should be reviewed by the Borough Solicitor and Finance Department.

Pennsylvania Medicaid reimbursement improved - but the statutory benchmark is d

BLS emergency

$562.05

Minimum reimbursement effective Jan. 1, 2024 in PA legislative analysis.

ALS-1 emergency

$667.43

Minimum reimbursement in the legislative comparison.

ALS-2

$966.01

Minimum reimbursement in the legislative comparison.

- Act 15 of 2023 raised Pennsylvania Medicaid ambulance reimbursement beginning Jan. 1, 2024 and added payment for every loaded mile.
- The statutory formula references the greater of specified 2023 Medicare Ambulance Fee Schedule rates or Medicaid fees updated for 2023.
- That Medicaid benchmark is therefore anchored to 2023 reference rates while wages, employee healthcare, vehicles, insurance, medical equipment, and supplies continue to rise.
- Medicare itself has annual fee-schedule updates; the concern here is the Pennsylvania Medicaid statutory benchmark enacted using 2023 reference rates.

Medicare and Medicaid reimbursement rates remain well below the actual cost of delivering EMS services, directly contributing to the operating deficit. For Good Fellowship, these two payers represent 56% of insurance revenue.

Good Fellowship 2026 budget

Sources: PA Human Services Code §443.13; Act 15 of 2023; Pennsylvania legislative budget and finance materials; Good Fellowship 2026 budget.

Why the General Fund is the wrong long-term home

Annual competition

EMS competes with every other municipal priority.

Budget volatility

A line item can be reduced or deferred when other costs spike.

Capital mismatch

Ambulances and durable medical equipment require multi-year replacement planning.

Transparency

A dedicated levy shows taxpayers exactly what funds EMS.

Reserve discipline

Restricted cash and earnings can support planned EMS capital needs.

Continuity

Stable funding protects readiness from unrelated budget pressures.

Policy analysis; final fund structure, reserve policy and permitted uses should be reviewed by the Borough Solicitor.

Healthcare and labor costs keep moving upward

Employer family premium

$26,993

Average employer-sponsored family health premium in 2025, about 26% above 2020.

EMS impact

Two-sided pressure

EMS agencies pay rising employee health-benefit costs while absorbing broader medical inflation.

Readiness labor

24 / 7 / 365

Staffing must be maintained regardless of payer mix or transport volume.

- An ambulance agency cannot simply reduce hours when reimbursement fails to keep pace; emergency coverage is expected continuously.
- Benefit inflation makes recruiting and retaining paramedics and EMTs more expensive at the same time that public reimbursement is administratively constrained.

Good Fellowship routinely adjusts staffing levels based on operational needs and call volume. This is a standard practice, particularly during overnight and other off-peak hours, to maintain operational efficiency while ensuring appropriate coverage.

Source: KFF 2025 Employer Health Benefits Survey; Good Fellowship operational model.

Consolidation has reshaped emergency-vehicle manufacturing

- American Industrial Partners, a private-equity firm, assembled specialty-vehicle manufacturers that became REV Group; its investment history ran from 2008 through 2024.
- REV's ambulance brands have included AEV, Horton, Leader, Road Rescue and Wheeled Coach, placing several well-known ambulance manufacturers under one corporate group.
- Bipartisan federal lawmakers have scrutinized consolidation in the related fire-apparatus market amid sharply higher prices and long delivery times. Manufacturers also cite supply-chain, labor, and demand pressures.
- For West Chester, the policy implication is capital risk: replacement vehicles are expensive and long-lead assets, making a dedicated reserve more valuable.

Good Fellowship's local cost signal

$350K+ vehicle + ~$125K equipment

Good Fellowship's subscription materials provide a concrete local estimate of the cost of putting a new equipped ambulance in service.

Sources: American Industrial Partners portfolio; REV Group SEC filings; federal antitrust inquiry; Good Fellowship Ambulance Subscriptions.

Tax treatment: a real property tax, not an ambulance service fee

Structure

Property-tax millage

A dedicated EMS levy is imposed on taxable real property rather than billed per ambulance call.

Federal treatment

Generally SALT-eligible

For taxpayers who itemize, qualifying local real-property taxes are generally deductible.

Important limit

Not universal

Deductibility depends on itemization, the federal SALT cap, and individual tax circumstances.

- The safest public wording is: 'The EMS levy is generally treated as a local real-property tax for federal itemized-deduction purposes, subject to SALT limits and individual circumstances.'
- It should not be described as fully deductible for every taxpayer.

Source: IRS Topic No. 503, Deductible Taxes. Residents should consult their tax adviser regarding individual deductibility.

Recommended West Chester structure

- Set a stand-alone EMS millage in the 0.40-0.50 range based on the annual Good Fellowship requirement and desired reserve contribution.
- Deposit all proceeds into a restricted EMS fund, separate from the General Fund.
- Pay the annual Good Fellowship service agreement from the dedicated fund.
- Invest cash not needed for near-term obligations in an interest-bearing municipal deposit account or other legally permitted investment; retain earnings in the EMS fund.
- Adopt a written reserve target for future ambulances, medical equipment, reimbursement shortfalls, and service-cost increases.
- Publish an annual dashboard showing tax revenue, interest earned, Good Fellowship funding, call volume, reimbursement trends, capital purchases, and ending reserve balance.
- Review the millage annually so Council can reduce, maintain, or adjust it as the service requirement changes.

Maintain Borough representation on Good Fellowship's Municipal Advisory Board to review financial statements and ensure full awareness of the organization's operational and financial trends.

Policy recommendation; ordinance language, investment authority, fund restrictions and reserve policy should be reviewed by the Borough Solicitor and Finance Department.

A dedicated EMS tax creates a long-term funding system



Stable

Predictable revenue for staffing, readiness and capital planning.

Transparent

Residents can see the tax, the EMS appropriation, interest earned and reserve balance.

Sustainable

Dedicated revenue plus investment earnings helps absorb rising reimbursement gaps and equipment costs.

A 24/7 public-safety service deserves a dedicated funding strategy.

Kathy Brooks

From: Stephen Vogelman Jr. <Vogelman@codeelevator.com>
Sent: Tuesday, July 28, 2026 4:27 PM
To: Kathy Brooks
Subject: Code Elevator Rates Library - Borough of West Chester

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Good afternoon,

This email is to confirm that the hourly billing rates currently provided to the Borough of West Chester will also be extended to the West Chester Library, located at 415 N. Church Street, West Chester, PA 19380.

The hourly billing rates for work performed outside the scope of the contract are as follows:

Rate Type	Mechanic	Helper	Team
Regular	$315.00	$252.00	$567.00
Premium (1.7x)	$535.50	N/A	N/A
Premium (0.7x)	$220.50	N/A	N/A
Overtime (2.0x)	$630.00	$504.00	$1,155.00

These rates will apply to all work performed outside the scope of the contract for the West Chester Library.

If you have any questions or concerns, please feel free to give me a call.

Thank you, and we appreciate the opportunity to continue serving your facilities.

Best regards,

CODE ELEVATOR

Stephen Vogelman Jr. |Vice President

a: Code Elevator | 420 Feheley Drive, Suite B | King of Prussia, PA 19406
e: vogelman@codeelevator.com
m: 267.535.0863
w: https://codeelevator.com/

From: Kathy Brooks <KBrooks@west-chester.com>
Sent: Tuesday, July 28, 2026 9:17 AM

GRANICUS

Amendment
Prepared for
West Chester PA

First Amendment to the Granicus Service Agreement between Granicus, LLC and West Chester PA

This First Amendment to the Granicus, LLC Service Agreement is effective on the date this document is signed and entered into by and between Granicus, LLC, a Minnesota Limited Liability Company d/b/a Granicus (hereinafter referred to as "Granicus"), and West Chester PA (hereinafter referred to as "Client"), with reference to the following:

WHEREAS, the Client and Granicus entered into an Agreement effective 17 Nov 2025 (the "Agreement"); and

WHEREAS, in addition to Client's existing solution, Client wishes to add certain products and services as detailed in Q-519412, which is attached as Exhibit A and incorporated herein by reference; and

WHEREAS, the Client and Granicus wish to extend the Agreement through 31 Dec 2031; and

NOW, THEREFORE, in consideration of the premises, the parties intend that the Agreement be amended as follows:

1. Compensation to be paid to Granicus under the Agreement shall be amended to include the fees detailed in Exhibit A. Exhibit A is exclusive of applicable state, local, and federal taxes, which, if any, will be included in the invoice. It is the responsibility of the Client to provide applicable exemption certificate(s).
2. The Agreement shall be extended through 31 Dec 2031.
3. Except as amended by this First Amendment, all other terms and conditions of the Agreement shall remain in full force and effect.
4. In the event of any inconsistency between the provisions of this First Amendment and the documents comprising the Agreement, the provisions of this First Amendment shall prevail.

IN WITNESS WHEREOF, the parties have caused this First Amendment to be executed by their duly authorized representatives.

Agreement and Acceptance

By signing this document, the undersigned certifies they have authority to enter the agreement. The undersigned also understands the services and terms.

West Chester PA	Granicus
Signature:	**Signature:**
Name:	**Name:**
Title:	**Title:**
Date:	**Date:**

Exhibit A

ORDER DETAILS

Prepared By:	Madelyn Bedard
Phone:	
Email:	madelyn.bedard@granicus.com
Order #:	Q-519412
Prepared On:	27 Jul 2026
Expires On:	31 Dec 2026

ORDER TERMS

Currency:	USD
Payment Terms:	Net 30 (Payments for subscriptions are due at the beginning of the period of performance.)
Current Subscription End Date:	31 Dec 2026
Initial Order Term End Date:	31 Dec 2031
Period of Performance:	01 Jan 2027 - 31 Dec 2027

PRICING SUMMARY

The pricing and terms within this Proposal are specific to the products and volumes contained within this Proposal.

Renewing Subscription Fees			
Solution	**Billing Frequency**	**Quantity/Unit**	**Annual Fee**
SmartGov Connector Merchant	Annual	1 Each	$966.50
SmartGov - Enterprise	Annual	1 Each	$19,179.36
SmartGov Connector Active Directory	Annual	1 Each	$966.50
SmartGov API	Annual	1 Each	$3,183.21
		SUBTOTAL:	**$24,295.57**

FUTURE YEAR PRICING

Solution(s)	Period of Performance			
	01 Jan 2028 - 31 Dec 2028	01 Jan 2029 - 31 Dec 2029	01 Jan 2030 - 31 Dec 2030	01 Jan 2031 - 31 Dec 2031
SmartGov Connector Merchant	$1,005.16	$1,045.37	$1,087.18	$1,130.67
SmartGov - Enterprise	$19,946.53	$20,744.40	$21,574.17	$22,437.14
SmartGov Connector Active Directory	$1,005.16	$1,045.37	$1,087.18	$1,130.67
SmartGov API	$3,310.54	$3,442.96	$3,580.68	$3,723.91
SUBTOTAL:	**$25,267.39**	**$26,278.10**	**$27,329.21**	**$28,422.39**

PRODUCT UPDATES

FOR INFORMATION ON RECENT AND UPCOMING PRODUCT ENHANCEMENTS ACROSS THE GRANICUS PORTFOLIO, PLEASE REFER TO THE SEMIANNUAL UPDATE INFORMATION ON THIS WEBPAGE:
: HTTPS://GRANICUS.COM/SEMIANNUAL-UPDATES/

PRODUCT DESCRIPTIONS

Solution	Description
SmartGov Connector Merchant	Connection to one merchant in the back office and/or portal from a list of available options. Subscriber remains responsible for the relationship with the provider.
SmartGov - Enterprise	Annual subscription to SmartGov software for: Permitting, Licensing, and Code Enforcement. Subscription includes the Public Portal.

REMINGTON & VERNICK ENGINEERS
AN ARDURRA COMPANY

Croton Road Corporate Center
555 Croton Road, Suite 401
King of Prussia, PA 19406
O: (610) 940-1050
F: (610) 940-1161

August 11, 2026

Sean Metrick
Borough Manager
Borough of West Chester
401 East Gay Street
West Chester, PA 19380

RE: Recommendation of Notice of Intent to Award
2026 Storm Sewer Lining
Borough of West Chester
RVE File #PA151833T012

Mr. Metrick:

Remington & Vernick Engineers (RVE) has performed an initial review of the bids received on August 11, 2026 for the above referenced project, and has found no discrepancies in the bid submitted by the apparent low bidder, Nu-Pipe, LLC (hereafter "Contractor"). A total of four (4) bids were received for this project with the base bids ranging from $199,180.70 to $310,420.00.

The Contractor submitted their bid for the Base Bid work in the amount of $199,180.70 and for Alternate Bid No. 1 in the amount of $124,588.25. A copy of the bid tabulation has been enclosed for your reference.

RVE therefore recommends that the Borough approve issuance of a Notice of Intent to Award to the Contractor for the 2026 Storm Sewer Lining project.

Should you have any questions, please feel free to contact our office at (610) 940-1050.

Sincerely,
REMINGTON & VERNICK ENGINEERS
By

Kelly Goff, P.E., C.F.M.
Consulting Engineer

KAG/ab

Enclosure
cc: Don Anderson, Public Works Director
Will Williams, Sustainability Director
Christopher J. Fazio, P.E., C.M.E., Greater PA Municipal Practice Director - Northeast
Owen Hyne, P.E., C.E.A., Group Leader – Southeast PA/King of Prussia
Raymond Ruczynski, Jr., Department Head – Construction Management and Inspection

BID TABULATION

PROJECT NAME:
2026 Storm Sewer Lining
PROJECT NUMBER:
PA151833T012
Client:
Borough of West Chester

Base Bid

#	DESCRIPTION	QUANTITY & UNITS		Nu-Pipe, LLC 5600 Central Avenue Saint Petersburg, FL 33707 207-212-8416		Insight Pipe Contracting, LLC 232 E. Lancaster Road Harmony, PA 16037 724-452-6060		Musson Brothers Inc. 1522 Pearl Street Waukesha, WI 53186 262-790-5060		JRCRUZ CORP. 33 W. Main Street Holmdel, NJ 07733 732-290-0700	
				UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL
1	Mobilization (Max $10,000.00)	1	LS	$6,821.00	$6,821.00	$8,500.00	$8,500.00	$10,000.00	$10,000.00	$10,000.00	$10,000.00
2	Maintenance and Protection of Traffic	1	LS	$10,789.70	$10,789.70	$9,000.00	$9,000.00	$39,000.00	$39,000.00	$25,000.00	$25,000.00
3	Lining of 30" Dia. Brick Pipe, Access Structure to Access Structure, Including cleaning, pre and post installation inspection, Complete	610	LF	$270.50	$165,005.00	$280.00	$170,800.00	$269.00	$164,090.00	$422.00	$257,420.00
4	Project Sign	1	EA	$1,565.00	$1,565.00	$1,500.00	$1,500.00	$1,000.00	$1,000.00	$3,000.00	$3,000.00
5	Contingency Allowance (If & Where Directed, Required Fixed Bid Amount of $15,000.00)	1	AL	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00
Base Bid Construction Cost Estimate Subtotal:					$199,180.70		$204,800.00		$229,090.00		$310,420.00

Alternate Bid No. 1

#	DESCRIPTION	QUANTITY & UNITS		UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL
101	Mobilization (Max. $10,000.00)	1	LS	$6,821.00	$6,821.00	$7,600.00	$7,600.00	$10,000.00	$10,000.00	$10,000.00	$10,000.00
102	Maintenance and Protection of Traffic	1	LS	$8,092.25	$8,092.25	$100.00	$100.00	$5,000.00	$5,000.00	$20,000.00	$20,000.00
103	Lining of 36"x24" Brick Pipe, Access Structure to Access Structure, Including cleaning, pre and post installation inspection, Complete	350	LF	$270.50	$94,675.00	$380.00	$133,000.00	$366.00	$128,100.00	$429.00	$150,150.00
104	Contingency Allowance (If & Where Directed, Required Fixed Bid Amount of $15,000.00)	1	AL	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00	$15,000.00
Alternate Bid No. 1 Construction Cost Estimate Subtotal:					$124,588.25		$155,700.00		$158,100.00		$195,150.00

REMINGTON & VERNICK ENGINEERS

August 6, 2026

WCHBO 00046

Attn: Sean Metrick, Borough Manager
West Chester Borough
401 East Gay Street
West Chester, PA 19380

RE: **Parking Lot Paving**
Bid Tabulation and Award Recommendation

Dear Sean:

Attached herewith is a tabulation of the bids received on Thursday, August 6, 2026 at 10:00 a.m. for the referenced contract. The bid results are as follows:

Contractor	Base Bid
G&B Construction	$ 231,374.50
Ronnie C Polk Paving Inc.	$ 242,713.00
Moore Brothers Enterprises Ltd	$ 272,716.20
Rocklynn Construction LLC	$ 296,685.00
Marino Corporation	$ 322,956.00
Paving Plus LLC	$ 325,938.50

We have enclosed a copy of the bid tabulations for your records. The lowest qualified bidder was G&B Construction of Feasterville Trevose, PA with a total low bid of $231,374.50.

G&B Construction have provided references, a history of completed work, and an inventory of equipment. Based upon this information, we recommend this project be awarded to G&B Construction as the total low bid amount of **$231,374.50,** pending review of their qualifications and contingent upon their execution of the Contract and supply of the required Bonds and Insurance.

Should you have any further questions or comments, please contact the undersigned.

Sincerely,
PENNONI ASSOCIATES INC.

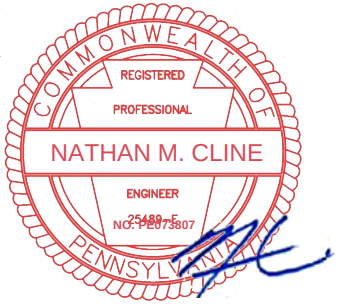
Nathan M. Cline, PE
Borough Engineer

WCHBO00046

West Chester Borough
Tabulation of Bids Received Until 10:00 A.M.
Prevailing time on August 6, 2026

Parking Lot Paving

ITEM NO.	APPROXIMATE QUANTITY/UNIT		DESCRIPTION	G&B Construction 415 W Bristol Road Feasterville Trevose, PA 19053 Contact: Andreea Ambrus (215) 919-6600		Ronnie C Polk Paving Inc. 716 Water Street, P.O. Box 268 Shoemakersville, PA 19555 Contact: Dustin Folk (610) 562-3550		Moore Brothers Enterprises Ltd 1511 Keystone Road Chester, PA 19013 Contact: Anthony Moore (610) 496-6860		Rocklynn Construction LLC 974 Rocklynn Road Springfield, PA 19064 Contact: Joseph DiLuzio (610) 357-6741		Marino Corporation 1400 Cressman Road, PO Box 1209 Skippack, PA 19474 Contact: Alex Howatt (610) 584-1800		Paving Plus LLC 116 Grove Street Glassboro, NJ 08028 Contact: Joy Putz (856) 404-9166	
				UNIT PRICE	AMOUNT					UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT	UNIT PRICE	AMOUNT
			BASE BID												
1	11,130	SY	1.5-inch Milling	$3.50	$38,955.00	$3.45	$38,398.50	$5.39	$59,990.70	$7.30	$81,249.00	$6.60	$73,458.00	$6.50	$72,345.00
2	11,130	SY	1.5-inch, 9.5mm Superpave Wearing Course	$13.00	$144,690.00	$11.40	$126,882.00	$14.60	$162,498.00	$13.95	$155,263.50	$13.40	$149,142.00	$19.00	$211,470.00
3	850	SY	5-inch, 25mm Superpave Base Repair	$31.00	$26,350.00	$59.00	$50,150.00	$36.00	$30,600.00	$36.75	$31,237.50	$84.00	$71,400.00	$5.00	$4,250.00
4	165	TON	9.5mm Superpave Leveling	$105.00	$17,325.00	$129.00	$21,285.00	$100.00	$16,500.00	$125.00	$20,625.00	$132.00	$21,780.00	$120.00	$19,800.00
5	1,660	LF	4" Single White Waterborne Line Striping	$0.85	$1,411.00	$1.00	$1,660.00	$0.75	$1,245.00	$3.00	$4,980.00	$1.60	$2,656.00	$1.55	$2,573.00
6	110	LF	4" Single Blue Waterborne Line Striping	$0.85	$93.50	$1.25	$137.50	$0.75	$82.50	$3.00	$330.00	$1.60	$176.00	$1.55	$170.50
7	3	EA	ADA Parking Pavement Markings	$100.00	$300.00	$100.00	$300.00	$100.00	$300.00	$500.00	$1,500.00	$108.00	$324.00	$110.00	$330.00
8	15	LF	18" Upright Concrete Curb Replacement	$150.00	$2,250.00	$260.00	$3,900.00	$100.00	$1,500.00	$100.00	$1,500.00	$268.00	$4,020.00	$1,000.00	$15,000.00
			TOTAL BID AMOUNT (Items 1 through 8)		**$231,374.50**		**$242,713.00**		**$272,716.20**		**$296,685.00**		**$322,956.00**		**$325,938.50**
			Bid Security	**10% Bid Bond**		**10% Bid Bond**		**10% Bid Bond**		**10% Bid Bond**		**10% Bid Bond**		**10% Bid Bond**	



Nathan M. Cline, PE PENNA. REG. NO. 073807

We Declare this to be a true Tabulation of Bids received on
August 6, 2026 by the Borough of West Chester for the Parking Lot Paving

PENNONI

Blocking Vehicle Project Funding Request

The coverage area for the West Chester Fire Department regularly experiences motor vehicle accidents, hazardous materials incidents, disabled vehicles, and other emergencies on heavily traveled roadways. These environments present significant dangers not only from the primary incident but also from secondary crashes involving approaching traffic. Despite the use of traffic cones, warning signs, emergency lighting, and other traffic control measures, responders and motorists remain at considerable risk while operating at emergency scenes.

To enhance roadway incident safety, our department is seeking to purchase a Truck Mounted Attenuator (TMA) vehicle. A TMA is specifically designed to absorb the kinetic energy of an impacting vehicle, significantly reducing the likelihood of serious injury or death to firefighters, emergency medical personnel, law enforcement officers, towing operators, public works employees, and other emergency responders working on the roadway. Just as importantly, the device helps protect occupants of striking vehicles by reducing crash severity.

Recognizing the importance of this safety initiative, the West Goshen Fire & EMS Coalition successfully secured a Commonwealth of Pennsylvania Economic Development & Community Development Initiatives Grant through the office of Senator Carolyn Comitta. The grant awarded $50,000 toward the purchase of a blocking vehicle. These funds are currently being held by the Borough of West Chester.

Over the past year, we have worked closely with vendors to identify a vehicle that meets both our operational requirements and budget limitations. After an extensive search, we identified a suitable unit and arranged for a comprehensive inspection by a certified mechanic. The vehicle has been determined to be an appropriate and cost-effective solution for this project.

The proposed purchase consists of a used 2010 International 14' Truck Mounted Attenuator currently being offered by J-Tech of Chester Springs, Pennsylvania.



Project Costs

Item	Vendor	Cost
2010 International 14' TMA Vehicle	J-Tech	$50,000.00
Emergency Lighting and Radio Equipment	Tony's Emergency Services	$14,649.00
Vehicle Graphics	Signarama	$442.34
Total Project Cost		**$65,091.34**

Funding Summary

Description	Amount
Grant Funding Secured	$50,000.00
Total Project Cost	$65,091.34
Funding Needed	**$15,091.34**

Conclusion

The acquisition of a dedicated blocking vehicle equipped with a Truck Mounted Attenuator will significantly improve the safety of emergency responders and the traveling public throughout our community. This unit will provide critical protection during roadway incidents, reduce the likelihood and severity of secondary crashes, and help safeguard both responders and motorists operating in hazardous traffic environments.

With $50,000 already secured through state grant funding, only **$15,091.34** is needed to complete this project and place this valuable safety resource into service. This investment will provide long-term benefits to the community by enhancing roadway safety, reducing injuries, and supporting the efficient management of emergency incidents throughout the region.

QUOTATION

102 Oscar Way
Chester Springs, PA 19425

610-458-4334 (office)
www.jtechusa.com

Bill To:

FIRE & EMS COALITION
1025 PAOLI PIKE
WEST CHESTER, PA 19380

ATTN:

SHIP TO:

Pickup

ATTN:
Phone:
Email:

Quote No.	Date	Cust No	Rep	Your Referenced Inquiry	Completion Date	F.O.B.	Terms
0036202	7/27/2026	11396	BW	8-242		J-TECH	

Quantity	Description	Price	Extension
1	8-242* '10 IHC 16' TMA Plus	50,000.00	50,000.00

'10 International 4300, VIN 1HTMMAAN0AH263441, MFDT diesel engine with 245HP, Allison automatic transmission, air brakes, GVWR 26,000 (under CDL), white cab, 221K miles

16' TMA Plus

J-Tech Engineer-Designed 16' TMA Plus

Body
- 16' ballasted flatbed
- Non-skid deck coating
- 38" stakesides powder coated Highway-Safety Red
- Heavy-duty bulkhead with viewing window
- All components powder coated finish
- Backup alarm
- Reflective tape sections on rub rail

J-Tech Hydraulic Arrow Board Stand
- Works in conjunction with Scorpion attenuator pump and controls
- Mounted to rear of body for optimal stability and protection
- Powder coated finish

Wanco 15-Lamp Arrow Board Kit
- In-cab controls
- High-efficiency LED display
- Solar panel mounted on bulkhead
- Battery box with maintenance-free batteries

Traffix Devices Scorpion Attenuator
- NCHRP350 TL-3 approved
- In-cab controls
- Full LED DOT lighting package

Warning Lights
- Two amber beacons mounted on bulkhead
- Two rear surface-mounted amber LEDs
- In-cab switch

Dual Camera Back-Up System
- Monitor on dash
- Cameras include infrared for night-vision

Page: 1 *****This Quote is Valid for 30 days*****

Acceptance Signature:_____

\\GSSDB\APPS\GLOBAL\BUSINT\CUSTOM\ER_QuoteFormLaser_Truck-2-MY3.rpt

102 Oscar Way
Chester Springs, PA 19425

610-458-4334 (office)
www.jtechusa.com

QUOTATION

Bill To:

FIRE & EMS COALITION
1025 PAOLI PIKE
WEST CHESTER, PA 19380

ATTN:

SHIP TO:

Pickup

ATTN:
Phone:
Email:

Quote No.	Date	Cust No	Rep	Your Referenced Inquiry	Completion Date	F.O.B.	Terms
0036202	7/27/2026	11396	BW	8-242		J-TECH	

Quantity	Description	Price	Extension
	Total for Quote $		**50,000.00**

- Truck is out of the J-Tech Rental Fleet and is sold as-is with no warranty expressed or implied. Truck will be thoroughly cleaned.

- All lead times are current as of the quote date but are subject to change. Please contact your account manager for the current lead time as of the date of your purchase order.

- Prices are FOB J-Tech, Chester Springs, PA unless otherwise noted. Please contact your account manager for additional delivery options.

- Price does not include applicable transfer taxes, tags, and fees required when registering the vehicle. Please contact your local tag and title agency for a list of fees that will be charged when registering the vehicle. J-tech offers limited tag and title services for an additional fee upon request. Please consult your account manager for additional information.

- The pricing on this quotation is a good faith estimate. Due to extreme volatility in the availability and cost of raw materials, J-Tech reserves the right to pass along excessive material increases to the customer.

Page: 2 *****This Quote is Valid for 30 days*****

Acceptance Signature:_____

Tony's EMERGENCY SERVICES

Putting First Responders, First.

484-724-9232

twemservices@gmail.com

PROPOSAL

March 25, 2026

Prepared for:

First West Chester Fire

Steve Pelna

chief@wcfiredept.org

VEHICLE DESCRIPTION: 2011 International 4300 16' Attenuator Truck

PARTS:

6 - Mpower 4" LEDs Red/White
2 - Intersector 8-LED Surface Mount Green
1 - nFORCE 54" Lightbar Center Strobe, Front & Corners Red/White, Rear Red/Amber
1 - Code3 Siren Speaker
1 - Able2 Remote Siren Switch Box w/Mini Controller
1 - Tomar Pre-emption Module
4 - Soundoff Signal 7"x3" Mpower Legacy Amber/Red
4 - 7x3 Bezel
4 - Soundoff Signal 4" Mpower LED Amber/White
2 - Soundoff Signal 4" Mpower LED Red/White
Misc Parts

INSTALLATION DESCRIPTION:

(4) red/white LEDs on front grill. (2) red/white LEDs one under each door w/steady burn white with door open.
Mount lightbar on roof.
(2) green LEDs above rear tailights on w/crash guard open.
Mount (2) red/white LEDs - 1 on each side of front hood.
Mount (4) amber/white LEDs - 2 on each side of stake body with fabricated bracketing.
Mount (2) red/amber 7"x3" LEDs on crash bar with fabricated bracketing.
Mount (2) red/amber 7"x3" LEDs flush mount on arrow board.
Wire all lighting compete to existing switch box.
Mount siren speaker behind front bumper.
Remove existing strobe and work light switches.
Install switch box controller on dash.
Mount in rear of cab: switch box, siren unit, pre-emption module, lightbar module and power distribution fuse box.
Install Harris dash mount radio. Fabricate bracketing and mount in headliner storage pocket.
Speaker above headliner front panel.
Antenna roof mount.
.

PARTS $8549.00 LABOR $6100.00 **TOTAL $14,649.00**

Signarama
70 Buckwalter Road
Suite 407
Limerick, PA 19468
(484) 961-8802

The Way to Grow Your Business
www.signarama-limerick.com

EST-31416

Payment Terms: 50/50

Created Date: 7/29/2026

DESCRIPTION: Stake Body Truck Graphics

Bill To: West Chester Fire Department
PO Box 322
West Chester, PA 19381
US

Installed: West Chester Fire Department
70 Buckwalter Road
Suite 407
Limerick, PA 19468
US

Requested By: Stephen Pelna
Email: spelna@discoverlewis.com
Cell Phone: (610) 633-5999

Salesperson: Dane Dewees
Email: Dane.Dewees@signarama.com

NO.	Product Summary	QTY	UNIT PRICE	AMOUNT
1	Stake Body Truck Graphics 3M Premium vinyl contour cut vehicle graphics *(Two doors and back section. Approximate 2' x 3' areas)* Includes installation at Signarama Limerick	1	$420.96	$420.96
2	Order Setup *Order Setup is per invoice to set machines according to job specifications. All orders include Signarama standard design setup if needed and 2 proof revisions if needed. After 3 proofs sent an additional $40 per proof sent fee is added to the order. Signarama will supply any up front or additional design fees if necessary at any point throughout the process.* ** *Note: Some design changes could require price adjustments. Revised pricing will be sent and require written customer approval before the job is proceeded with any further. Verbal communications will not be accepted for price changes. Approval delays will effect job time tables accordingly.* ** Product Discount Applied: (100.00%) $40.00	1	$0.00	$0.00

Subtotal:	$420.96
Taxes:	$21.38
Grand Total:	$442.34

All payments are non-refundable due to the custom nature of our products and services. Payment terms are as follows:
Orders under $500 require 100% payment at order placement.
Orders $501-$9,999 require a 50% payment at order placement and balance due at pickup or prior to delivery.
Orders over $10,000.00 require a 50% deposit at order placement, 30% due three weeks later and the remaining balance due prior to pickup, delivery or scheduled installation.

Installation projects will not be scheduled until final payment is received. Labor-only installation projects require 100% non-refundable payment at order placement. Invoices are due upon receipt unless otherwise stated. Past-due balances are subject to a $25 late fee and interest at 1.5% per month (18% annually). Customer agrees to pay all collection costs, including reasonable attorney's fees, if legal action is required. Estimates listing multiple line items without a grand total do not include sales tax. Tax will be calculated once final selections are made and a grand total is issued.

Proof Approval & Liability

By signing or approving a proof (including email approval), the customer accepts full responsibility for all content, layout, spelling, sizing, and specifications. Please review proofs carefully. All production and installation dates are estimates and not guaranteed. Vendor's liability is limited to the goods and services listed on the invoice and excludes indirect or consequential damages.

Signature: _____ **Date:** _____

ESTIMATES ARE VALID FOR 15 DAYS.

QUOTATION

102 Oscar Way
Chester Springs, PA 19425

610-458-4334 (office)
www.jtechusa.com

Bill To:

FIRE & EMS COALITION
1025 PAOLI PIKE
WEST CHESTER, PA 19380

ATTN:

SHIP TO:

Pickup

ATTN:
Phone:
Email:

Quote No.	Date	Cust No	Rep	Your Referenced Inquiry	Completion Date	F.O.B.	Terms
0036202	7/27/2026	11396	BW	8-242		J-TECH	

Quantity	Description	Price	Extension
1	8-242* '10 IHC 16' TMA Plus	50,000.00	50,000.00

'10 International 4300, VIN 1HTMMAAN0AH263441, MFDT diesel engine with 245HP, Allison automatic transmission, air brakes, GVWR 26,000 (under CDL), white cab, 221K miles

16' TMA Plus

J-Tech Engineer-Designed 16' TMA Plus

Body
- 16' ballasted flatbed
- Non-skid deck coating
- 38" stakesides powder coated Highway-Safety Red
- Heavy-duty bulkhead with viewing window
- All components powder coated finish
- Backup alarm
- Reflective tape sections on rub rail

J-Tech Hydraulic Arrow Board Stand
- Works in conjunction with Scorpion attenuator pump and controls
- Mounted to rear of body for optimal stability and protection
- Powder coated finish

Wanco 15-Lamp Arrow Board Kit
- In-cab controls
- High-efficiency LED display
- Solar panel mounted on bulkhead
- Battery box with maintenance-free batteries

Traffix Devices Scorpion Attenuator
- NCHRP350 TL-3 approved
- In-cab controls
- Full LED DOT lighting package

Warning Lights
- Two amber beacons mounted on bulkhead
- Two rear surface-mounted amber LEDs
- In-cab switch

Dual Camera Back-Up System
- Monitor on dash
- Cameras include infrared for night-vision

Page: 1 *****This Quote is Valid for 30 days*****

Acceptance Signature:_____

102 Oscar Way
Chester Springs, PA 19425

610-458-4334 (office)
www.jtechusa.com

QUOTATION

Bill To:

FIRE & EMS COALITION
1025 PAOLI PIKE
WEST CHESTER, PA 19380

ATTN:

SHIP TO:

Pickup

ATTN:
Phone:
Email:

Quote No.	Date	Cust No	Rep	Your Referenced Inquiry	Completion Date	F.O.B.	Terms
0036202	7/27/2026	11396	BW	8-242		J-TECH	

Quantity	Description	Price	Extension
	Total for Quote $		**50,000.00**

- Truck is out of the J-Tech Rental Fleet and is sold as-is with no warranty expressed or implied. Truck will be thoroughly cleaned.

- All lead times are current as of the quote date but are subject to change. Please contact your account manager for the current lead time as of the date of your purchase order.

- Prices are FOB J-Tech, Chester Springs, PA unless otherwise noted. Please contact your account manager for additional delivery options.

- Price does not include applicable transfer taxes, tags, and fees required when registering the vehicle. Please contact your local tag and title agency for a list of fees that will be charged when registering the vehicle. J-tech offers limited tag and title services for an additional fee upon request. Please consult your account manager for additional information.

- The pricing on this quotation is a good faith estimate. Due to extreme volatility in the availability and cost of raw materials, J-Tech reserves the right to pass along excessive material increases to the customer.

Page: 2 *****This Quote is Valid for 30 days*****

Acceptance Signature:_____

BOROUGH OF WEST CHESTER
CHESTER COUNTY, PENNSYLVANIA
RESOLUTION NO. ####

A RESOLUTION OF THE BOROUGH COUNCIL OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, TO AUTHORIZE THE APPLICATION TO THE DCED MAIN STREET MATTERS GRANT PROGRAM FOR THE SOUTH HIGH STREET STREETSCAPE IMPROVEMENTS PROJECT.

BE IT RESOLVED, that the Borough of West Chester of Chester County hereby request a Main Street Matters Grant of $619,290.00 for the South High Street Streetscape Improvements Project.

Be it **FURTHER RESOLVED,** that the Applicant does hereby designate Sean Metrick, Borough Manager and Nicole Scimone, Borough Council President, as the officials to execute all documents and agreements between the Borough of West Chester and the Department of Community and Economic Development, to facilitate and assist in obtaining the requested grant.

I, Sean Metrick, duly qualified Secretary of the Borough of West Chester, Chester County, PA, hereby certify that the forgoing is a true and correct copy of a Resolution duly adopted by a majority vote of the Borough Council at a regular meeting held August 19th 2026, and said Resolution has been recorded in the Minutes of the Borough of West Chester and remains in effect as of this date.

IN WITNESS THEREOF, I affix my hand and attach the seal of the Borough of West Chester, this 19th day of August, 2026.

_____
Name of Applicant

_____
County

_____
Secretary

the WEST CHESTER DOWNTOWN FOUNDATION

P.O. Box 3109 ⁂ West Chester, PA 19381 ⁂ 610.738.3350 ⁂ www.wcdf.org

July 11, 2026

Dana DiDomenico
Office of the Borough Manager
401 E. Gay St.
West Chester, PA 19380

Dear Dana,

The West Chester Downtown Foundation's 15th Annual West Chester Preservation Awards Event is happening on October 15, 2026!

We love getting together to recognize the efforts that help make West Chester great. We are grateful for your past support and we hope you will join us again this year.

The mission of the Awards Program is to recognize those projects and individuals who have worked to maintain the historic character and preserve the historic integrity of the Borough of West Chester. Awards are given in four categories:

- **Bricks and Mortar** for architectural projects
- **Preservation Service** for educational and advocacy projects
- **Special Recognition Award** to individuals and organizations in recognition of significant contributions to the preservation of the Borough of West Chester.
- **Preservation Legacy Award** for long-term or far-reaching contributions to the preservation of West Chester.

We will have hors d'oeuvres and a light buffet from Limoncello with beer and wine. The award ceremony will take place on Thursday, October 15, 2026 at 5:30 pm at the Chester County History Center at 225 N. High. Please consider supporting the program by becoming a sponsor. The categories and benefits are outlined on the sponsorship form. Attendees will have the opportunity to see the winners announced and to socialize with local decision makers, members of the West Chester business and preservation communities, and residents of the Borough of West Chester.

Downtown West Chester event net proceeds go to support many of West Chester's most vital charitable institutions.
Our 2026 grants will be announced at the event.

We would be grateful for your support of this valuable community preservation program.

Sincerely,

Allen Burke
2026 Committee Chair

Can you help us again with a sponsorship?

West Chester Preservation Awards Committee

James Breen, Allen Burke, Jeff Burke, Cara Corridoni, Thomas Dougherty, Chris Hazley, Joseph Martino, Ray Ott, Kathleen Penney, Philip Yocum

A copy of the official registration and financial information for the West Chester Downtown Foundation may be obtained from the PA Dept. of State by calling (toll free within PA) 1-800-732-0999. Registration, as required by the PA Solicitation of Funds for Charitable Purposes Act, does not imply endorsement. EIN#01-0641261
The West Chester Downtown Foundation is a non-profit, 501(c)(3) organization.
Office Location: 137 North High Street, West Chester, PA 19381

2025 West Chester Preservation Awards Sponsors

Serpentine

Susan & Vijay Aggarwal
Blue Dog Printing & Design
Sarah & Allen Burke
Hazley Builders
E. Kahn Development
Patricia Burton Loew
A. Roy Smith
Team Jean Homes
Timlyn Vaughan Photography
Borough of West Chester

Marble

Archer & Buchanan Architecture
Arthur Hall Insurance, A Marsh & McLennan Agency LLC Company
Brandywine Valley Heating
and Air Conditioning, Inc
Chester County History Center
Thomas Comitta Associates, Inc.
Town Planners & Landscape Architects
County Lines/ValleyDel Publications
O'Rourke & Sons
Ray & Paula Ott
R&B Restoration Carpentry
Umbreit Wileczek & Associates, PC

Limestone

Jeffrey P. Burke, Esq.
of MacElree Harvey LTD.
Krug Architects
Limoncello
Patterhn Ives Architecture
John & Barbara Spellman
Zukin Realty

Brick

CORE Development
Church Street Gallery
James A. Cochrane Inc. Realtor - Michael Wallacavage
Culbertson Restoration LTD.
DellaVecchia, Reilly, Smith
& Boyd Funeral Home Inc.
Jane Dorchester,
Architectural Historian
Michael Galey & Rachel Kagen
Diane Hammell & Ken Watterson
Corinne & Joe Martino
Paper Moon Custom Stationery
Kevin & Lynn Sherlock
Allan & Nancy Steenhusen
Laura M. Stokley, RA, NCARB, Architect
Visual Expansion Gallery
Tom Walsh, Commercial
Realtor – Long & Foster
West Chester University
David Wickard
Melissa & Joshua Willson
Philip & Sue Yocum

the WEST CHESTER
DOWNTOWN FOUNDATION

P.O. Box 3109
West Chester, PA 19381
610.738.3350 ⁘ www.wcdf.org

2026 West Chester Preservation Awards
Sponsorship Opportunities

Award Event held on October 15, 2026
at the Chester County History Center

	Brick $175	Limestone $350	Marble $550	Serpentine $900
Tickets to award ceremony	2	3	5	10
Announced at event by WCDF President				✔
Prominent recognition in event program				✔
Recognition in event program	✔	✔	✔	✔
Name on signage throughout the event	✔	✔	✔	✔
Name listed on mailing to winners, and sponsors	✔	✔	✔	✔
Recognition on WCDF and Downtown West Chester website	✔	✔	✔	✔
Customized individual recognition on WCPA Facebook page				✔
Group recognition on WCPA Facebook page	✔	✔	✔	✔
Name listed on the card that is distributed at the Up on the Roof event in September	✔	✔	✔	✔
Name featured in next year's event invitation	✔	✔	✔	✔

A copy of the official registration and financial information for the West Chester Downtown Foundation may be obtained from the PA Dept. of State by calling (toll free within PA) 1-800-732-0999.
Registration, as required by the PA Solicitation of Funds for Charitable Purposes Act, does not imply endorsement. EIN#01-0641261
the West Chester Downtown Foundation is a non-profit, 501(c)(3) organization.
Office Location: 137 North High Street, West Chester, PA 19381

the WEST CHESTER
DOWNTOWN FOUNDATION

P.O. Box 3109
West Chester, PA 19381
610.738.3350 ✻ www.wcdf.org

2026 Sponsor RSVP

The West Chester Downtown Foundation (WCDF) thanks you for your support of the 2026 West Chester Preservation Awards. Please complete this form and return it with your check to the address below in order for us to ensure proper recognition for your support.

*The deadline for inclusion in printed materials is Friday, August 15, 2026.

Please select one of the following sponsorship categories:

..... SERPENTINE SPONSOR ..... $900 (CHARITABLE AMOUNT: $550)

..... MARBLE SPONSOR ..... $550 (CHARITABLE AMOUNT: $375)

..... LIMESTONE SPONSOR ..... $350 (CHARITABLE AMOUNT: $245)

..... BRICK SPONSOR ..... $175 (CHARITABLE AMOUNT: $105)

Please tell us whom to contact regarding your sponsorship benefits:

NAME .....

TITLE .....

COMPANY NAME .....

ADDRESS .....

PHONE ..... EMAIL .....

PLEASE LIST YOUR NAME OR COMPANY NAME AS IT SHOULD APPEAR FOR SPONSORSHIP RECOGNITION ON PRINTED MATERIALS: .....

Please make checks payable to "WCDF" and direct all calls and correspondence to:

Elizabeth McGuire
Downtown West Chester
P.O. Box 3109
West Chester, PA 19381

Email: emcguire@wcbid.com

Please include "Preservation Awards" on the subject line in your email message.

Phone: 610-738-3350

Office location:
137 North High Street
West Chester, PA 19380

A copy of the official registration and financial information for the West Chester Downtown Foundation may be obtained from the PA Dept. of State by calling (toll free within PA) 1-800-732-0999.
Registration, as required by the PA Solicitation of Funds for Charitable Purposes Act, does not imply endorsement. EIN#01-0641261
the West Chester Downtown Foundation is a non-profit, 501(c)(3) organization.
Office Location: 137 North High Street, West Chester, PA 19381

Finance Department Use Only
Purchase Order Number

BOROUGH OF WEST CHESTER

PURCHASE ORDER REQUEST

TO: Sean Metrick

FROM: Donald Anderson

SUB: **PURCHASE ORDER REQUEST**

DATE: 6/9/2026

IT IS REQUESTED THAT A PURCHASE ORDER BE ISSUED TO:

Vendor Code Elevator

Contact

Address 420 Feheley Drive, Ste B
King of Prussia, PA19406

Phone (610) 275-1800

Email

Fax (610) 275-1815

Justification

Repairs to elevators at Library.

TOTAL AMOUNT TO BE PAID:	$ 10,000.00

Reference (select one) ☐ Quote ☐ SOW ☐ SA ☐ State Contract

Finance Department Use Only
Purchase Order Number

BOROUGH OF WEST CHESTER

PURCHASE ORDER REQUEST

TO: Sean Metrick, Borough Manager

FROM: Joshua B. Lee, Chief of Police

SUB: **PURCHASE ORDER REQUEST**

DATE: 7/20/2026

IT IS REQUESTED THAT A PURCHASE ORDER BE ISSUED TO:

Vendor Cody Computer Services, Inc.

Contact Daniel Zebrowski

Address 1005 E. High Street
Pottstown PA 19464

Phone (484) 207-1799

Email dzebrowski@codysystems.com

Fax

Justification

Annual Support & Maintenance for the police department records management system for term 07/01/2026 - 06/30/2027

TOTAL AMOUNT TO BE PAID:	$ 20,815.11

Reference (select one) ☐ Quote ☐ SOW ☐ SA

Finance Department Use Only
Purchase Order Number

BOROUGH OF WEST CHESTER

PURCHASE ORDER REQUEST

TO: Sean Metrick, Borough Manager

FROM: Will Williams

SUB: **PURCHASE ORDER REQUEST**

DATE: 8/3/2026

IT IS REQUESTED THAT A PURCHASE ORDER BE ISSUED TO:

Vendor McClure Company

Contact Jakes Hayes

Address 4101 North Sixth Street
PO Box 1579
Harrisburg, PA 17105-1579

Phone (717) 233-6431

Email jakehayes@mcclureco.com

Fax

Justification

2026 Capital Project
COSTARS
Replace RTU 4 at Borough Hall, serving 24/7 areas of 1st floor
2026 Budget: $73,000

TOTAL AMOUNT TO BE PAID:	$ 41,793.00

Reference (select one) ☑ Quote ☐ SOW ☐ SA ☑ State Contract

Finance Department Use Only
Purchase Order Number

BOROUGH OF WEST CHESTER

PURCHASE ORDER REQUEST

TO: Sean Metrick, Borough Manager

FROM: Ramsey Reiner

SUB: **PURCHASE ORDER REQUEST**

DATE: 7/21/2026

IT IS REQUESTED THAT A PURCHASE ORDER BE ISSUED TO:

Vendor Pennoni

Contact Nate Cline

Address 158 West Gay Street, Suite 300 | West Chester, PA 19380

Phone

Email ncline@pennoni.com

Fax

Justification

Garage facilities assessment for Capital Planning.

TOTAL AMOUNT TO BE PAID:	$ 37,750.00

Reference (select one) ☑ Quote ☑ SOW ☐ SA ☑ State Contract

Finance Department Use Only
Purchase Order Number

BOROUGH OF WEST CHESTER

PURCHASE ORDER REQUEST

TO: Sean Metrick

FROM: Michael Findley

SUB: **PURCHASE ORDER REQUEST**

DATE: 7/24/2026

IT IS REQUESTED THAT A PURCHASE ORDER BE ISSUED TO:

Vendor Petroleum Traders

Contact Cassidy Thompson

Address 7120 Pointe Inverness Way PO Box 2357
Fort Wayne, IN 46801-2357

Phone (260) 469-5821

Email cthompson@petroeumtraders.co

Fax

Justification

For the purchase of heating oil for the wastewater department through the CCIU
Contract is from August 1, 2026 to July 31, 2027
16,000 gallons at $2.6301 a gallon.
Combined 2026 & 2027

TOTAL AMOUNT TO BE PAID:	$ 42,081.60

Reference (select one) ☐ Quote ☐ SOW ☐ SA ☑ State Contract

Finance Department Use Only
Purchase Order Number

BOROUGH OF WEST CHESTER

PURCHASE ORDER REQUEST

TO: Sean Metrick, Borough Manager

FROM: Joshua B. Lee, Chief of Police

SUB: **PURCHASE ORDER REQUEST**

DATE: 7/28/2026

IT IS REQUESTED THAT A PURCHASE ORDER BE ISSUED TO:

Vendor Pix4D SA

Contact Calvin Platt

Address Route de Renens 24
1008 Prilly
Switzerland

Phone

Email calvin.platt@pix4d.com

Fax

Justification

Crash and crime scene mapping equipment.
Vendor is a sole source supplier for the required equipment

TOTAL AMOUNT TO BE PAID:	$ 17,079.00

Reference (select one) ☐ Quote ☐ SOW ☐ SA

Finance Department Use Only
Purchase Order Number

BOROUGH OF WEST CHESTER

PURCHASE ORDER REQUEST

TO: Sean Metrick, Borough Manager

FROM: Ramsey Reiner, Parking Director

SUB: **PURCHASE ORDER REQUEST**

DATE: 7/10/2026

IT IS REQUESTED THAT A PURCHASE ORDER BE ISSUED TO:

Vendor RW Communications | CDW-G

Contact John Ward | Fred Wills

Address RWC - 5535 Allentown Blvd, Harrisburg, PA 17112

CDW - 200 N. Milwaukee Avenue, Vernon Hills, IL 60061

Phone (717) 566-8862

Email jward@rwcommunications.com

Fax

Justification

RW Communications - Project Cost: 64,432.02 | Member Number: COSTARS-003-E26-720
CDW-G - Project Cost: 39,082.46 | Member Number: Sourcewell 121923
Capital Project - Installing Ubiquiti cameras at the Chestnut parking garage to replace an outdated camera system.

TOTAL AMOUNT TO BE PAID:	$ 103,514.48

Reference (select one) ☑ Quote ☑ SOW ☐ SA ☑ State Contract

COMMONWEALTH OF PENNSYLVANIA COUNTY OF CHESTER

ON THIS, THE _____DAY OF _____20_____,
BEFORE ME, THE UNDERSIGNED OFFICER PERSONALLY APPEARED,
RESPONSIBLE MEMBER FROM HIGH STREET 410 DEVELOPERS, LLC., WHO BEING
DULY SWORN ACCORDING TO LAW DEPOSES AND SAYS THAT THEY ARE THE EQUITABLE
OWNERS OF THE PROPERTY SHOWN ON THIS PLAN, THAT THEREOF WAS MAD AT
THEIR DIRECTION, THAT THEY ACKNOWLEDGE THE SAME TO BE RECORDED, AND THAT ALL STREETS AND OTHER
PROPERTY IDENTIFIED AS PROPOSED PUBLIC PROPERTY (EXECPTING THOSE AREAS LABELED "NOT FOR DEDICATION")
WILL BE OFFERED FOR DEDICATION

_____
(HIGH STREET 410 DEVELOPERS, LLC MEMBER)

SWORN TO AND SUBSCRIBED BEFORE ME
THIS _____ dAY OF_____,
20_____

_____
(NOTARY PUBLIC)

APPROVALS:

PLANNING COMMISSION:
REVIEWED BY THE PLANNING COMMISSION OF THE BOROUGH OF WEST
CHESTER, CHESTER COUNTY, PENNSYLVANIA,
THIS ___ DAY OF _____, 20___.

_____
(MEMBER)
_____ _____
(MEMBER)
_____
(CHAIRPERSON)

BOROUGH COUNCIL:
APPROVED BY THE BOROUGH COUNCIL OF THE BOROUGH OF WEST CHESTER,
CHESTER COUNTY, PENNSYLVANIA,
THIS ___ DAY OF _____, 20___.

_____
(PRESIDENT)
_____
(SECRETARY)

BOROUGH ENGINEER:
REVIEWED BY THE BOROUGH ENGINEER OF THE BOROUGH OF WEST CHESTER,
CHESTER COUNTY, PENNSYLVANIA,
THIS ___ DAY OF _____, 20___.

_____
(BOROUGH ENGINEER)

CHESTER COUNTY PLANNING COMMISSION:
THIS PLAN WAS REVIEWED BY THE CHESTER COUNTY PLANNING COMMISSION,
THIS ___ DAY OF _____, 20___.

_____
(CCPC FILE NUMBER)

_____
(PLANNING COMMISSION SECRETARY)

CHESTER COUNTY RECORDER OF DEEDS
RECORDED IN THE OFFICE OF THE RECORDER OF DEEDS OF CHESTER
COUNTY AT WEST CHESTER, PENNSYLVANIA, IN PLAN BOOK _____,
PAGE _____, ON THIS ___ DAY OF _____,
20___.

_____
(DEPUTY RECORDER OF DEEDS)

SURVEYORS STATEMENT

I, , A PENNSYLVANIA PROFESSIONAL LAND SURVEYOR,
, A PENNSYLVANIA PROFESSIONAL LAND SURVEYOR, , A PENNSYLVANIA PROFESSIONAL LAND SURVEYOR,
HEREBY CERTIFY THAT THE LOT LINES, STREETS, RIGHTS-OF-WAY AND EASEMENTS SHOWN ON THIS PLAN
WERE SURVEYED AND PLOTTED BY ME AND ARE ACCURATE. I FURTHER CERTIFY THAT THE ERROR OF
CLOSURE IS NOT GREATER THAN 1:10,000.

_____
(WILLIAM R. CUJDIK, P.E., P.L.S.) (SEAL)

CERTIFICATE OF CONFORMANCE

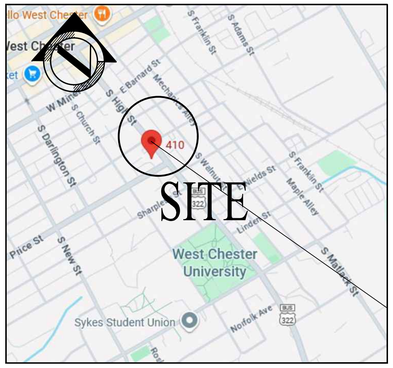
I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT INFORMATION
CONTAINED IN THE ACCOMPANYING PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH ACCEPTED
ENGINEERING PRACTICE, IS TRUE AND CORRECT, AND IS IN CONFORMANCE TO THE ACCURACY REQUIRED BY
THE BOROUGH OF WEST CHESTER ZONING, STORM WATER, AND SUBDIVISION AND LAND DEVELOPMENT
ORDINANCES. (WITH THE EXCEPTIONS OF WAIVERS REQUESTED ON THIS SHEET)

_____ _____
(PROFESSIONAL ENGINEER) (DATE)

PRELIMINARY LAND DEVELOPMENT PLANS
410 SOUTH HIGH STREET III TOWNHOMES
FOR
TAX MAP U.P.I. NUMBERS: 1-9-1030
TC-TOWN CENTER ZONING DISTRICT
410 S. HIGH STREET ~ BOROUGH OF WEST CHESTER
CHESTER COUNTY ~ STATE OF PENNSYLVANIA

PREPARED FOR

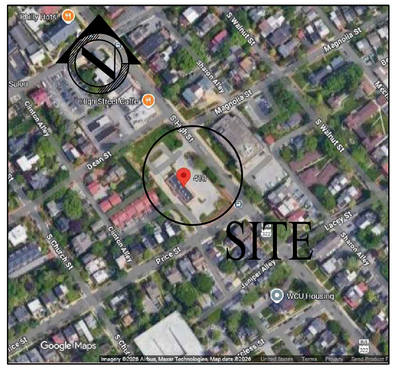
HIGH STREET 410, LLC
283 2ND STREET PIKE, SUITE 110
SOUTHAMPTON, PA 18966
PHONE: (888) 609-1171



LOCATION MAP
SCALE: 1"=1000'



ZONING AND TAX MAP
SCALE: 1"=200'



AERIAL MAP
SCALE: 1"=200'

WAIVERS REQUESTED:

SWM SECTION:	REQUEST:
§94-306.J(3)	THE APPLICANT IS REQUESTING THAT THE INFILTRATION FACILITIES BE SET BACK A MINIMUM OF 2 FEET FROM ALL BUILDINGS AND FEATURES WITH SUBGRADE ELEMENTS WHERE THE REFERENCED ORDINANCE SECTION REQUIRES 10 FEET OF SEPARATION. THE BUILDING SUBGRADE ELEMENTS IN CLOSE PROXIMITY TO THE INFILTRATION AREAS CONSIST OF A BASEMENT WHICH IS A HABITABLE SPACE. ADDITIONAL DESIGN PRECAUTIONS HAVE BEEN PROPOSED TO PREVENT GROUNDWATER INFILTRATION INTO THE BASEMENTS AND PROTECTION OF THE BUILDING FOOTERS.
§94-306.J(4)	THE APPLICANT IS REQUESTING THAT THE BOTTOM ELEVATION OF THE INFILTRATION FACILITIES BE ALLOWED TO BE ABOVE THE PROPOSED BUILDING SUBGRADE ELEMENTS AT CERTAIN LOCATIONS. THE BUILDING SUBGRADE ELEMENTS IN CLOSE PROXIMITY TO THE INFILTRATION AREAS CONSIST OF A BASEMENT WHICH IS A HABITABLE SPACE. ADDITIONAL DESIGN PRECAUTIONS HAVE BEEN PROPOSED TO PREVENT GROUNDWATER INFILTRATION INTO THE BASEMENTS AND PROTECTION OF THE BUILDING FOOTERS.
DESIGN STANDARDS SECTION:	REQUEST:
§97-27.F.(7)	THE APPLICANT IS REQUESTING A WAIVER OF THE CLEAR SIGHT TRIANGLE REQUIREMENT. CLEAR-SIGHT TRIANGLES SHALL BE PROVIDED AT ALL STREET INTERSECTIONS. WITHIN SUCH TRIANGLES, NO VISION-OBSTRUCTING OBJECT SHALL BE PERMITTED WHICH OBSCURES VISION ABOVE THE HEIGHT OF 30 INCHES AND BELOW 10 FEET, MEASURED FROM THE CENTER-LINE GRADE OF INTERSECTING STREETS. EACH SIDE OF THE SIGHT TRIANGLE SHALL BE A MINIMUM OF 75 FEET, MEASURED FROM THE POINT OF INTERSECTION ALONG EACH STREET CENTER LINE.
§97-27.F.(8)	THE APPLICANT IS REQUESTING A WAIVER OF THE SIGHT DISTANCE REQUIREMENT BASED ON STOP CONDITION AT INTERSECTING STREETS. IN DESIGNING STREET INTERSECTIONS, THE FOLLOWING SIGHT DISTANCE DIMENSIONS SHALL BE USED: POSTED SPEED OF INTERSECTED STREET IS 25 MPH. THE REQUIRED SIGHT DISTANCES IS 175 FEET MEASURED FROM A POINT SET BACK 15 FEET FROM THE INTERSECTED PAVEMENT EDGE ON THE STREET CONTROLLED BY A STOP SIGN OR SIGNAL.

REQUIRED PROJECT APPROVALS

BOROUGH OF WEST CHESTER	PENDING
PENNDOT-HIGHWAY OCCUPANCY PERMIT	PENDING
PADEP-SEWAGE FACILITIES PLANNING MODULE EXEMPTION	PENDING
PADEP-NPEDES PERMIT	PENDING
CHESTER COUNTY CONSERVATION DISTRICT	PENDING
AQUA AMERICAN PENNSYLVANIA	PENDING

RECREATION LAND REQUIREMENTS

PER SALDO SECTION 97-38.1.D(2) A MINIMUM OF 5% OF THE TRACT AREA SHALL BE PROVIDED FOR RECREATION.

TOTAL AREA = 58,035 SF

REQUIRED RECREATION AREA:

5% OF TRACT AREA = 2,901.75 SF

PROVIDED RECREATION AREA = 710 SF (PUBLIC) AND 2,252 SF (PASSIVE)

LIST OF DRAWINGS:

SHEET	TITLE
1	COVER PAGE
2	NOTES
3	EXISTING CONDITIONS-DEMOLITION
4	SITE ZONING PLAN
5	SITE IMPROVEMENT PLAN
6	GRADING PLAN
7	UTILITY PLAN
8	DRAINAGE PLAN
9	SANITARY PROFILES
10	GENERAL SITE DETAILS
11	GENERAL SITE DETAILS
12	GENERAL SITE DETAILS
13	GENERAL SITE DETAILS
14	TRUCK TURNING

LANDSCAPE & LIGHTING (STUART AND ASSOCIATES, LLC)

SHEET	TITLE
1	BOROUGH LANDSCAPE PLAN
2	BOROUGH LANDSCAPE SCHEDULE + DETAILS
3	BOROUGH LANDSCAPE DETAILS
4	BOROUGH LIGHTING PLAN
5	BOROUGH LIGHTING DETAILS

EROSION & SEDIMENTATION CONTROL PLANS:

SHEET	TITLE
1	ESCP PLAN
2	ESCP E&S NOTES & DETAILS
3	ESCP DETAILS

POST CONSTRUCTION STORMWATER MANAGEMENT PLANS:

SHEET	TITLE
1	SITE PLAN
2	OPERATION & MAINTENANCE NOTES
3	DETAIL SHEET BASIN 1
4	DETAIL SHEET BASIN 2

NOTE: ALL PLAN SHEETS ABOVE SHALL BE RECORDED IN THE CHESTER COUNTY RECORDER.

RECORD OWNER:

GARY D. SALUTI AND SUZANNE M. DUNPHY
21388 FERRY LANDING ROAD TILGHMAN, MD 21671
DEED BOOK: 6832, PAGE 201

EQUITABLE OWNER/APPLICANT:

HIGH STREET 410, LLC
283 2ND STREET PIKE, SUITE 110
SOUTHAMPTON, PA 18966
PHONE: (888) 609-1171

CLIENT DATA

Cornerstone
Consulting Engineers & Design Services, Inc.
213 West Main Street . Lansdale . PA 19446
Phone: 215-362-2600 Fax: 215-362-8400
WWW.CORNERSTONENET.COM
Philadelphia Region 215-362-2600
Lehigh Valley Region 610-820-8200
Pocono Region 570-839-1770

REVISIONS

NO	BY	DESCRIPTION	DATE
1	DB	REVISED PER TOWNSHIP COMMENTS	6/22/2026

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania 15122 - 1078
811
BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA CALL 1-800-242-1776

J. PATTERSON
REGISTERED PROFESSIONAL
ENGINEER
COMMONWEALTH OF PENNSYLVANIA

PROJECT LOCATION

PRELIMINARY LAND DEVELOPMENT PLAN
410 S. HIGH STREET
WEST CHESTER, PA 19382
BOROUGH OF WEST CHESTER
CHESTER COUNTY, PA

TITLE

COVER SHEET

PROJ. #	26-0118	DATE	03-09-2026
CAD ID.	26-0118	DRN BY	RTH
SCALE	AS NOTED	CHK BY	JBA

SHEET 1 OF 14

REV 1

GENERAL NOTES

1. REFERENCES TO CORNERSTONE CONSULTING ENGINEERS & DESIGN SERVICES INC IN THESE NOTES AND IN THE PLAN SET MAY BE REFERRED TO IN ABBREVIATED FORMAT AS CORNERSTONE. REFERENCE TO THE PROFESSIONAL OF RECORD MAY BE EITHER THE ARCHITECT OF RECORD OR ENGINEER OF RECORD FOR A PARTICULAR DISCIPLINE, AND MAY BE ABBREVIATED AS 'ENGINEER' OR 'ARCHITECT'.
2. THE NOTES PROVIDED ON THIS PLAN APPLY TO ALL PLAN SHEETS.
3. EACH CONTRACTOR OR SUBCONTRACTOR SHALL ENSURE THEY HAVE A COMPLETE SET OF DOCUMENTS TO BID AND CONSTRUCT FROM. A CONTRACTOR AWARDED ANY PART OF THE PROJECT SHALL BE RESPONSIBLE FOR ENSURING THAT THEIR SUB-CONSULTANTS AND SUB-CONTRACTORS HAVE ALL PROJECT INFORMATION INCLUDING THESE NOTES.
4. THE CONSTRUCTION MANAGER, GC, OR CONTRACTOR RESPONSIBLE FOR MULTIPLE SCOPES OF THE PROJECT SHALL ENSURE THEY HAVE ALL PLANS SETS ASSOCIATED WITH THE PROJECT. THESE PLANS HAVE BEEN PREPARED FOR THE SCOPE SHOWN HEREIN AND OTHER SETS MAY HAVE BEEN DEVELOPED FOR OTHER DISCIPLINES OR OTHER PROJECT SCOPES.
5. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED AND ARE IN THEIR POSSESSION. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS AND PERMITS ISSUED OR APPROVED BY PERMITTING AUTHORITIES.
6. THE CONTRACTOR MUST HAVE COPIES OF ALL PERMITS AND MUNICIPAL OR AGENCY HAVING JURISDICTION STAMPED PLANS AT THE JOB SITE AT ALL TIMES. THE OWNER AND CONTRACTOR SHALL ENSURE THEY UNDERSTAND THE TIME PERIOD FOR WHICH ALL PERMITS AND APPROVALS COVER, AND IF A PERMIT OR APPROVAL IS SUBJECT TO EXPIRATION, SHALL EITHER RENEW OR RECEIVED AN EXTENSION, OR IDENTIFY THE NEED FOR SUCH RENEWAL OR EXTENSION IN WRITING TO THE OWNER.
7. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST VERIFY WITH THE PROFESSIONAL OF RECORD AND CORNERSTONE THE PLAN REVISION AND PLAN DATES TO BE USED FOR CONSTRUCTION. THIS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CORNERSTONE IS NOT RESPONSIBLE FOR THE USE OF PLANS FOR WHICH THERE HAS BEEN A CHANGE TO THE RULES AND REGULATIONS, OR POLICIES SINCE THE PROJECT WAS APPROVED. IT SHALL BE THE OWNER AND CONTRACTORS' RESPONSIBILITY TO ENSURE ALL PERMITS AND APPROVALS ARE CURRENT.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THEY HAVE REVIEWED ALL PLAN SETS AND REPORTS ASSOCIATED WITH THE PROJECT PRIOR TO PROVIDING A BID OR PROVIDING CONSTRUCTION SERVICES. SHOULD THERE BE DISCREPANCIES BETWEEN CONSTRUCTION DOCUMENTS OR PERMITTING PLANS, THE CONTRACTOR SHALL PROVIDE AN RFI TO THE CLIENT, THE ENGINEER OF RECORD, ARCHITECT OF RECORD, AND THE PLAN PREPARER IF THE PLAN PREPARER IS NOT THE PROFESSIONAL OF RECORD, FOR RESOLUTION. PLEASE NOTE THAT RFI'S SHOULD BE SENT BY THE CONTRACTOR IN CHARGE OF ALL DISCIPLINES AND SHALL NOT BE SUBMITTED DIRECTLY BY SUBCONTRACTORS.
10. THE ENGINEER OF RECORD IS NOT RESPONSIBLE OR LIABLE FOR ANY SUBSURFACE CONDITIONS.
11. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE REQUIREMENTS AND STANDARDS OF THE LOCAL GOVERNING AUTHORITY.
12. CONTRACTOR SHALL INCLUDE ALL WORK NECESSARY TO INSTALL THE IMPROVEMENTS ON THESE PLANS, INCLUDING BUT NOT LIMITED TO: LABOR, MATERIALS, DEMOLITION, MATERIAL REMOVAL AND DISPOSAL, QUALITY WORKMANSHIP OF IMPROVEMENTS AND REPAIRS, SCHEDULING, SAFETY COORDINATION AND MONITORING, CLEAN UP, TESTING, ONE CALL, SURVEY STAKEOUT, PERMITTING, PROJECT MANAGEMENT AND TRAFFIC CONTROLS.
13. ALL DIMENSIONS SHOWN ON THE PLANS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER IF ANY DISCREPANCIES EXIST PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
14. NEITHER THE PROFESSIONAL ACTIVITIES OF CORNERSTONE, NOR THE PRESENCE OF CORNERSTONE'S EMPLOYEES AND SUBCONSULTANTS AT A CONSTRUCTION/PROJECT SITE SHALL RELIEVE THE GENERAL CONTRACTOR OF ITS OBLIGATIONS, DUTIES AND RESPONSIBILITIES INCLUDING, BUT NOT LIMITED TO: CONSTRUCTION MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING AND COORDINATING THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS AS MAY BE REQUIRED BY ANY AUTHORITY.
15. IF THE CONTRACTOR DEVIATES FROM THE PLANS AND SPECIFICATIONS, INCLUDING THE NOTES CONTAINED THEREON, WITHOUT FIRST OBTAINING PRIOR WRITTEN AUTHORIZATION FOR SUCH DEVIATIONS FROM THE OWNER AND ENGINEER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PAYMENT OF ALL COSTS TO CORRECT ANY WORK DONE, ALL FINES OR PENALTIES ASSESSED WITH RESPECT THERETO AND ALL COMPENSATORY OR PUNITIVE DAMAGES RESULTING THEREFROM AND IT SHALL INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ALL SUCH COSTS TO CONNECT ANY SUCH WORK AND FROM ALL SUCH FINES AND PENALTIES, COMPENSATION AND PUNITIVE DAMAGES AND COSTS OF ANY NATURE RESULTING THEREFROM.
16. THESE PLAN AND SPECIFICATION DOCUMENTS, AND ANY SUPPORTING DOCUMENTATION, ARE PREPARED SOLELY FOR THE USE BY THE PARTY WITH WHOM CORNERSTONE CONSULTING ENGINEERS & DESIGN SERVICES, INC HAS ENTERED INTO A CONTRACT AND THERE ARE NO REPRESENTATIONS OF ANY KIND MADE BY CORNERSTONE TO ANY PARTY WITH WHOM CORNERSTONE HAS NOT ENTERED INTO A CONTRACT.
17. ANY INFORMATION PROVIDED IN THE DESIGN DOCUMENTS RELATED TO SEQUENCING, PHASING, DESIGN TECHNIQUES SPECIFICATION OR DETAILING ARE PROVIDED FOR GENERAL GUIDANCE AS TO THE DESIRED END RESULT AND DESIGN INTENT AND IS NOT INTENDED TO REPLACE THE CONTRACTORS OBLIGATION IN: INVESTIGATING, THOROUGHLY UNDERSTANDING, APPROPRIATELY COORDINATING WITH THEIR SUB CONSULTANTS AND PROPERLY PRICING THE MEANS AND METHODS NECESSARY FOR PROPER AND SAFE COMPLETION OF THE PROJECT OR PHASE OF THE PROJECT.
18. CORNERSTONE AND THE ENGINEER OF RECORD ARE NOT RESPONSIBLE FOR ANY INJURY OR DAMAGES RESULTING FROM THE CONTRACTOR'S FAILURE TO BUILD AND/OR CONSTRUCT IN STRICT COMPLIANCE WITH THE APPROVED PLANS, CURRENT CODES, RULES, STATUTES, ETC. IF THE PROJECT, OR PORTION OF THE PROJECT IS NOT CONSTRUCTED, THEN CORNERSTONE AND THE ENGINEER OR ARCHITECT OR RECORD SHALL BE HELD HARMLESS.
19. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING RECORDS OF CONSTRUCTION THROUGHOUT THE PROCESS AND PROVIDE AN AS-BUILT AS COORDINATED WITH THE OWNER AT THE COMPLETION OF THE PROJECT.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENTS OR AGREEMENTS ON ADJOINING PROPERTIES TO GAIN ACCESS TO THE SITE FOR DEMOLITION AND CONSTRUCTION AS MAY BE IDENTIFIED BY THE CONTRACTOR BASED ON THEIR MEANS AND METHODS.
21. REFER TO OTHER PLANS SHEETS FOR ADDITIONAL NOTES, DETAILS, AND SPECIFICATIONS.

SAFETY NOTES

1. CORNERSTONE AND THE PROFESSIONAL OF RECORD ARE NOT RESPONSIBLE FOR JOB SITE SAFETY, SAFETY INQUIRIES OR SUPERVISION. THE CONTRACTOR SHALL CONDUCT ALL CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH OSHA STANDARDS AND REQUIREMENTS, TO ENSURE THE HEALTH AND SAFETY OF THE PUBLIC, TO ENSURE THE INTEGRITY OF THE SITE AND ANY EXISTING FEATURES TO REMAIN, AND IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A SECURE SITE.
3. THE CONTRACTOR IS RESPONSIBLE FOR ALL SHORING REQUIRED DURING EXCAVATION AND SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT OSHA STANDARDS, AS WELL AS ADDITIONAL PROVISIONS TO ASSURE STABILITY OF CONTIGUOUS STRUCTURES, AS FIELD CONDITIONS DICTATE.
4. THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OSHA GUIDELINES AND ALL RULES AND REGULATIONS THAT APPLY.
5. WHEN CONSTRUCTION ACTIVITIES IMPACT ROADWAYS, PARKING LOTS AND PEDESTRIAN ROUTES, THE CONTRACTOR MUST PROVIDE TRAFFIC CONTROL AND GENERALLY ACCEPTED SAFETY PRACTICES IN CONFORMANCE WITH THE CURRENT FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES' (MUTCD) AND FEDERAL, STATE AND LOCAL POLICIES, REQUIREMENTS, AND REGULATIONS.

INSPECTION NOTES

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE INSPECTION REQUIREMENTS FOR THE PROJECT. AT A MINIMUM, THE CONTRACTOR SHALL PROVIDE THE INSPECTION ENTITY WITH A MINIMUM OF TWO BUSINESS DAYS' NOTICE FOR SCHEDULING OF INSPECTIONS, OR AS OTHERWISE OUTLINED IN THE PERMIT, APPROVAL, OR LAND DEVELOPMENT AGREEMENT. REQUESTS SHALL BE IN WRITING, OR IF COMPLETED WITH A PHONE CALL, THE CONTRACTOR SHALL RETAIN A WRITTEN RECORD OF THE REQUEST, TO BE SUPPLIED TO THE OWNER IF REQUESTED.
2. IT SHALL BE THE CONTRACTORS OBLIGATION TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH THECOUNTY AND ANY OTHER PERMITTING ENTITIES WHERE A PRE-CONSTRUCTION MEETING IS A REQUIREMENT.
3. THE CONTRACTOR SHALL PERFORM ANY SELF-INSPECTION FORMS REQUIRED BY MUNICIPAL, STATE, OR FEDERAL AGENCIES, AND HAVE COPIES ON-SITE OR READILY AVAILABLE IF REQUESTED.
4. THE PRESENCE OF CORNERSTONE ON SITE DOES NOT REMOVE THE OBLIGATION OF THE CONTRACTOR TO DIRECTLY COORDINATE INSPECTIONS WITH THE GOVERNING BODY.
5. SHOULD THE PROJECT NEED ANY CRITICAL STAGE REVIEWS AS A PART OF THE NPDES PERMIT, IT SHALL BE THE CONTRACTORS SOLE RESPONSIBILITY TO SCHEDULE THE SITE REVIEW WITH THE APPROPRIATE DESIGN PROFESSIONAL AT THE SPECIFIC STAGES NOTED ON THE PLANS. REFER TO THE PCSM PLANS FOR THE CRITICAL STAGE REVIEW. CORNERSTONE CANNOT SIGN OFF ON THE NPDES NOTICE OF TERMINATION (NOT) IF THE CRITICAL STAGE REVIEWS ARE NOT COMPLETED. ANY ADDITIONAL SERVICES OR RE-CONSTRUCTION RESULTING FROM THE CONTRACTORS LACK OF SCHEDULING SHALL BE AT THE CONTRACTORS COST.

CONTRACTOR SUBMITTALS & REQUESTS FOR INFORMATION

1. THE CONTRACTOR SHALL COORDINATE WITH THECOUNTY ON THEIR SUBMITTAL SUBMISSION AND REVIEW PROCESS AND IS RESPONSIBLE FOR MANAGING THE PROCESS. SHOULD THE CONTRACTOR REQUIRE CORNERSTONE OR THE PROFESSIONAL OF RECORD TO REVIEW ANY SUBMITTALS, THEY SHALL IDENTIFY THE NEED PRIOR TO THE START OF CONSTRUCTION SO THAT CORNERSTONE CAN COORDINATE WITH THE OWNER/DEVELOPER. THE OWNER /DEVELOPER OR CORNERSTONE WILL ADVISE IF THE OWNER/DEVELOPER WILL HANDLE SUBMITTAL REQUESTS DIRECTLY.
2. THE CONTRACTOR SHALL PROVIDE SUBMITTALS WITH A COVER SHEET OUTLINING THE CONTENTS OF THE SUBMITTAL, ALONG WITH SPECIFIC ITEMS NOTED TO BE REVIEWED FOR THE SUBMITTAL. SUBMITTALS WHICH PROVIDE AN ENTIRE CATALOGUE AND/OR DESIGN GUIDELINES WITH NO INFORMATION NOTED WILL BE REJECTED.
3. ANY SHOP DRAWINGS OR SUBMITTALS PROVIDED TO THE ARCHITECT OR ENGINEER IS ONLY FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH THE DESIGN INTENT AND THE INFORMATION SHOWN IN THE PLANS. THE CONSTRUCTION MEANS OR METHODS, COORDINATION OF THE WORK WITH OTHER TRADES OR CONSTRUCTION SAFETY PRECAUTIONS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
4. REVIEW OF A SPECIFIC ITEM SHALL NOT INDICATE THAT THE ENGINEER OR ARCHITECT HAS REVIEWED THE ENTIRE ASSEMBLY OF WHICH THE ITEM IS A COMPONENT AND SHALL NOT BE RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS NOT BROUGHT TO THE ATTENTION OF THE ENGINEER OR ARCHITECT IN WRITING BY THE CONTRACTOR.
5. CORNERSTONE AND THE PROFESSIONAL OF RECORD WILL ADDRESS REQUESTS FOR INFORMATION, QUESTIONS AND POTENTIAL DISCREPANCIES FROM THE CLIENT, AUTHORIZED CLIENT MANAGER, OR GENERAL CONTRACTOR. CORNERSTONE AND THE DESIGN PROFESSIONAL WILL NOT RESPOND TO AN RFI OR DISCUSS AN RFI SUBMITTED DIRECTLY FROM SUBCONTRACTORS.
6. CONTRACTOR SHALL PROVIDE A MINIMUM OF THREE (3) BUSINESS DAYS FOR CORNERSTONE TO REVIEW SUBMITTAL REQUESTS.
7. SUBMITTALS AND RFI SUBMISSIONS SHALL NOT BE SUBMITTED FOR THE REVIEW OF WORK CUSTOMARILY PROVIDED BY THE CONTRACTOR, THE CONTRACTOR'S SUBCONTRACTOR OR SUPPLIERS.

GENERAL UTILITY NOTES

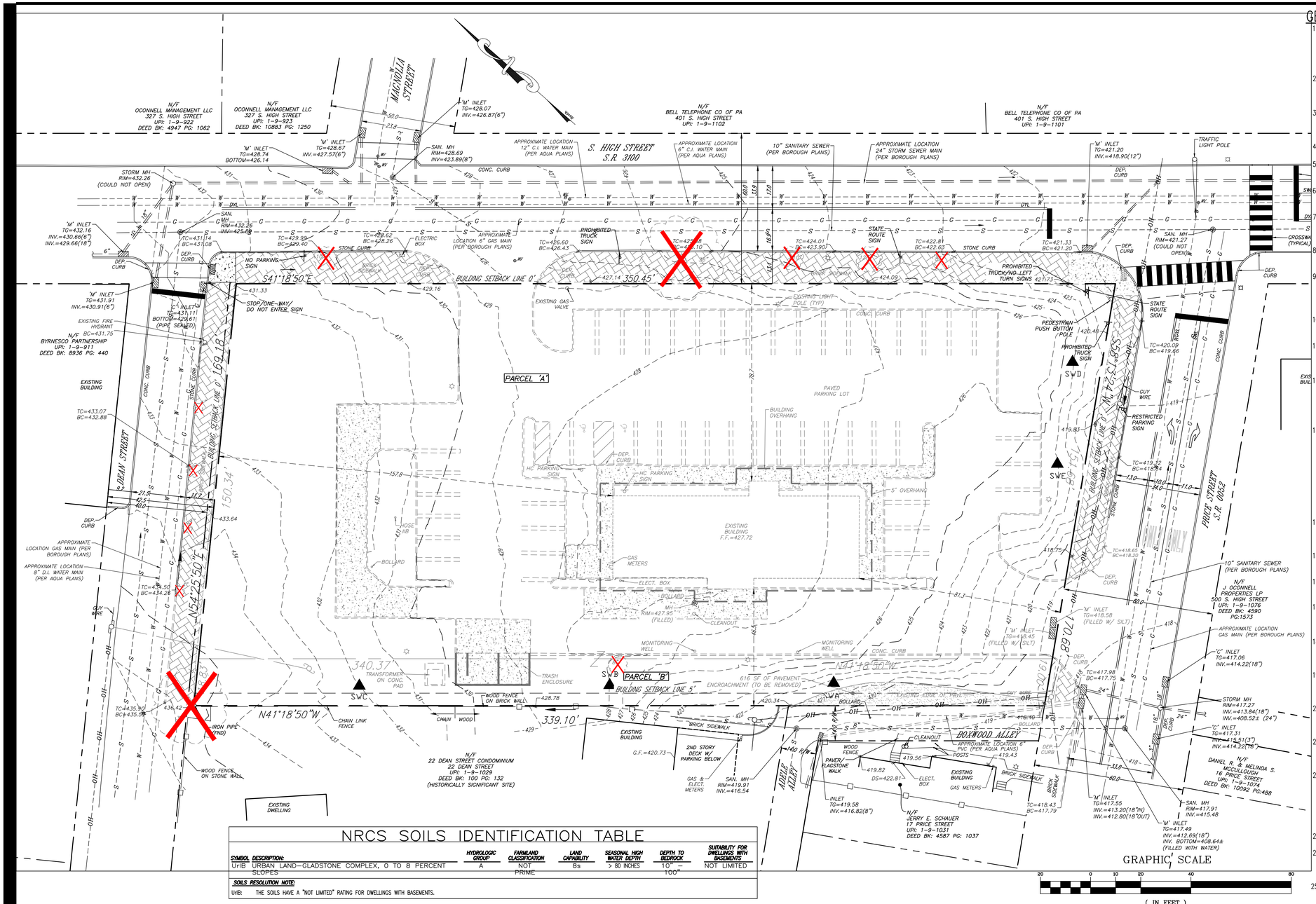
1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY UTILITY 'ONE-CALL' NUMBER A MINIMUM 72 HOURS PRIOR TO ANY EXCAVATION ON THIS SITE. CONTRACTOR SHALL ALSO INDEPENDENTLY NOTIFY LOCAL WATER AND SEWER DEPARTMENTS TO MARK OUT THEIR UTILITIES.
2. LOCATION OF ALL EXISTING AND PROPOSED SERVICES ARE APPROXIMATE AND MUST BE CONFIRMED INDEPENDENTLY WITH LOCAL UTILITY COMPANIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION OR EXCAVATION. SANITARY SEWER AND ALL OTHER UTILITY SERVICE CONNECTION POINTS SHALL BE CONFIRMED INDEPENDENTLY BY THE CONTRACTOR IN FIELD PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. ALL DISCREPANCIES SHALL BE REPORTED IMMEDIATELY IN WRITING TO THE ENGINEER. CONSTRUCTION SHALL COMMENCE BEGINNING AT THE LOWEST INVERT (POINT OF CONNECTION) AND PROGRESS UP GRADIENT. INTERFACE POINTS (CROSSINGS) WITH EXISTING UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY TEST PIT PRIOR TO COMMENCEMENT OR CONSTRUCTION.
3. LOCATIONS ON THE PLAN DESIGNATED WITH AN ASTERISK (*) ARE LOCATIONS INTENDED TO MATCH EXISTING GRADES OR EXISTING INVERTS. THESE LOCATIONS HAVE BEEN INTERPOLATED AND/OR CALCULATED AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES.
4. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT BUILDING UTILITY CONNECTION LOCATION. WHERE CONFLICTS EXIST WITH THESE SITE PLANS, ENGINEER IS TO BE NOTIFIED PRIOR TO CONSTRUCTION TO RESOLVE SAME. SERVICE SIZES TO BE DETERMINED BY ARCHITECT.
5. ALL EXISTING CAPS, LIDS, RIMS, ETC. TO REMAIN SHALL BE RESET FLUSH WITH PROPOSED GRADE.
6. CONTRACTOR SHALL COORDINATE WITH ADJOINING PROPERTY OWNERS FOR ANY DISRUPTION OF SERVICE.
7. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SCHEDULE FOR INSTALLATION WITH THE RESPECTIVE UTILITY COMPANIES AND THE OWNER.
8. ALL EXISTING IMPROVEMENTS THAT ARE ALTERED OR DEMOLISHED SHALL BE REPLACED OR REPAIRED TO RESTORE THE AREA TO AT LEAST ITS ORIGINAL CONDITION, UNLESS OTHERWISE DICTATED BY THE PLANS, SPECIFICATIONS, PERMIT OR ANY MUNICIPAL, MUNICIPAL AUTHORITY OR STATE REQUIREMENT.
9. ANY TRENCHING REQUIRED FOR THE INSTALLATION OF UTILITIES SHALL MEET ALL APPLICABLE OSHA REQUIREMENTS.
10. UNDERGROUND UTILITY LINES SHALL BE INSTALLED, INSPECTED AND APPROVED PRIOR TO BACKFILLING.
11. THESE DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES. PLANS ARE BASED ON SURVEY OF VISIBLE FIELD EVIDENCE, ONE CALL AND ANY PLANS PROVIDED BY THE UTILITY COMPANY AND OWNER.
12. ALL RIM ELEVATIONS ARE APPROXIMATE, AND THE CONTRACTOR SHALL ENSURE THAT THE LID OR GRATE ARE FLUSH WITH PAVEMENT OR CONCRETE GRADE.
13. SECURELY CLOSE ALL OPEN ENDS OF THE PIPE AND ANY FITTINGS WITH A WATERTIGHT PLUG WHEN WORK IS NOT IN PROGRESS.
14. THE DEFLECTION OF PIPE JOINTS AND CURVATURE OF PIPE SHALL NOT EXCEED THE MORE STRINGENT OF THE MANUFACTURERS SPECIFICATION OR THE MUNICIPAL AUTHORITY REQUIREMENT.
15. CONTRACTOR SHALL PROVIDE HYDROSTATIC AND LEAKAGE TESTING FOR WATER MAINS AS REQUIRED BY THECOUNTY OR MUNICIPAL AUTHORITY. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY ON WHETHER LATERAL AND SERVICE CONNECTIONS MUST BE TESTED AND WITNESSED BY THE RESPECTIVE UTILITY. IF THE UTILITY COMPANY OR MUNICIPAL AUTHORITY DOES NOT HAVE A SPECIFIED TESTING METHOD, THE CONTRACTOR SHALL FOLLOW AWWA PROCEDURES.
16. THE INTERIOR OF ALL PIPES SHALL BE CLEAN AND THE JOINT SURFACES SHALL BE WIPED CLEAN AND DRY AFTER THE PIPE HAS BEEN LOWERED INTO THE TRENCH.
17. AT LEAST THREE WEEKS PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL NOTIFY THECOUNTY AND UTILITY COMPANIES OF THE PENDING WORK AND PROVIDE THEM WITH A SCHEDULE, SUB-CONSULTANT NAMES AND CONTACT INFORMATION AND SUPPLY THEM WITH SHOP DRAWINGS.
18. THE CONTRACTOR SHALL CONTACT THE BOROUGH'S INSPECTION OFFICE TO ENSURE ALL REQUIRED INSPECTIONS ARE COORDINATED.
19. TREES SHALL NOT BE PLACED OVER UNDERGROUND UTILITIES
20. THE CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODE, UTILITY SERVICE COMPANIES, AND/OR ANY INSPECTOR. THIS AND THE FINAL CONNECTIONS OF THE SERVICE SHALL BE COMPLETED 30 DAYS PRIOR TO POSSESSION, UNLESS OTHERWISE WAIVED BY THE OWNER.
21. A MINIMUM HORIZONTAL DISTANCE OF 10-FEET SHALL BE MAINTAINED BETWEEN SANITARY SEWER AND WATER LINES OR OTHER SOURCES OF WATER CONTAMINATION. IN INSTANCES WHERE WATER AND SEWER LINES ARE APPROVED TO BE IN THE SAME TRENCH OR CROSS EACH OTHER, THE BOTTOM OF THE WATER LINE SHALL BE A MINIMUM EIGHTEEN INCHES ABOVE THE TOP OF THE SANITARY LINE (OR OTHER LINE). IN CASES WHERE THE SEPARATION IS NOT MET, CONCRETE ENCASEMENT MAY BE REQUIRED. THE CONTRACTOR SHALL COORDINATE ANY CROSSING WITH THE UTILITY COMPANIES PRIOR TO, AND DURING CONSTRUCTION TO DETERMINE WHETHER ADDITIONAL CONCRETE SUPPORTS ARE NEEDED.
22. IN INSTANCES WHERE A WATER AND SEWER LINE CROSS AND THE BOTTOM OF THE WATER LINE IS NOT 18-INCHES MINIMUM ABOVE SEWER LINE, THE WATER LINE OR SEWER LINE MUST BE ENCASED IN WATERTIGHT PIPE EXTENDING A MINIMUM OF 10-FEET, OR BY USE OF ANOTHER METHOD ACCEPTABLE TO BOTH UTILITY COMPANIES, IN EACH DIRECTION FROM THE CROSSING. THE WATER TIGHT PIPE SHALL ALSO BE WATER TIGHT AT THE ENDS. ANY JOINT IN THE ENCASEMENT IS TO BE MECHANICALLY RESTRAINED. IN INSTANCES WHERE THE WATERLINE MUST BE BELOW THE SANITARY SEWER, THE TOP OF THE WATERLINE SHALL BE A MINIMUM 18-INCHES FROM THE BOTTOM OF THE SANITARY PIPE, AND ENCASED IN THE MANNER DESCRIBED ABOVE.
23. THE CONTRACTOR MAY BE REQUIRED TO ENCASE WATER LINES WITH CROSSINGS OF OTHER TYPES OF UTILITIES IF UTILITY COMPANY FEELS THAT THERE IS A RISK OF CONTAMINATION, OR FOR ADDITIONAL PROTECTION OF THE UTILITIES.
24. ALL UNDERGROUND STORMWATER SYSTEMS SHALL BE TELEVISED PRIOR TO RELEASE OF THE FINANCIAL SECURITY.

GRADING NOTES

1. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT REFERENCED IN THIS PLAN SET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ALL SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE SOILS REPORT. UNLESS A MORE STRINGENT REQUIREMENT IS SET FORTH IN A GEOTECHNICAL REPORT, ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DENSITY PER A.S.T.M. TEST D-1557. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT EXCEED 2% ABOVE NOR 3% BELOW OPTIMUM. CONTRACTOR SHALL SUBMIT A COMPACTION REPORT PREPARED BY A QUALIFIED SOILS ENGINEER, REGISTERED WITHIN THE STATE WHERE THE WORK IS PERFORMED, VERIFYING THAT ALL FILLED AREAS AND SUBGRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT.
2. AREAS OF BULK FILL SHALL BE INSTALLED AS RECOMMENDED IN THE GEOTECHNICAL REPORT. IN THE ABSENCE OF A GEOTECHNICAL REPORT, FILL AREAS SHALL BE INSTALLED IN ACCORDANCE WITH THE NOTE ABOVE. CONTRACTOR SHALL PROVIDE DENSITY TESTING FROM A CERTIFIED GEOTECHNICAL FIRM FOR ALL ROAD BASES, AREAS TO BE USED FOR THE FOUNDATION OF STRUCTURES, OR ANY AREAS OF FILL WHERE SETTLEMENT WILL RESULT IN DAMAGE TO SURFACE IMPROVEMENTS. THE CONTRACTOR IS TO INCLUDE IN THE BID AND CONTRACT THE COST FOR THE TESTING.
3. CONTRACTOR IS RESPONSIBLE FOR THE DETERMINATION OF THE SITE CUTS/ FILLS AND IMPORTS/EXPORTS PRIOR TO PROVIDING A BID. THE CONTRACTOR SHALL REVIEW THE GEOTECHNICAL REPORT IN CONJUNCTION WITH THEIR MEANS AND METHODS TO DETERMINE POTENTIAL SOILS SWELL AND LOSS FACTORS AND POTENTIAL FOR ROCK, UNSUITABLE SOILS OR SINKHOLES.
4. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING TOPOGRAPHIC INFORMATION AND UTILITY INVERT ELEVATIONS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION. CONTRACTOR TO ENSURE 1% MIN. SLOPE AGAINST ALL ISLANDS GUTTERS, CURBS AND 2.0% ON ALL CONCRETE SURFACES, AND 2.0% MIN. ON ASPHALT, EXCEPT AS NOTED ON PLANS. ANY DISCREPANCIES THAT MAY AFFECT THE PUBLIC SAFETY OR PROJECT COST, MUST BE IDENTIFIED TO THE ENGINEER IN WRITING IMMEDIATELY. PROCEEDING WITH CONSTRUCTION WITH DESIGN DISCREPANCIES IS DONE SO AT THE CONTRACTOR'S OWN RISK.
5. LOCATIONS ON THE PLAN DESIGNATED WITH AN ASTERISK (*) ARE LOCATIONS INTENDED TO MATCH EXISTING GRADES OR EXISTING INVERTS. THESE LOCATIONS HAVE BEEN INTERPOLATED AND/OR CALCULATED AND MUST BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES.
6. SPOT GRADES ARE SHOWN WITH A TC (TOP OF CURB) SHOWING THE ELEVATION AT THE TOP OF CURB AND BC (BOTTOM OF CURB) IDENTIFYING THE GRADE. TC/BC IDENTIFIES THAT THE CURB IS TO BE FLUSH CURB. BC DOES NOT REPRESENT THE BOTTOM OF THE CURB STRUCTURE. REFER TO THE CURB DETAILS FOR FURTHER INFORMATION.
7. SUBBASE MATERIAL FOR SIDEWALKS, CURB, OR ASPHALT SHALL BE FREE OF ORGANICS AND OTHER UNSUITABLE MATERIALS. SHOULD SUBBASE BE DEEMED UNSUITABLE, SUBBASE IS TO BE REMOVED AND FILLED WITH APPROVED FILL MATERIAL COMPACTED TO 95% OPTIMUM DENSITY (AS DETERMINED BY MODIFIED PROCTOR METHOD).
8. IN CASE OF DISCREPANCIES BETWEEN PLANS, NOTIFY ENGINEER OF RECORD OF ANY CONFLICT THROUGH A REQUEST FOR INFORMATION.
9. ALL PAVEMENT SLOPES WITHIN HANDICAP PARKING AREAS, ACCESSIBLE ROUTES AND RAMPS SHALL MEET ADA REQUIREMENTS.
10. ALL EXISTING CAPS, LIDS, RIMS, ETC. TO REMAIN SHALL BE RESET FLUSH WITH PROPOSED GRADE.
11. SITE IS LOCATED OUTSIDE OF THE 100 YR. AND 500 YR. FLOOD ZONE.
12. THE CONTRACTOR SHALL ADHERE TO ALL TERMS AND CONDITIONS AS OUTLINED IN THE NPDES PERMIT FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES AS APPLICABLE.
13. ALL PAVING AND GRADING CONSTRUCTION ACTIVITIES SHALL MEET THE REQUIREMENTS OF THECOUNTY.
14. ALL GRADED SLOPES SHALL BE GRADED TO A SLOPE OF 3H:1V OR FLATTER UNLESS OTHERWISE NOTED ON THE PLANS. IN INSTANCES WHERE THE SLOPE IS STEEPER THAN 3H:1V, THE SLOPE SHALL BE STABILIZED IMMEDIATELY WITH SEED AND EROSION CONTROL MATTING INSTALLED TO THE MANUFACTURE'S RECOMMENDATIONS.
15. IF ANY EXISTING STRUCTURES, INCLUDING BUT NOT LIMITED TO SIDEWALK, PAVEMENT, UTILITIES, BUILDINGS, LANDSCAPING, WALLS, ETC. THAT ARE TO REMAIN ARE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR, AT THEIR EXPENSE, SHALL REPAIR OR REPLACE THE STRUCTURE TO RETURN IT THE EXISTING CONDITION OR BETTER.
16. THE CONTRACTOR SHALL ENSURE THAT PLANTING AREAS ARE NOT COMPACTED AND THAT THEY DO NOT CONTAIN MATERIALS THAT WILL BE AN IMPEDIMENT TO THE GROWTH OF ANY PROPOSED LANDSCAPING.
17. THE CONTRACTOR SHOULD NOTE THAT DEWATERING MAY BE REQUIRED DEPENDING ON THE SEASON IN WHICH CONSTRUCTION OCCURS.
18. GRADING IN AREAS OF INFILTRATION SHALL BE COMPLETED WITH A MEANS AND METHODS THAT SHALL NOT COMPACT THE SOILS AT THE BMP/SOIL INTERFACE. REFER TO THE PCSM PLAN AND PLAN NOTES FOR ADDITIONAL REQUIREMENTS.
19. GRADING DURING CONSTRUCTION AND FOR FINAL GRADE SHALL BE CONDUCTED IN SUCH A MANNER THAT THERE THIS NO PONDING OF WATER AND THAT RUNOFF FLOWS AWAY FROM BUILDING STRUCTURES AND TRENCHES. CONTRACTOR SHALL EMPLOY NECESSARY MEASURES TO PROTECT BASIN, DRAINAGE AND STRUCTURE AREAS.
20. IN KARST AREAS, THE CONTRACTOR SHALL ENSURE THERE IS NO PONDED WATER AND SHALL CHECK THE SITE AFTER EVERY RAIN EVENT FOR SINKHOLE DEVELOPMENT. SHOULD A SINKHOLE BE FOUND, THE CONTRACTOR SHALL CONTACT THE OWNER AND A GEOTECHNICAL ENGINEER FOR RESOLUTION.
21. PREPARATION OF A GEOTECHNICAL REPORT WAS NOT IN CORNERSTONE'S PROVIDED SCOPE TO THE CLIENT AND TO THE KNOWLEDGE OF CORNERSTONE A GEOTECHNICAL REPORT HAS NOT BEEN PROVIDED, THEREFORE IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY ANY BEARING PRESSURES AND SOIL CONDITIONS PRIOR TO INSTALLATION OF ANY STRUCTURAL IMPROVEMENTS OR COORDINATE WITH THE CLIENT TO OBTAIN FURTHER INFORMATION.

GENERAL DRAINAGE NOTES

1. ALL INLETS SHALL BE INSTALLED SO THAT ANY TOP UNIT ADJUSTMENT WILL NOT RESULT IN MORE THAN 1-INCH OVERHANG IN ANY LOCATION ON THE PRECAST BOX.
2. ALL DRAINAGE INLETS SHALL BE PENNDOT PRECAST INLETS WITH A PENNDOT TOP UNIT AND BICYCLE SAFE GRATE UNLESS OTHERWISE SPECIFIED. INLETS GREATER THAN 5-FEET DEEP SHALL BE PROVIDED WITH INTEGRAL LADDER/STEPS.
3. YARD DRAINS SHALL BE PRECAST CONCRETE BOXES.
4. ALL INLETS AND YARD DRAINS SHALL BE PARGED AND ANY PIPE TRIMMED TO BE FLUSH WITH THE INTERIOR WALL OF THE INLET.
5. IT SHALL BE THE CONTRACTORS' RESPONSIBILITY TO PROTECT STORM WATER INFILTRATION AREAS AND TO PROVIDE CONFIRMATION INFILTRATION TESTING BY A QUALIFIED GEOLOGIST OR ENGINEER, OR THEIR REPRESENTATIVE, TO THE DESIGN ENGINEER



NRCS SOILS IDENTIFICATION TABLE

SYMBOL	DESCRIPTION:	HYDROLOGIC GROUP	FARMLAND CLASSIFICATION	LAND CAPABILITY	SEASONAL HIGH WATER DEPTH	DEPTH TO BEDROCK	SUITABILITY FOR DWELLINGS WITH BASEMENTS
UrlB	URBAN LAND–GLADSTONE COMPLEX, 0 TO 8 PERCENT SLOPES	A	NOT PRIME	6s	> 80 INCHES	10"– 100"	NOT LIMITED

SOILS RESOLUTION NOTE:

UrlB: THE SOILS HAVE A "NOT LIMITED" RATING FOR DWELLINGS WITH BASEMENTS.

CURRENT RECORD LEGAL DESCRIPTION

ALL THAT CERTAIN LOT OF LAND SITUATE IN THE SAID BOROUGH OF WEST CHESTER, COUNTY OF CHESTER, COMMONWEALTH OF PENNSYLVANIA, BOUNDED AND DESCRIBED AS FOLLOWS, TO WIT:

BEGINNING AT THE SOUTHWEST CORNER OF DEAN AND HIGH STREETS; THENCE SOUTHWARDLY ALONG THE WEST LINE OF HIGH STREET ABOUT 354 FEET TO THE NORTH LINE OF PRICE STREET; THENCE ALONG THE LINE OF PRICE STREET ABOUT 152 FEET TO LANDS OF ALFRED D. SHARPLES; THENCE NORTHWARDLY ALONG SAID LANDS BY A LINE PARALLEL WITH HIGH STREET AND DISTANT THEREFROM MEASURED AT RIGHT ANGLES 150 FEET ABOUT 344 FEET TO THE SOUTH LINE OF DEAN STREET; THENCE EASTWARDLY ALONG THE LINE OF DEAN STREET ABOUT 150 ⅔ FEET TO THE PLACE OF BEGINNING.

AND ALSO ALL THAT CERTAIN LOT OF LAND SITUATE IN THE BOROUGH OF WEST CHESTER AFORESAID BOUNDED AND DESCRIBED AS FOLLOWS, TO WIT:

BEGINNING AT A POINT IN THE SOUTH LINE OF DEAN STREET; THENCE SOUTHWARDLY BY A LINE PARALLEL WITH THE WEST LINE OF HIGH STREET AND 150 FEET DISTANT THEREFROM (MEASURED AT RIGHT ANGLES) TO THE NORTH LINE OF PRICE STREET ABOUT 342 FEET; THENCE WESTWARDLY ALONG THE LINE OF PRICE STREET ABOUT 19 FEET; THENCE NORTHWESTWARDLY ALONG OTHER LAND OF ALFRED D. SHARPLES BY A LINE PARALLEL WITH THE FIRST MENTIONED LINE AND DISTANT THEREFROM 19 FEET TO THE SOUTH LINE OF DEAN STREET ABOUT 343 FEET; THENCE EASTWARDLY ALONG THE LINE OF DEAN STREET ABOUT 19 FEET TO THE PLACE OF BEGINNING.

BEING THE SAME PREMISES WHICH GARY D. SALUTI AND SUZANNE M. DUNPHY, AS CO-ADMINISTRATORS OF THE ESTATE OF VERDOINE DON SALUTI A/K/A V. DON SALUTI A/K/A V.D., SALUTI, DECEASED BY DEED DATED 4/18/06 AND RECORDED 5-3-06 IN CHESTER COUNTY, PA, IN RECORD BOOK 6832 PAGE 201 CONVEYED UNTO GARY D. SALUTI AND SUZANNE M. DUNPHY, AS TENANTS IN COMMON, IN FEE.

NEW RECORD LEGAL DESCRIPTION

ALL THAT CERTAIN PARCEL OF LAND SITUATE IN THE BOROUGH OF WEST CHESTER, COUNTY OF CHESTER, COMMONWEALTH OF PENNSYLVANIA, BOUNDED AND DESCRIBED AS FOLLOWS, TO WIT:

BEGINNING AT THE PLACE OF BEGINNING LOCATED AT THE SOUTHWEST CORNER OF DEAN STREET (40 FEET WIDE) AND HIGH STREET (60 FEET WIDE); THENCE ALONG THE WEST LINE OF HIGH STREET SOUTH 41 DEGREES 18 MINUTES 50 SECONDS EAST 2.54 FEET TO THE PROPOSED WIDENED RIGHT-OF-WAY LINE OF DEAN STREET (45 FEET WIDE); THENCE CROSSING SAID WIDENED RIGHT-OF-WAY LINE OF DEAN STREET AND TRAVELING ALONG THE WEST LINE OF HIGH STREET SOUTH 41 DEGREES 18 MINUTES 50 SECONDS EAST 347.91 TO THE NORTH LINE OF PRICE STREET (60 FEET WIDE); THENCE ALONG THE LINE OF PRICE STREET SOUTH 58 DEGREES 13 MINUTES 24 SECONDS WEST 170.68 FEET TO THE WEST LINE OF BOXWOOD ALLEY (14 FEET WIDE); THENCE ALONG THE LINE OF BOXWOOD ALLEY AND LANDS NOW OR FORMERLY 22 DEAN STREET CONDOMINIUM NORTH 41 DEGREES 18 MINUTES 50 SECONDS WEST 336.59 FEET TO THE PROPOSED WIDENED RIGHT-OF-WAY LINE OF DEAN STREET (45 FEET WIDE); THENCE CROSSING SAID WIDENED RIGHT-OF-WAY LINE OF DEAN STREET AND TRAVELING ALONG LANDS NOW OR FORMERLY 22 DEAN STREET CONDOMINIUM NORTH 41 DEGREES 18 MINUTES 50 SECONDS WEST 2.51 FEET TO THE SOUTH LINE OF DEAN STREET; THENCE ALONG THE LINE OF DEAN STREET NORTH 54 DEGREES 25 MINUTES 50 SECONDS EAST 169.18 FEET TO THE FIRST MENTIONED POINT AND PLACE OF BEGINNING.

GENERAL NOTES

1. BOUNDARY AND IMPROVEMENTS SHOWN BY PHYSICAL FIELD SURVEY PERFORMED BY PADULA ENGINEERING COMPANY IN JULY & AUGUST 2022. ELEVATIONS BASED ON NAVD88 DATUM OBTAINED BY GPS OBSERVATION TAKEN ON AUGUST 6, 2022. PLAN COORDINATES REFER TO THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM NAD83 OBTAINED BY GPS OBSERVATION TAKEN ON AUGUST 6, 2022.
2. SOURCE OF TITLE: DEED BOOK: 6832 PAGE: 201 & COMMONWEALTH LAND TITLE INSURANCE COMPANY COMMITMENT NO. PHI222437, DATED JULY 20, 2022.
3. FEMA FLOOD MAP NUMBER 42029C0210G, EFFECTIVE ON 09/29/17 INDICATES THAT THE PROPERTY IS LOCATED WITHIN ZONE X, AREA OF MINIMAL FLOOD HAZARD, AND IS OUTSIDE OF THE 100-YEAR FLOODPLAIN.
4. THERE ARE NO KNOWN WETLANDS LOCATED ON SITE PER NATIONAL WETLAND INVENTORY MAPS.
5. SOILS PLOTTED FROM NATIONAL RESOURCES CONSERVATION DISTRICT (NRCS) WEB SOIL SURVEY, BY THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA).
6. THE SITE IS LOCATED WITHIN THE PLUM RUN CREEK WATERSHED WHICH HAS A CHAPTER 93 STREAM CLASSIFICATION OF WARM WATER FISHES, MIGRATORY FISH (WWF, MF).
7. UNDERGROUND UTILITIES SHOWN WERE PLOTTED FROM OBSERVABLE EVIDENCE AT THE TIME OF SURVEY AND INFORMATION FROM PLANS SUPPLIED BY UTILITY COMPANIES. NO GUARANTEE IS MADE THAT UNDERGROUND UTILITIES ARE ACCURATELY OR COMPLETELY SHOWN HEREON.
8. THE EXISTING BUILDING IS SERVICED BY PUBLIC WATER AND SEWER. THE PROPOSED BUILDING SHALL BE SERVICED BY PUBLIC WATER AND SEWER.
9. CONCRETE MONUMENTS SHOWN THUS (■) SHALL BE PLACED WHERE INDICATED, IRON PINS SHOWN THUS (●) SHALL BE PLACED WHERE INDICATED. IN INSTANCES WHERE IRON PINS CANNOT BE SET AT LOT CORNERS DUE TO PHYSICAL FEATURES, A PERMANENT MARKING SHALL BE MADE ON SAID STRUCTURE FOR LOT DEEDS TO REFERENCE.
10. REFER TO ARCHITECTURAL PLANS FOR EXACT DIMENSIONS OF THE PROPOSED BUILDING AND EXACT LOCATIONS OF THE PROPOSED BUILDING UTILITY SERVICE LINES/LATERALS.
11. ALL PROPOSED DWELLING UNITS SHALL HAVE PARKING SPACES WITHIN THE GARAGE AREAS. ALL RESIDENTIAL PARKING SPACES SHALL BE NUMBERED (PAINTED) AND ASSIGNED TO THE RESIDENTS OF THE BUILDING.
12. REQUIRED PERMITS AND APPROVALS INCLUDE, BUT ARE NOT LIMITED TO: BOROUGH SUBDIVISION AND LAND DEVELOPMENT APPROVAL, PENNDOT HIGHWAY OCCUPANCY PERMIT, PADEP SEWAGE FACILITIES PLANNING MODULE EXEMPTION APPROVAL, PADEP GENERAL NPDES PERMIT, CHESTER COUNTY CONSERVATION DISTRICT APPROVAL, AQUA PA APPROVAL.
13. STORMWATER MANAGEMENT FACILITIES SHALL BE OWNED AND MAINTAINED BY A PROPERTY OWNER. THE PROPERTY OWNER SHALL BE DEED RESTRICTED FROM REMOVAL OR MODIFYING THE STORMWATER FACILITIES WITHOUT APPROVAL FROM THE BOROUGH. THE BOROUGH SHALL HAVE THE RIGHT, NOT THE OBLIGATION, TO ENTER THE PROPERTY TO INSPECT THE FACILITIES. THE PROPERTY OWNER SHALL BE REQUIRED TO ENSURE PROPER MAINTENANCE OF THE FACILITIES OCCURS AT ALL TIMES. A BLANKET EASEMENT SHALL BE PROVIDED TO THE BOROUGH FOR MAINTENANCE AND REPAIR OF THE STORMWATER MANAGEMENT FACILITIES WITHIN THE PROJECT. THE BOROUGH SHALL HAVE THE RIGHT, BUT NOT THE OBLIGATION TO ENTER THE SITE AND MAINTAIN AND REPAIR THE STORMWATER MANAGEMENT FACILITIES IF THE PROPERTY OWNER DEFAULTS ON THEIR RESPONSIBILITIES.
14. AN AS-BUILT DRAWING AND AN EXPLANATION OF ANY DISCREPANCIES WITH THE DESIGN PLANS SHALL BE SUBMITTED TO THE BOROUGH FOR APPROVAL, WITHIN 30 DAYS OF AFTER COMPLETION OF THE STORMWATER MANAGEMENT FACILITIES.
15. THE PROPERTY OWNER SHALL ALSO BE RESPONSIBLE FOR THE OWNERSHIP AND MAINTENANCE OF ALL UTILITY LATERALS.
16. CENTRAL MAILBOX LOCATION(S) SHALL BE PROVIDED FOR THE DEVELOPMENT AT LOCATIONS SPECIFIED BY POST OFFICE.
17. ALL PROPOSED SIDEWALKS AND WALKWAYS SHALL BE ALL WEATHER SURFACES AND COMPLY WITH CURRENT ADA REQUIREMENTS. SIDEWALKS TO BE RECONSTRUCTED/REPLACED SHALL USE CLAY-FIRED BRICK.
18. TRASH COLLECTION FOR ALL UNITS IS TO BE PRIVATE AND CONTRACTED THROUGH THE PROPERTY OWNER. TRASH COLLECTION FOR EACH UNIT IS TO BE PROVIDED AT A CENTRAL LOCATION ON THE PROPERTY.
19. A BLANKET PEDESTRIAN EASEMENT SHALL BE PROVIDED FOR ALL SIDEWALKS THAT ENCROACH WITHIN THE DEVELOPMENT AND CAN BE FOUND ALONG SOUTH HIGH STREET, PRICE STREET, AND DEAN STREET. THE SIDEWALKS SHALL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER.
20. SNOW REMOVAL AND A SNOW REMOVAL PLAN SHALL BE INCLUDED IN THE PROPERTY OWNER DOCUMENTS. A BLANKET EASEMENT FOR SNOW REMOVAL WILL BE PROVIDED WITHIN THE RECREATION AREA ALONG PRICE STREET.
21. ALL TRAFFIC CONTROL SIGNS MUST BE POSTED ON PENNDOT APPROVED BREAKAWAY POSTS IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE TC-8700 SERIES IN PENNDOT PUBLICATION 111M.
22. ALL PROPOSED PEDESTRIAN FACILITIES REFLECTED ON THESE PLANS SHALL BE CONSTRUCTED TO COMPLY WITH THE FOLLOWING STANDARDS;
    A. PENNDOT DESIGN MANUAL 2, CHAPTER 6
    B. PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, PUBLICATION 72M, RC-67M.
    C. U.S. ACCESS BOARD, PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) AND ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG)
23. ANY NEW STREET TREES PROPOSED SHALL BE PLANTED IN TREE WELLS.
24. ANY PROPOSED LIGHTING SUBSTITUTIONS SHALL BE APPROVED BY THE BOROUGH PRIOR TO INSTALLATION. ALL WIRING AND POWER LINES TO SERVICE STREET LIGHTING SHALL BE PLACED UNDERGROUND.
25. APPROVAL OF THIS PLAN DOES NOT INCLUDE APPROVAL OF SIGNAGE. ALL SIGNAGE IS SUBJECT TO THE RULES, REGULATIONS AND PERMIT REQUIREMENTS OF THE BOROUGH.
26. DUE TO THE SIGNIFICANT SITE CONSTRAINTS ANTICIPATED WITH CONSTRUCTION, A PLAN REGARDING CONTRACTOR PARKING SHALL BE PROVIDED FOR BOROUGH REVIEW, INCLUDING ANY POSSIBLE PARKING RESTRICTIONS NEEDED ALONG THE SITE PERIMETER, OFF-SITE PARKING AND SIMILAR SO AS TO MINIMIZE PARKING ISSUES IN THIS AREA. THIS PLAN SHALL BE PROVIDED FOR REVIEW PRIOR TO LAND DEVELOPMENT PLAN RECORDATION.
27. BRICK SIDEWALKS AND STONE CURBS SHALL BE INSTALLED AND MAINTAINED IN THE TC-TOWN CENTER. CURBS SHALL BE DESIGNED IN ACCORDANCE WITH §97.A.8. OF THE APPENDIX A, DESIGN STANDARDS. NEW CURBS SHALL MATCH ADJOINING EXISTING CURBS IN TERMS OF THE TYPE.
28. ANY MODIFICATION TO THE SIGNAL AT PRICE AND HIGH STREETS SHALL REQUIRE PENNDOT PERMIT APPROVAL.

LEGEND & ABBREVIATIONS

- CENTERLINE OF ROAD
- PROPERTY BOUNDARY
- ADJOINER BOUNDARY
- RIGHT OF WAY LINE
- EXISTING FENCE
- BUILDING SETBACK LINE
- 95 EXISTING CONTOURS
- 295.60 EXISTING SPOT ELEVATION
- EXISTING TREE (TO BE REMOVED)
- OH EXISTING OVERHEAD WIRE
- W EXISTING WATER LINE
- C EXISTING TELCO LINE
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- S EXISTING SANITARY LINE
- SW EXISTING STORM SEWER LINE
- EXISTING CURB
- DEPRESSED CURB
- U/G - A/G UNDER/ABOVE GROUND
- SIGN
- UTILITY POLE (UP)
- UTILITY POLE WITH ROAD LIGHT
- HYDRANT
- (D) STORM MANHOLE
- (S) SANITARY MANHOLE
- (E) ELECTRIC MANHOLE
- (W) WATER MANHOLE
- STORM INLET
- GV GAS METER
- WM WATER METER
- TBX TRAFFIC SIGNAL BOX
- E ELECTRIC VAULT
- GV GAS VALVE
- WV WATER VALVE
- CO CLEAN OUT
- MW MONITORING WELL
- CONCRETE MONUMENT FOUND
- IRON PIN FOUND
- IRON PIPE FOUND
- NAIL FOUND

Cornerstone
Consulting Engineers & Design Services, Inc.
213 West Main Street, Lansdale, PA 19446
Phone: 215-362-2600 Fax: 215-362-8400
WWW.CORNERSTONEGET.COM
Pocono Region 570-839-1770
Lehigh Valley Region 610-820-8200
Philadelphia Region 215-362-2600

CLIENT DATA

REVISIONS

NO	BY	DESCRIPTION	DATE
1	DB	REVISED PER TOWNSHIP COMMENTS	6/22/2026

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania
15122 - 1078
811
BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776

J. D. ANDERSON
PROFESSIONAL ENGINEER
JOHN D. ANDERSON
ENGINEER
PE055536

PROJECT LOCATION

PRELIMINARY LAND DEVELOPMENT PLAN
410 S. HIGH STREET
WEST CHESTER, PA 19382
BOROUGH OF WEST CHESTER
CHESTER COUNTY, PA

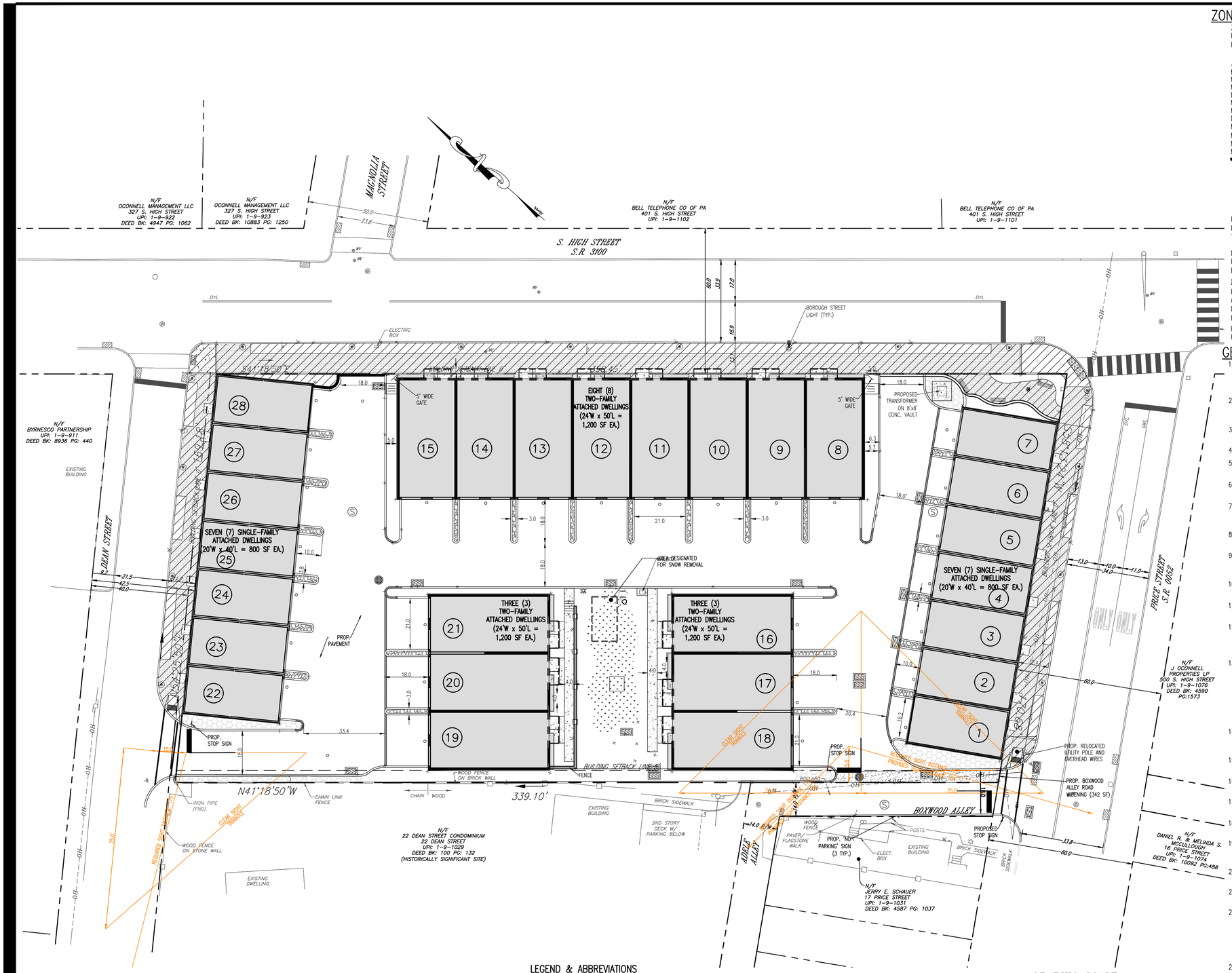
TITLE

EXISTING CONDITIONS DEMOLITION PLAN

PROJ. #	26-0118	DATE	03-09-2026
CAD ID.	26-0118	DRN BY	RTH
SCALE	AS NOTED	CHK BY	JBA

SHEET 3 OF 14

REV 1



LEGEND & ABBREVIATIONS

- CENTERLINE OF ROAD
- PROPERTY BOUNDARY
- ADJOINER BOUNDARY
- RIGHT OF WAY LINE
- EXISTING FENCE
- BUILDING SETBACK LINE
- EXISTING CONTOURS
- EXISTING SPOT ELEVATION
- EXISTING TREELINE
- EXISTING OVERHEAD WIRE
- EXISTING WATER LINE
- EXISTING TELCO LINE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING SANITARY LINE
- EXISTING STORM SEWER LINE
- EXISTING CURB
- DEPRESSED CURB
- U/G - A/G UNDER/ABOVE GROUND
- SIGN
- UTILITY POLE (UP)
- UTILITY POLE WITH ROAD LIGHT
- HYDRANT
- STORM MANHOLE
- SANITARY MANHOLE
- ELECTRIC MANHOLE
- WATER MANHOLE
- STORM INLET
- GAS METER
- WATER METER
- TRAFFIC SIGNAL BOX
- ELECTRIC VAULT
- GAS VALVE
- WATER VALVE
- CLEAN OUT
- MONITORING WELL
- CONCRETE MONUMENT FOUND
- IRON PIN FOUND
- IRON PIPE FOUND
- NAIL FOUND

ZONING INFORMATION:

ZONING DISTRICT: TC-TOWN CENTER
EXISTING USE: FAST FOOD RESTAURANT
PROPOSED USE: UNIFIED RESIDENTIAL DEVELOPMENT – SINGLE FAMILY ATTACHED (UNITS 1-7 AND 22-28)
TWO FAMILY ATTACHED (UNITS 8-15 AND 16-21)

AREA & BULK REGULATIONS:	REQUIRED	EXISTING	PROPOSED
MAXIMUM GROSS TRACT AREA	3.0 AC.	58,035 SF* (1.332 AC)	58,035 SF* (1.332 AC)
MAXIMUM DENSITY	40 DU / ACRE	0 DU / ACRE	31.53 DU / AC
MINIMUM TRACT WIDTH AT STREET LINE	100 FT.	350.54 FT.	350.54 FT.
BUILDING SETBACK LINE / FRONT YARD	MIN. 0 FT. / MAX. 5 FT.	78.7 FT.	0 FT.
MINIMUM SIDE YARD	5 FT.	N/A	N/A
MINIMUM REAR YARD	5 FT.	46.5 FT.	5.3 FT.
DIST. BTWN EXT. WALLS OF BUILDINGS	15 FT.	N/A	34.0 FT.
MAXIMUM TRACT BUILDING COVERAGE	90.0%	8.42% (4,886 SF)	48.60% (28,000 SF)
MAXIMUM TRACT IMPERVIOUS COVERAGE	95.0%	59.59% (34,582 SF)	91.6% (52,763 SF)
MINIMUM TRACT GREEN AREA	5.0%	39.9% (23,031 SF)	8.4% (4,850 SF)
MAXIMUM BUILDING HEIGHT	45 FT.	APPROX. 16 FT.	45.0 FT.

*PARCELS 'A' AND 'B' COMBINED NET LOT AREA

RECORD OWNER:
GARY D. SALUTI & SUZANNE M. DUNPHY
21388 FERRY LANDING ROAD
TILGHMAN, MD 21671
DEED BOOK: 6832, PAGE 201

EQUITABLE OWNER/APPLICANT:
HIGH STREET 410, LLC
283 2ND STREET PIKE, SUITE 110
SOUTHAMPTON, PA 18966

PARCEL A AREA: 51,669 SF (1.186 ACRES); BOUNDARY ERROR OF CLOSURE IS 1:1,241,056
PARCEL B AREA: 6,366 SF (0.146 ACRES); BOUNDARY ERROR OF CLOSURE IS 1:3,586,505
TOTAL TRACT AREA: 58,035 SF (1.332 ACRES); NET TRACT AREA = 57,613 SF (1.323 ACRES)

NUMBER OF EXISTING LOTS.....1
PROPOSED LOTS.....1
EXISTING/PROPOSED USES.....COMMERCIAL/RESIDENTIAL

PARKING REGULATIONS:

REQUIREMENTS: TWO (2) OFF-STREET PARKING SPACES SHALL BE PROVIDED FOR EACH DWELLING UNIT. AT LEAST ONE (1) SHALL BE LOCATED INSIDE A GARAGE AND ONE OF WHICH MAY BE LOCATED DIRECTLY ADJACENT TO THE DWELLING UNIT THAT THE SPACES SERVES. PARKING SPACES FOR THE SAME DWELLING UNIT MAY BE STACKED BEHIND GARAGES OR OTHER PARKING SPACES. FORTY-TWO (42) DU * 2 SPACES = 84 PARKING SPACES

PROVIDED: FIFTY-SIX (56) GARAGE SPACES AND TWENTY-EIGHT (28) SURFACE SPACES = EIGHTY-FOUR (84) PARKING SPACES.

GENERAL NOTES

1. BOUNDARY AND IMPROVEMENTS SHOWN BY PHYSICAL FIELD SURVEY PERFORMED BY PADULA ENGINEERING COMPANY IN JULY & AUGUST 2022. ELEVATIONS BASED ON NAVD88 DATUM OBTAINED BY GPS OBSERVATION TAKEN ON AUGUST 6, 2022. PLAN COORDINATES REFER TO THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM NAD83 OBTAINED BY GPS OBSERVATION TAKEN ON AUGUST 6, 2022.
2. SOURCE OF TITLE:
   DEED BOOK: 6832 PAGE: 201 & COMMONWEALTH LAND TITLE INSURANCE COMPANY COMMITMENT NO. PHI222437, DATED JULY 20, 2022.
3. FEMA FLOOD MAP NUMBER 42029C0210G, EFFECTIVE ON 09/29/17 INDICATES THAT THE PROPERTY IS LOCATED WITHIN ZONE X, AREA OF MINIMAL FLOOD HAZARD, AND IS OUTSIDE OF THE 100-YEAR FLOODPLAIN.
4. THERE ARE NO KNOWN WETLANDS LOCATED ON SITE PER NATIONAL WETLAND INVENTORY MAPS.
5. SOILS PLOTTED FROM NATIONAL RESOURCES CONSERVATION DISTRICT (NRCS) WEB SOIL SURVEY, BY THE UNITED STATES DEPARTMENT OF AGRICULTURE (USDA).
6. THE SITE IS LOCATED WITHIN THE PLUM RUN CREEK WATERSHED WHICH HAS A CHAPTER 93 STREAM CLASSIFICATION OF WARM WATER FISHES, MIGRATORY FISH (WWF, MF).
7. UNDERGROUND UTILITIES SHOWN WERE PLOTTED FROM OBSERVABLE EVIDENCE AT THE TIME OF SURVEY AND INFORMATION FROM PLANS SUPPLIED BY UTILITY COMPANIES. NO GUARANTEE IS MADE THAT UNDERGROUND UTILITIES ARE ACCURATELY OR COMPLETELY SHOWN HEREON.
8. THE EXISTING BUILDING IS SERVICED BY PUBLIC WATER AND SEWER. THE PROPOSED BUILDING SHALL BE SERVICED BY PUBLIC WATER AND SEWER.
9. CONCRETE MONUMENTS SHOWN THUS (■) SHALL BE PLACED WHERE INDICATED, IRON PINS SHOWN THUS (●) SHALL BE PLACED WHERE INDICATED. IN INSTANCES WHERE IRON PINS CANNOT BE SET AT LOT CORNERS DUE TO PHYSICAL FEATURES, A PERMANENT MARKING SHALL BE MADE ON SAID STRUCTURE FOR LOT DEEDS TO REFERENCE.
10. REFER TO ARCHITECTURAL PLANS FOR EXACT DIMENSIONS OF THE PROPOSED BUILDING AND EXACT LOCATIONS OF THE PROPOSED BUILDING UTILITY SERVICE LINES/LATERALS.
11. ALL PROPOSED DWELLING UNITS SHALL HAVE PARKING SPACES WITHIN THE GARAGE AREAS. ALL RESIDENTIAL PARKING SPACES SHALL BE NUMBERED (PAINTED) AND ASSIGNED TO THE RESIDENTS OF THE BUILDING.
12. REQUIRED PERMITS AND APPROVALS INCLUDE, BUT ARE NOT LIMITED TO: BOROUGH SUBDIVISION AND LAND DEVELOPMENT APPROVAL, PENNDOT HIGHWAY OCCUPANCY PERMIT, PADEP SEWAGE FACILITIES PLANNING MODULE EXEMPTION APPROVAL, PADEP GENERAL NPDES PERMIT, CHESTER COUNTY CONSERVATION DISTRICT APPROVAL, AQUA PA APPROVAL.
13. STORMWATER MANAGEMENT FACILITIES SHALL BE OWNED AND MAINTAINED BY A PROPERTY OWNER. THE PROPERTY OWNER SHALL BE DEED RESTRICTED FROM REMOVAL OR MODIFYING THE STORMWATER FACILITIES WITHOUT APPROVAL FROM THE BOROUGH. THE BOROUGH SHALL HAVE THE RIGHT, NOT THE OBLIGATION, TO ENTER THE PROPERTY TO INSPECT THE FACILITIES. THE PROPERTY OWNER SHALL BE REQUIRED TO ENSURE PROPER MAINTENANCE OF THE FACILITIES OCCURS AT ALL TIMES. A BLANKET EASEMENT SHALL BE PROVIDED TO THE BOROUGH FOR MAINTENANCE AND REPAIR OF THE STORMWATER MANAGEMENT FACILITIES WITHIN THE PROJECT. THE BOROUGH SHALL HAVE THE RIGHT, BUT NOT THE OBLIGATION TO ENTER THE SITE AND MAINTAIN AND REPAIR THE STORMWATER MANAGEMENT FACILITIES IF THE PROPERTY OWNER DEFAULTS ON THEIR RESPONSIBILITIES.
14. AN AS-BUILT DRAWING AND AN EXPLANATION OF ANY DISCREPANCIES WITH THE DESIGN PLANS SHALL BE SUBMITTED TO THE BOROUGH FOR APPROVAL, WITHIN 30 DAYS OF AFTER COMPLETION OF THE STORMWATER MANAGEMENT FACILITIES.
15. THE PROPERTY OWNER SHALL ALSO BE RESPONSIBLE FOR THE OWNERSHIP AND MAINTENANCE OF ALL UTILITY LATERALS.
16. CENTRAL MAILBOX LOCATION(S) SHALL BE PROVIDED FOR THE DEVELOPMENT AT LOCATIONS SPECIFIED BY POST OFFICE.
17. ALL PROPOSED SIDEWALKS AND WALKWAYS SHALL BE ALL WEATHER SURFACES AND COMPLY WITH CURRENT ADA REQUIREMENTS. SIDEWALKS TO BE RECONSTRUCTED/REPLACED SHALL USE CLAY-FIRED BRICK.
18. TRASH COLLECTION FOR ALL UNITS IS TO BE PRIVATE AND CONTRACTED THROUGH THE PROPERTY OWNER. TRASH COLLECTION FOR EACH UNIT IS TO BE PROVIDED AT A CENTRAL LOCATION ON THE PROPERTY.
19. A BLANKET PEDESTRIAN EASEMENT SHALL BE PROVIDED FOR ALL SIDEWALKS THAT ENCROACH WITHIN THE DEVELOPMENT AND CAN BE FOUND ALONG SOUTH HIGH STREET, PRICE STREET, AND DEAN STREET. THE SIDEWALKS SHALL BE OWNED AND MAINTAINED BY THE PROPERTY OWNER.
20. SNOW REMOVAL AND A SNOW REMOVAL PLAN SHALL BE INCLUDED IN THE PROPERTY OWNER DOCUMENTS. A BLANKET EASEMENT FOR SNOW REMOVAL WILL BE PROVIDED WITHIN THE RECREATION AREA ALONG PRICE STREET.
21. ALL TRAFFIC CONTROL SIGNS MUST BE POSTED ON PENNDOT APPROVED BREAKAWAY POSTS IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE TC-8700 SERIES IN PENNDOT PUBLICATION 111M.
22. ALL PROPOSED PEDESTRIAN FACILITIES REFLECTED ON THESE PLANS SHALL BE CONSTRUCTED TO COMPLY WITH THE FOLLOWING STANDARDS;
    A. PENNDOT DESIGN MANUAL 2, CHAPTER 6
    B. PENNDOT STANDARDS FOR ROADWAY CONSTRUCTION, PUBLICATION 72M, RC-67M.
    C. U.S. ACCESS BOARD, PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) AND ADA ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG)
23. ANY NEW STREET TREES PROPOSED SHALL BE PLANTED IN TREE WELLS.
24. ANY PROPOSED LIGHTING SUBSTITUTIONS SHALL BE APPROVED BY THE BOROUGH PRIOR TO INSTALLATION. ALL WIRING AND POWER LINES TO SERVICE STREET LIGHTING SHALL BE PLACED UNDERGROUND.
25. APPROVAL OF THIS PLAN DOES NOT INCLUDE APPROVAL OF SIGNAGE. ALL SIGNAGE IS SUBJECT TO THE RULES, REGULATIONS AND PERMIT REQUIREMENTS OF THE BOROUGH.
26. DUE TO THE SIGNIFICANT SITE CONSTRAINTS ANTICIPATED WITH CONSTRUCTION, A PLAN REGARDING CONTRACTOR PARKING SHALL BE PROVIDED FOR BOROUGH REVIEW, INCLUDING ANY POSSIBLE PARKING RESTRICTIONS NEEDED ALONG THE SITE PERIMETER, OFF-SITE PARKING AND SIMILAR SO AS TO MINIMIZE PARKING ISSUES IN THIS AREA. THIS PLAN SHALL BE PROVIDED FOR REVIEW PRIOR TO LAND DEVELOPMENT PLAN RECORDATION.
27. BRICK SIDEWALKS AND STONE CURBS SHALL BE INSTALLED AND MAINTAINED IN THE TC-TOWN CENTER. CURBS SHALL BE DESIGNED IN ACCORDANCE WITH §97.A.8. OF THE APPENDIX A, DESIGN STANDARDS. NEW CURBS SHALL MATCH ADJOINING EXISTING CURBS IN TERMS OF THE TYPE.
28. ALL RAMPS SHALL BE CONSTRUCTED TO COMPLY WITH CURRENT ADA STANDARDS. (SEE DETAIL SHEET 10)
29. ANY MODIFICATION TO THE SIGNAL AT PRICE AND HIGH STREETS SHALL REQUIRE PENNDOT PERMIT APPROVAL.
30. ANY DAMAGED OR DEFICIENT CURB, ASPHALT OR SIDEWALK SHALL BE REPAIRED OR REPLACED AT THE DIRECTION OF THE BOROUGH ENGINEER.
31. TRASH COLLECTION WILL UTILIZE INDIVIDUAL TRASH TOTES FOR EACH UNIT.

CLIENT DATA

Cornerstone
Consulting Engineers & Design Services, Inc.
213 West Main Street . Lansdale . PA 19446
Phone: 215-362-2600 . Fax: 215-362-8400
WWW.CORNERSTONENET.COM
Philadelphia Region 215-362-2600
Lehigh Valley Region 610-820-8200
Pocono Region 570-839-1770

REVISIONS

NO	BY	DESCRIPTION	DATE
1	DJB	REVISED PER TOWNSHIP COMMENTS	6/22/2026

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania
15122 - 1078
811
BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776

JOHN B. ANDERSON
REGISTERED PROFESSIONAL
JOHN B. ANDERSON
LICENSE NO. PE055536
ENGINEER
COMMONWEALTH OF PENNSYLVANIA

PROJECT LOCATION

PRELIMINARY LAND DEVELOPMENT PLAN
410 S. HIGH STREET
WEST CHESTER, PA 19382
BOROUGH OF WEST CHESTER
CHESTER COUNTY, PA

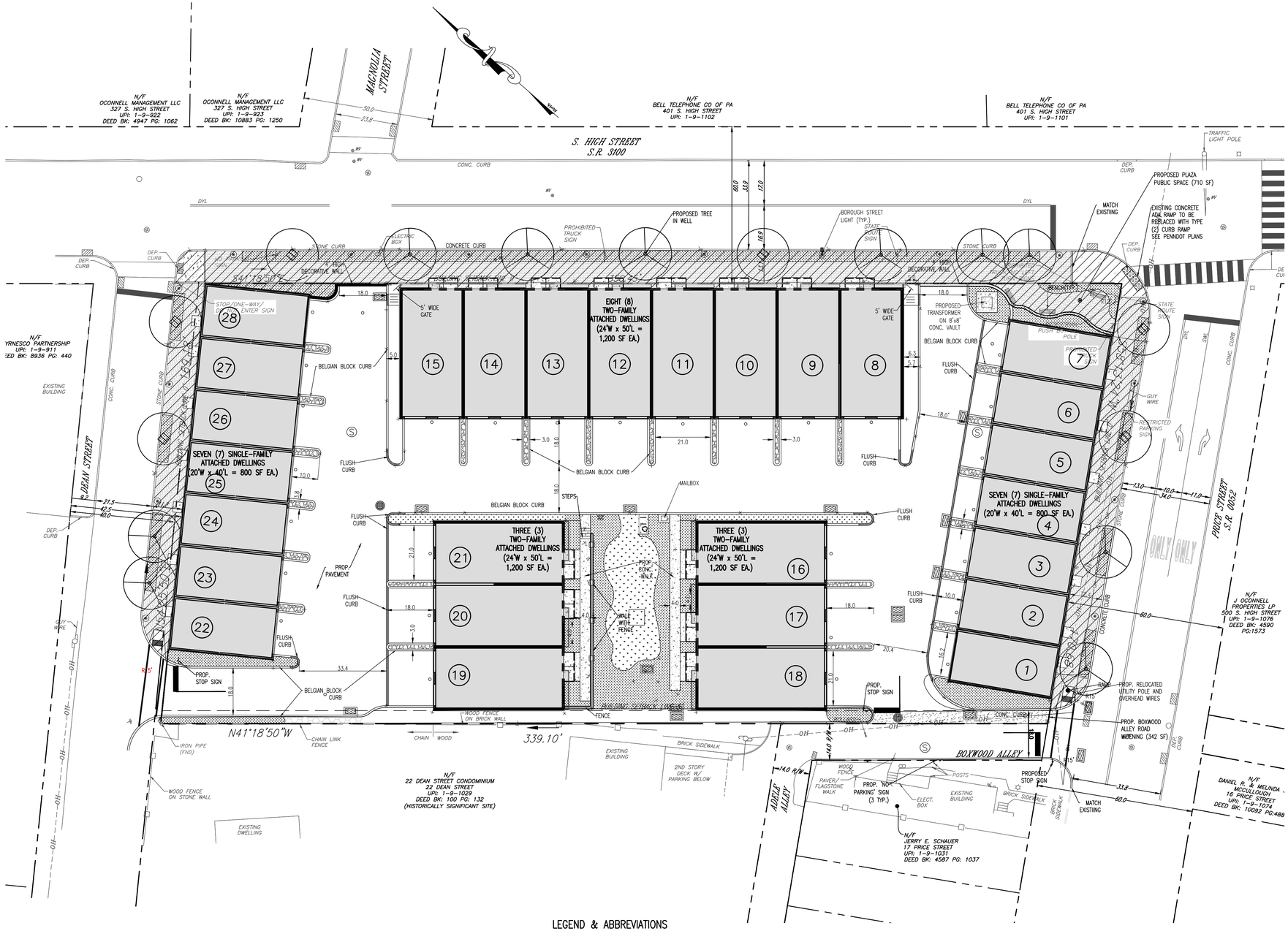
TITLE

SITE ZONING PLAN

PROJ. #	26-0118	DATE	03-09-2026
CAD ID.	26-0118	DRN BY	RTH
SCALE	AS NOTED	CHK BY	JBA

SHEET 4 OF 14

REV 1



LEGEND & ABBREVIATIONS

- CENTERLINE OF ROAD
- PROPERTY BOUNDARY
- ADJOINER BOUNDARY
- RIGHT OF WAY LINE
- EXISTING FENCE
- BUILDING SETBACK LINE
- EXISTING CONTOURS
- EXISTING SPOT ELEVATION
- EXISTING OVERHEAD WIRE
- EXISTING WATER LINE
- EXISTING TELCO LINE
- EXISTING ELECTRIC LINE
- EXISTING GAS LINE
- EXISTING SANITARY LINE
- EXISTING STORM SEWER LINE
- EXISTING CURB
- DEPRESSED CURB
- SIGN
- UTILITY POLE (UP)
- UTILITY POLE WITH ROAD LIGHT
- HYDRANT
- STORM MANHOLE
- SANITARY MANHOLE
- ELECTRIC MANHOLE
- WATER MANHOLE
- STORM INLET
- GAS METER
- WATER METER
- TRAFFIC SIGNAL BOX
- GAS VALVE
- WATER VALVE
- IRON PIN FOUND
- IRON PIPE FOUND
- PROP. SANITARY SEWER CLEANOUT
- PROP. STORM DRAINAGE INLET
- PROP. STORM MANHOLE
- PROP. SAN MANHOLE
- PROPOSED CURB
- FLUSH CURB

SITE IMPROVEMENT NOTES

1. PRIOR TO STARTING CONSTRUCTION, ALL UTILITY SERVICES IN THE AREA SHALL BE LOCATED AND PRIOR TO STARTING CONSTRUCTION, ALL UTILITY SERVICES IN THE AREA SHALL BE LOCATED AND MEASURES TAKEN TO PROTECT THE EXISTING FACILITIES. ANY DAMAGE TO EXISTING FACILITIES SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PERSONS VEHICLES AND BUILDINGS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PERSONS VEHICLES AND BUILDINGS WITHIN THE CONSTRUCTION AREAS FROM INJURY AND DAMAGE DURING THE COURSE OF WORK
3. CONSTRUCTION SHALL BE LOCATED, AND MEASURES TAKEN TO PROTECT THE EXISTING FACILITIES IN CONSTRUCTION SHALL BE LOCATED, AND MEASURES TAKEN TO PROTECT THE EXISTING FACILITIES IN ACCORDANCE WITH PENNSYLVANIA ACT 38. ANY DAMAGE TO EXISTING FACILITIES RESULTING FROM THE NEGLIGENCE OF THE CONTRACTOR SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTOR'S EXPENSE.
4. LOCATION OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM FIELD SURVEY AND LOCATION OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM FIELD SURVEY AND EXISTING RECORDS. COMPLETENESS AND ACCURACY OF EXISTING UTILITY INFORMATION ARE NOT GUARANTEED. PRIOR TO THE START OF ANY CONSTRUCTION, THE CONTRACTOR SHALL ACCURATELY FIELD MEASURE LOCATION AND ELEVATION OF EXISTING UTILITIES AT POINTS OF CONNECTION AND POTENTIAL CONFLICT. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER OF ANY DEVIATION FROM INFORMATION SHOWN ON THESE PLANS.
5. ALL SITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE LOCAL, ALL SITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE LOCAL, COUNTY, STATE AND FEDERAL STATUTES AND REGULATIONS.
6. ALL TRENCHING, SHORING AND EXCAVATING OPERATIONS SHALL BE PERFORMED IN COMPLIANCE WITH ALL TRENCHING, SHORING AND EXCAVATING OPERATIONS SHALL BE PERFORMED IN COMPLIANCE WITH THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
7. SCALED DIMENSIONS FROM THIS PLAN SHALL NOT BE USED FOR CONSTRUCTION WITHOUT SCALED DIMENSIONS FROM THIS PLAN SHALL NOT BE USED FOR CONSTRUCTION WITHOUT CONFIRMATION FROM ARIA ENGINEERING, LLC.
8. IF ANY UNSUITABLE SOIL IS ENCOUNTERED DURING EXCAVATION, THE CONTRACTOR SHALL REMOVE IT IF ANY UNSUITABLE SOIL IS ENCOUNTERED DURING EXCAVATION, THE CONTRACTOR SHALL REMOVE IT AND REPLACE IT WITH COMPACTED STRUCTURAL MATERIAL
9. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE LOCAL AUTHORITY OR IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE LOCAL AUTHORITY OR GOVERNING AGENCY OF THE BEGINNING DATE OF CONSTRUCTION AND TO ENSURE THAT NO WORK IS PERFORMED WITHOUT THE REQUIRED PERMITS AND INSPECTIONS BY THE LOCAL AUTHORITY OR GOVERNING AGENCY.
10. IF CONDITIONS IN THE FIELD DIFFER FROM THOSE SHOWN ON THE PLAN, THE CONTRACTOR SHALL IF CONDITIONS IN THE FIELD DIFFER FROM THOSE SHOWN ON THE PLAN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED TRAFFIC CONTROL, SHEETING, SHORING THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED TRAFFIC CONTROL, SHEETING, SHORING AND BARRICADING OF OPEN EXCAVATIONS.
12. ALL MATERIALS AND METHODS OF CONSTRUCTION FOR STORMWATER FACILITIES AND SEEDING SHALL ALL MATERIALS AND METHODS OF CONSTRUCTION FOR STORMWATER FACILITIES AND SEEDING SHALL CONFORM TO PENNDOT FORM 408 SPECIFICATIONS, LATEST EDITION.
13. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR AND HAVE CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, SAFETY PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK AND FOR COORDINATION OF ALL PORTIONS OF THE WORK UNDER CONTRACT.
14. CONTRACTOR SHALL REVIEW VARIOUS PHASES OF WORK WITH THE OWNER TO DETERMINE WHETHER CONTRACTOR SHALL REVIEW VARIOUS PHASES OF WORK WITH THE OWNER TO DETERMINE WHETHER ANY PHASE WILL CONFLICT WITH THE OWNERS DAILY OPERATIONS. WHERE CONFLICT IS APPARENT THE CONTRACTOR SHALL COORDINATE WITH THE OWNER THE WORK TO BE PERFORMED SO AS TO BE THE LEAST DISRUPTIVE.
15. ALL CURBING, CONCRETE OR PAVING TO BE REMOVED SHALL BE SAW CUT FIRST TO ENSURE A ALL CURBING, CONCRETE OR PAVING TO BE REMOVED SHALL BE SAW CUT FIRST TO ENSURE A CLEAN SEPARATION FROM EXISTING.
16. ANY PAVING DAMAGED DURING CONSTRUCTION ACTIVITIES SHALL BE REMOVED TO SUBGRADE AND ANY PAVING DAMAGED DURING CONSTRUCTION ACTIVITIES SHALL BE REMOVED TO SUBGRADE AND REPLACED WITH THE PAVING SECTION.
17. WHERE ALL NEW BITUMINOUS PAVING MEETS EXISTING BITUMINOUS A HOT BITUMINOUS SEALANT SHALL WHERE ALL NEW BITUMINOUS PAVING MEETS EXISTING BITUMINOUS A HOT BITUMINOUS SEALANT SHALL BE POURED ALONG THE SAW CUT JOINT.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REMOVAL, REPLACEMENT, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REMOVAL, REPLACEMENT, AND MAINTENANCE OF ALL EXISTING LANDSCAPING DURING CONSTRUCTION. THIS INCLUDES PROPERLY STORING MATERIAL TO BE REUSED, PRUNING WHERE REQUIRED AND PROTECTING EXISTING ROOT STRUCTURES OF TREES WHERE CONSTRUCTION OCCURS WITHIN THE DRIP LINE.
19. THE PAVED AREAS WITHIN THE RIGHT-OF-WAY, THAT ARE DISTURBED DURING LATERAL INSTALLATION, THE PAVED AREAS WITHIN THE RIGHT-OF-WAY, THAT ARE DISTURBED DURING LATERAL INSTALLATION, SHALL BE MILLED AND OVERLAID WITH WEARING COURSE.
20. BUILDING FOUNDATION TO BE SEALED (WATERTIGHT) A MINIMUM 12" ABOVE FINISHED GRADE. BUILDING FOUNDATION TO BE SEALED (WATERTIGHT) A MINIMUM 12" ABOVE FINISHED GRADE.
21. ALL EXISTING UTILITIES ON THE SUBJECT PROPERTY MUST BE FIELD LOCATED PRIOR TO THE START ALL EXISTING UTILITIES ON THE SUBJECT PROPERTY MUST BE FIELD LOCATED PRIOR TO THE START OF ANY EXCAVATION.
22. ROOF DRAINS SHALL BE CONNECTED TO THE STORMWATER FACILITIES AS SHOWN. THE EXACT ROOF DRAINS SHALL BE CONNECTED TO THE STORMWATER FACILITIES AS SHOWN. THE EXACT LOCATIONS AND PIPE SIZES OF THE PROPOSED CONNECTIONS SHALL BE TAKEN FROM THE APPROVED ARCHITECTURAL BUILDING PERMIT PLANS.
23. SHOULD ANY CONCRETE SIDEWALK BE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR IS SHOULD ANY CONCRETE SIDEWALK BE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR REPLACING THE SIDEWALK IN ACCORDANCE THE BOROUGH REQUIREMENTS AND ALL APPLICABLE STATE REQUIREMENTS SHOULD THE SIDEWALK BE WITHIN A STATE RIGHT-OF-WAY

CLIENT DATA

Cornerstone
Consulting Engineers & Design Services, Inc.
213 West Main Street . Lansdale . PA 19446
Phone: 215-362-2600 . Fax: 215-362-8400
WWW.CORNERSTONENET.COM
Philadelphia Region 215-362-2600
Lehigh Valley Region 610-820-8200
Pocono Region 570-839-1770

REVISIONS

NO	BY	DESCRIPTION	DATE
1	DB	REVISED PER TOWNSHIP COMMENTS	6/22/2026

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania 15122 - 1078
811
BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776

JBA — JOSEPH B. ARISON — REGISTERED PROFESSIONAL — ENGINEER — COMMONWEALTH OF PENNSYLVANIA

PROJECT LOCATION

PRELIMINARY LAND DEVELOPMENT PLAN
410 S. HIGH STREET
WEST CHESTER, PA 19382
BOROUGH OF WEST CHESTER
CHESTER COUNTY, PA

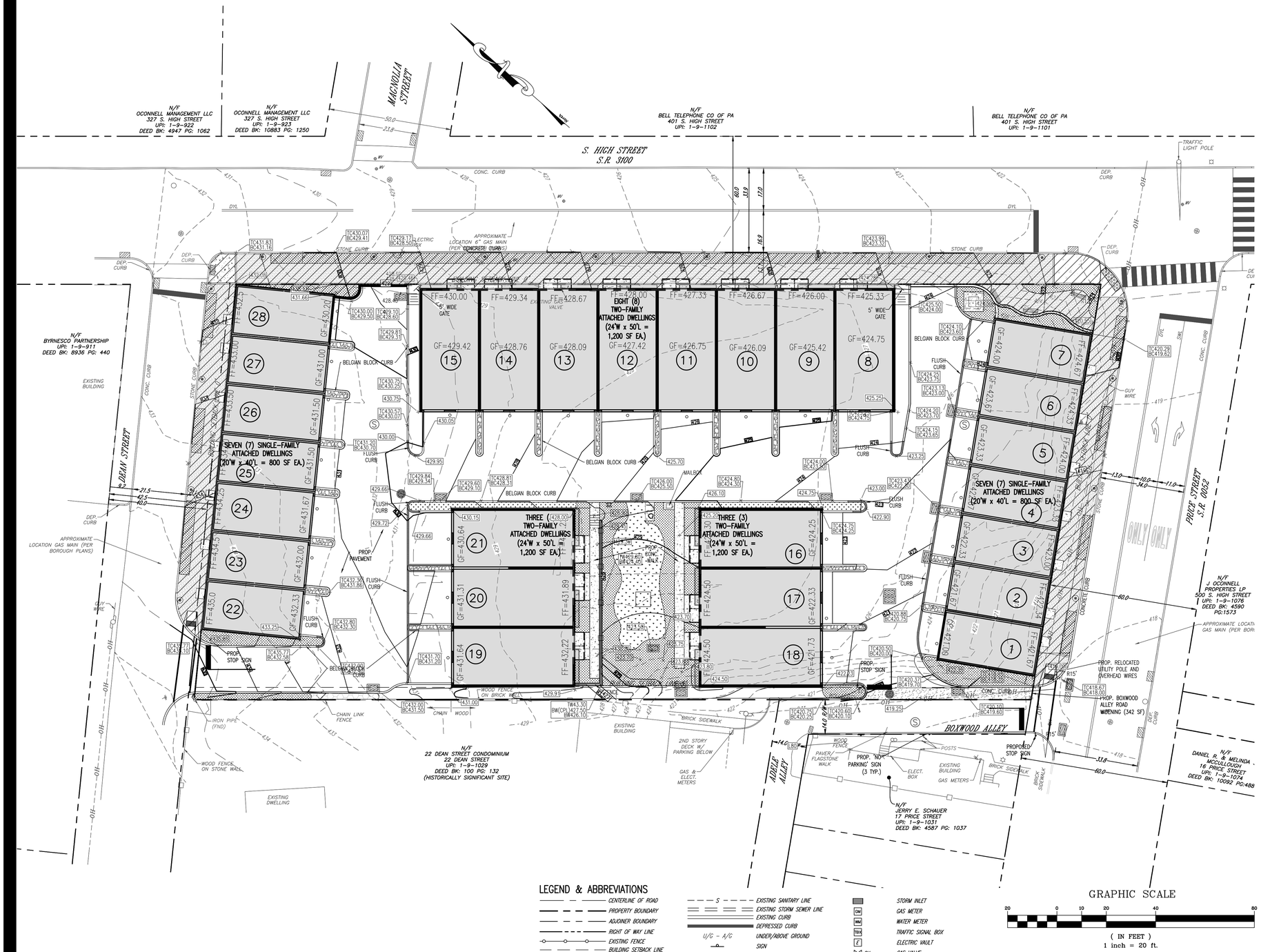
TITLE

SITE IMPROVEMENT PLAN

PROJ. #	26-0118	DATE	03-09-2026
CAD ID.	26-0118	DRN BY	RTH
SCALE	AS NOTED	CHK BY	JBA

SHEET 5 OF 14

REV 1



LEGEND & ABBREVIATIONS

- CENTERLINE OF ROAD
- PROPERTY BOUNDARY
- ADJOINER BOUNDARY
- RIGHT OF WAY LINE
- EXISTING FENCE
- BUILDING SETBACK LINE
- 95 EXISTING CONTOURS
- 295.80 EXISTING SPOT ELEVATION
- EXISTING TREELINE
- OH EXISTING OVERHEAD WIRE
- W EXISTING WATER LINE
- C EXISTING TELCO LINE
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- S EXISTING SANITARY LINE
- EXISTING STORM SEWER LINE
- EXISTING CURB
- DEPRESSED CURB
- U/C - A/G UNDER/ABOVE GROUND
- SIGN
- UTILITY POLE (UP)
- UTILITY POLE WITH ROAD LIGHT
- HYDRANT
- (D) STORM MANHOLE
- (S) SANITARY MANHOLE
- (E) ELECTRIC MANHOLE
- (W) WATER MANHOLE
- STORM INLET
- GM GAS METER
- WM WATER METER
- TSB TRAFFIC SIGNAL BOX
- EV ELECTRIC VAULT
- GV GAS VALVE
- WV WATER VALVE
- CO CLEAN OUT
- MW MONITORING WELL
- CONCRETE MONUMENT FOUND
- IRON PIN FOUND
- IRON PIPE FOUND
- NAIL FOUND

GENERAL NOTES

1. PRIOR TO STARTING CONSTRUCTION, ALL UTILITY SERVICES IN THE AREA SHALL BE LOCATED AND PRIOR TO STARTING CONSTRUCTION, ALL UTILITY SERVICES IN THE AREA SHALL BE LOCATED AND MEASURES TAKEN TO PROTECT THE EXISTING FACILITIES. ANY DAMAGE TO EXISTING FACILITIES SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PERSONS VEHICLES AND BUILDINGS THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PERSONS VEHICLES AND BUILDINGS WITHIN THE CONSTRUCTION AREAS FROM INJURY AND DAMAGE DURING THE COURSE OF WORK.
3. CONSTRUCTION SHALL BE LOCATED, AND MEASURES TAKEN TO PROTECT THE EXISTING FACILITIES IN CONSTRUCTION SHALL BE LOCATED, AND MEASURES TAKEN TO PROTECT THE EXISTING FACILITIES IN ACCORDANCE WITH PENNSYLVANIA ACT 38. ANY DAMAGE TO EXISTING FACILITIES RESULTING FROM THE NEGLIGENCE OF THE CONTRACTOR SHALL BE IMMEDIATELY AND COMPLETELY REPAIRED AT THE CONTRACTOR'S EXPENSE.
4. LOCATION OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM FIELD SURVEY AND LOCATION OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN DEVELOPED FROM FIELD SURVEY AND EXISTING RECORDS. COMPLETENESS AND ACCURACY OF EXISTING UTILITY INFORMATION ARE NOT GUARANTEED. PRIOR TO THE START OF ANY CONSTRUCTION, THE CONTRACTOR SHALL ACCURATELY FIELD MEASURE LOCATION AND ELEVATION OF EXISTING UTILITIES AT POINTS OF CONNECTION AND POTENTIAL CONFLICT. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER AND ENGINEER OF ANY DEVIATION FROM INFORMATION SHOWN ON THESE PLANS.
5. ALL SITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE LOCAL, ALL SITE IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE LOCAL, COUNTY, STATE AND FEDERAL STATUTES AND REGULATIONS.
6. ALL TRENCHING, SHORING AND EXCAVATING OPERATIONS SHALL BE PERFORMED IN COMPLIANCE WITH ALL TRENCHING, SHORING AND EXCAVATING OPERATIONS SHALL BE PERFORMED IN COMPLIANCE WITH THE REQUIREMENTS OF THE U.S. DEPARTMENT OF LABOR, OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
7. SCALED DIMENSIONS FROM THIS PLAN SHALL NOT BE USED FOR CONSTRUCTION WITHOUT SCALED DIMENSIONS FROM THIS PLAN SHALL NOT BE USED FOR CONSTRUCTION WITHOUT CONFIRMATION FROM ARIA ENGINEERING, LLC.
8. IF ANY UNSUITABLE SOIL IS ENCOUNTERED DURING EXCAVATION, THE CONTRACTOR SHALL REMOVE IT IF ANY UNSUITABLE SOIL IS ENCOUNTERED DURING EXCAVATION, THE CONTRACTOR SHALL REMOVE IT AND REPLACE IT WITH COMPACTED STRUCTURAL MATERIAL.
9. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE LOCAL AUTHORITY OR IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE LOCAL AUTHORITY OR GOVERNING AGENCY OF THE BEGINNING DATE OF CONSTRUCTION AND TO ENSURE THAT NO WORK IS PERFORMED WITHOUT THE REQUIRED PERMITS AND INSPECTIONS BY THE LOCAL AUTHORITY OR GOVERNING AGENCY.
10. IF CONDITIONS IN THE FIELD DIFFER FROM THOSE SHOWN ON THE PLAN, THE CONTRACTOR SHALL IF CONDITIONS IN THE FIELD DIFFER FROM THOSE SHOWN ON THE PLAN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED TRAFFIC CONTROL, SHEETING, SHORING THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REQUIRED TRAFFIC CONTROL, SHEETING, SHORING AND BARRICADING OF OPEN EXCAVATIONS.
12. ALL MATERIALS AND METHODS OF CONSTRUCTION FOR STORMWATER FACILITIES AND SEEDING SHALL ALL MATERIALS AND METHODS OF CONSTRUCTION FOR STORMWATER FACILITIES AND SEEDING SHALL CONFORM TO PENNDOT FORM 408 SPECIFICATIONS, LATEST EDITION.
13. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR AND HAVE CONTROL OVER CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, SAFETY PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK AND FOR COORDINATION OF ALL PORTIONS OF THE WORK UNDER CONTRACT.
14. CONTRACTOR SHALL REVIEW VARIOUS PHASES OF WORK WITH THE OWNER TO DETERMINE WHETHER CONTRACTOR SHALL REVIEW VARIOUS PHASES OF WORK WITH THE OWNER TO DETERMINE WHETHER ANY PHASE WILL CONFLICT WITH THE OWNERS DAILY OPERATIONS. WHERE CONFLICT IS APPARENT THE CONTRACTOR SHALL COORDINATE WITH THE OWNER THE WORK TO BE PERFORMED SO AS TO BE THE LEAST DISRUPTIVE.
15. ALL CURBING, CONCRETE OR PAVING TO BE REMOVED SHALL BE SAW CUT FIRST TO ENSURE A ALL CURBING, CONCRETE OR PAVING TO BE REMOVED SHALL BE SAW CUT FIRST TO ENSURE A CLEAN SEPARATION FROM EXISTING.
16. ANY PAVING DAMAGED DURING CONSTRUCTION ACTIVITIES SHALL BE REMOVED TO SUBGRADE AND ANY PAVING DAMAGED DURING CONSTRUCTION ACTIVITIES SHALL BE REMOVED TO SUBGRADE AND REPLACED WITH THE PAVING SECTION.
17. WHERE ALL NEW BITUMINOUS PAVING MEETS EXISTING BITUMINOUS A HOT BITUMINOUS SEALANT SHALL WHERE ALL NEW BITUMINOUS PAVING MEETS EXISTING BITUMINOUS A HOT BITUMINOUS SEALANT SHALL BE POURED ALONG THE SAW CUT JOINT.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REMOVAL, REPLACEMENT, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER REMOVAL, REPLACEMENT, AND MAINTENANCE OF ALL EXISTING LANDSCAPING DURING CONSTRUCTION. THIS INCLUDES PROPERLY STORING MATERIAL TO BE REUSED, PRUNING WHERE REQUIRED AND PROTECTING EXISTING ROOT STRUCTURES OF TREES WHERE CONSTRUCTION OCCURS WITHIN THE DRIP LINE.
19. THE PAVED AREAS WITHIN THE RIGHT-OF-WAY, THAT ARE DISTURBED DURING LATERAL INSTALLATION, THE PAVED AREAS WITHIN THE RIGHT-OF-WAY, THAT ARE DISTURBED DURING LATERAL INSTALLATION, SHALL BE MILLED AND OVERLAID WITH WEARING COURSE.
20. BUILDING FOUNDATION TO BE SEALED (WATERTIGHT) A MINIMUM 12" ABOVE FINISHED GRADE. BUILDING FOUNDATION TO BE SEALED (WATERTIGHT) A MINIMUM 12" ABOVE FINISHED GRADE.
21. ALL EXISTING UTILITIES ON THE SUBJECT PROPERTY MUST BE FIELD LOCATED PRIOR TO THE START ALL EXISTING UTILITIES ON THE SUBJECT PROPERTY MUST BE FIELD LOCATED PRIOR TO THE START OF ANY EXCAVATION.
22. ROOF DRAINS SHALL BE CONNECTED TO THE STORMWATER FACILITIES AS SHOWN. THE EXACT ROOF DRAINS SHALL BE CONNECTED TO THE STORMWATER FACILITIES AS SHOWN. THE EXACT LOCATIONS AND PIPE SIZES OF THE PROPOSED CONNECTIONS SHALL BE TAKEN FROM THE APPROVED ARCHITECTURAL BUILDING PERMIT PLANS.
23. SHOULD ANY CONCRETE SIDEWALK BE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR IS SHOULD ANY CONCRETE SIDEWALK BE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR REPLACING THE SIDEWALK IN ACCORDANCE THE BOROUGH REQUIREMENTS AND ALL APPLICABLE STATE REQUIREMENTS SHOULD THE SIDEWALK BE WITHIN A STATE RIGHT-OF-WAY.

CLIENT DATA

Cornerstone
Consulting Engineers & Design Services, Inc.
213 West Main Street . Lansdale . PA 19446
Phone: 215-362-2600 . Fax: 215-362-8400
WWW.CORNERSTONENET.COM
Philadelphia Region 215-362-2600
Lehigh Valley Region 610-820-8200
Pocono Region 570-839-1770

REVISIONS

NO	BY	DESCRIPTION	DATE
1	DB	REVISED PER TOWNSHIP COMMENTS	6/22/2026

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania
15122 - 1078
811
BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776

JEFFREY B. CLARKSON — REGISTERED PROFESSIONAL — ENGINEER — COMMONWEALTH OF PENNSYLVANIA

PROJECT LOCATION

PRELIMINARY LAND DEVELOPMENT PLAN
410 S. HIGH STREET
WEST CHESTER, PA 19382
BOROUGH OF WEST CHESTER
CHESTER COUNTY, PA

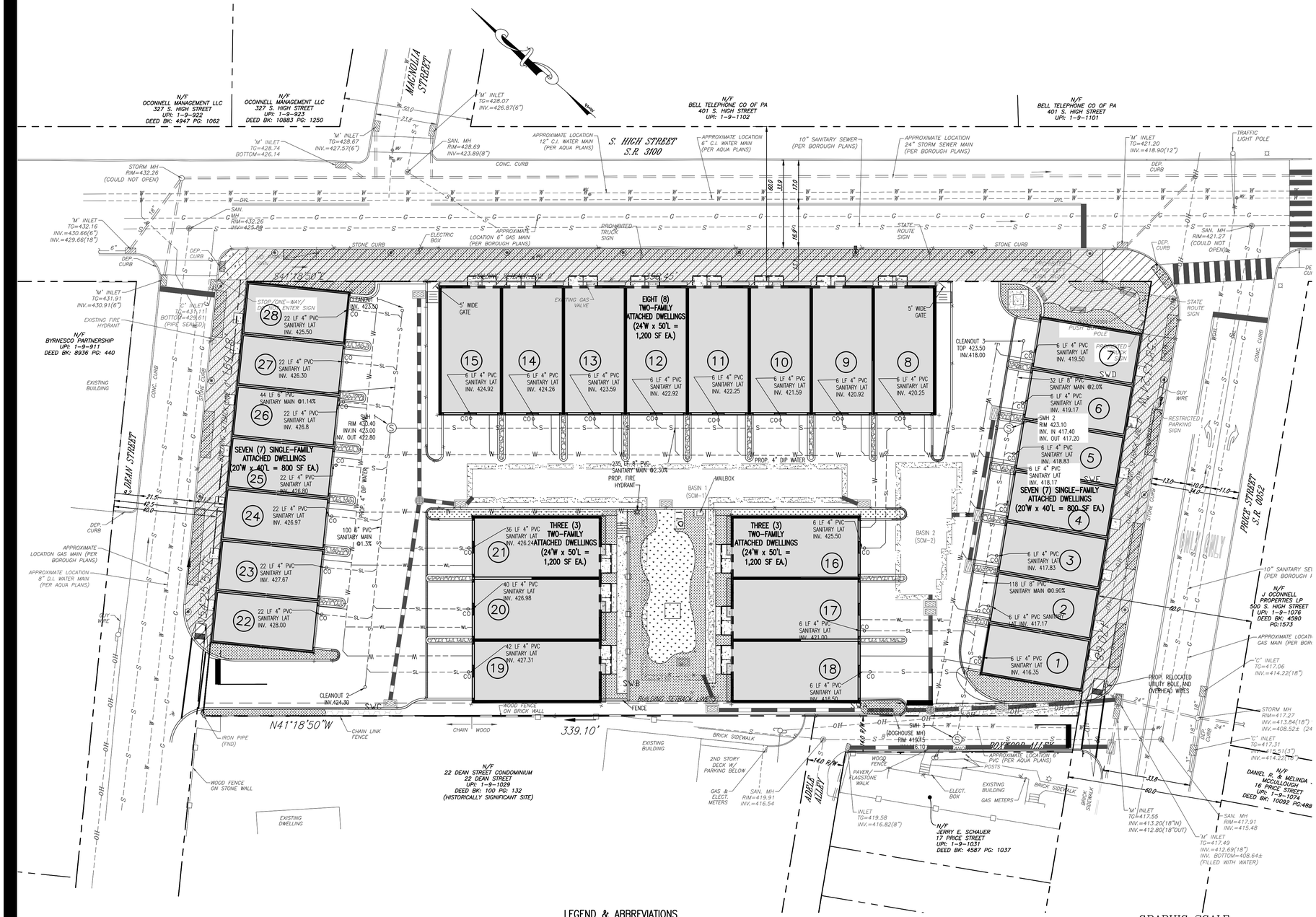
TITLE

GRADING PLAN

PROJ. #	26-0118	DATE	03-09-2026
CAD ID.	26-0118	DRN BY	RTH
SCALE	AS NOTED	CHK BY	JBA

SHEET 6 OF 14

REV 1



UTILITY NOTES

GENERAL NOTES

1. COORDINATE LOCATIONS AND TIE-IN POINTS OF PROPOSED MECHANICAL AND ELECTRICAL SYSTEMS WITH THE APPROPRIATE CONSULTANTS PLANS, AND / OR THE APPROPRIATE GOVERNMENTAL AGENCY HAVING JURISDICTION AT THE TIME OF CONSTRUCTION. ALL TRENCHES SHALL BE SHORED IN ACCORDANCE WITH OSHA STANDARDS.
   PA ONE CALL SERIAL NO. 20261701989
2. SHOP DRAWINGS SHALL BE REVIEWED BY THE PROJECTS DESIGN ENGINEER AND SUBMITTED TO THE TOWNSHIP ENGINEER FOR REVIEW AND APPROVAL ON BEHALF OF AQUA BEFORE ANY MATERIALS, EQUIPMENT, AND APPURTENANCES USED IN THE SEWER COLLECTION SYSTEM ARE ORDERED. A MINIMUM OF TWO WEEKS SHALL BE ALLOWED FOR BOROUGH OF WEST CHESTER COMMENTS, IF ANY, TO THE CONTRACTOR SUBMITTING THE SAME.
3. ALL SANITARY SEWER FACILITIES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE BOROUGH OF WEST CHESTER'S STANDARDS SPECIFICATIONS AND DETAILS.

UTILITY LINE TRENCH EXCAVATION NOTES:

1. LIMIT ADVANCED CLEARING AND GRUBBING OPERATIONS TO A DISTANCE EQUAL TO TWO TIMES THE LENGTH OF PIPE INSTALLATION THAT CAN BE COMPLETED IN ONE DAY.
2. WORK CREWS AND EQUIPMENT FOR TRENCHING, PLACEMENT OF PIPE, PLUG CONSTRUCTION AND BACKFILLING WILL BE SELF CONTAINED AND SEPARATE FROM CLEARING AND GRUBBING AND SITE RESTORATION AND STABILIZATION OPERATIONS.
3. ALL SOIL EXCAVATED FROM THE TRENCH WILL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
4. LIMIT DAILY TRENCH EXCAVATION TO THE LENGTH OF PIPE PLACEMENT, PLUG INSTALLATION AND BACKFILLING THAT CAN BE COMPLETED THE SAME DAY.
5. WATER WHICH ACCUMULATES IN THE OPEN TRENCH WILL BE COMPLETELY REMOVED BY PUMPING BEFORE PIPE PLACEMENT AND/OR BACKFILLING BEGINS. WATER REMOVED SHALL BE PUMPED THROUGH A FILTRATION DEVICE.
6. ON THE DAY FOLLOWING PIPE PLACEMENT AND TRENCH BACKFILLING, THE DISTURBED AREA WILL BE GRADED TO FINAL CONTOURS AND IMMEDIATELY STABILIZED.

SANITARY SEWER NOTES

1. SANITARY SEWER LINES SHALL BE PVC SDR 26.
2. ALL SANITARY SEWER FACILITIES AND APPURTENANCES SHALL BE INSTALLED IN ACCORDANCE WITH BOROUGH OF WEST CHESTER STANDARDS, SPECIFICATIONS AND DETAILS.
3. ALL PROPOSED SANITARY SEWER SERVICES SHALL BE COORDINATED WITH THE MECHANICAL/PLUMBING CONSTRUCTION DOCUMENTS.
4. SANITARY SEWER LINES AND STORM SEWER CROSSINGS SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF EIGHTEEN (18) INCHES OR A MINIMUM HORIZONTAL SEPARATION OF TEN (10) FEET. IF 18" VERTICAL CLEARANCE CANNOT BE MAINTAINED, THE SANITARY SEWER OR SEWER LATERAL SHALL BE A FULL STICK OF DUCTILE IRON PIPE (DIP) WITH A PROTECTO 401 LINER PIPE CENTERED AT CROSSING.
5. ALL EXISTING SANITARY LATERALS WILL BE CAPPED ACCORDING TO BOROUGH OF WEST CHESTER STANDARDS.
6. ALL CLEANOUTS LOCATED IN THE PAVING SHALL BE INSTALLED UTILIZING A CAST IRON VALVE BOX AND COVER WITH THE INSCRIPTION 'SEWER' ON THE LID.
7. ALL SEWER RELATED WORK LOCATED WITHIN AN EASEMENT /ROAD RIGHT-OF-WAY IS REQUIRED TO BE PERFORMED BY A BOROUGH QUALIFIED CONTRACTOR. THE DEVELOPER IS REQUIRED TO CONFORM IF INTENDED CONTRACTOR IS QUALIFIED PRIOR TO THE START OF WORK.
8. ALL SEWER WORK MUST BE OBSERVED BY THE BOROUGH OF WEST CHESTER AS THE INSTALLATION PROGRESSES. WORK PERFORMED WITHOUT SUCH OBSERVATION IS SUBJECT TO REJECTION. A MINIMUM OF 72 HOURS ADVANCE NOTICE TO THE BOROUGH OF WEST CHESTER IS REQUIRED.
9. LATERALS SHALL BE 4 INCH DIAMETER MINIMUM.
10. EXISTING SANITARY SEWER LATERAL SHALL BE CAPPED AT THE SEWER MAIN.
11. PROPOSED SANITARY SEWER SYSTEM WILL BE PRIVATELY OWNED AND NOT DEDICATED TO THE BOROUGH OF WEST CHESTER. ONLY MANHOLE SMH3 WILL BE DEDICATED TO THE BOROUGH OF WEST CHESTER.

WATER GENERAL NOTES:

1. ALL WATER FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AQUA WATER FACILITIES LINE EXTENSION AGREEMENT SPECIFICATIONS.
2. LOCATION OF EXISTING WATER FACILITIES SHOWN ARE APPROXIMATE. ANY UTILITIES NOT SHOWN, OR NOT LOCATED AS SHOWN, SHALL NOT BE THE CAUSE OF THE CONTRACTOR TO DENY RESPONSIBILITY FOR PROTECTION AND/OR REPAIR DURING CONSTRUCTION. EXACT LOCATION SHALL BE VERIFIED IN THE FIELD.
3. ALL WATER MAINS REQUIRE A MINIMUM OF FOUR (4) FEET COVER UNLESS OTHERWISE APPROVED BY AQUA.
4. WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM OF TEN (10) FEET HORIZONTAL SEPARATION UNLESS OTHERWISE APPROVED AQUA.
5. WATER AND STORM SEWER LINES SHALL HAVE A MINIMUM OF FOUR (4) FEET HORIZONTAL SEPARATION.
6. SANITARY AND STORM SEWER LINES SHALL HAVE A MINIMUM OF EIGHTEEN (18) INCH VERTICAL SEPARATION FROM THE WATER LINE UNLESS OTHERWISE APPROVED BY AQUA.
7. HYDRANT LOCATION IS SUBJECT TO THE APPROVAL OF THE FIRE MARSHALL CLAIMING JURISDICTION OVER THE PROJECT LOCATION.
8. ONLY AQUA PERSONNEL SHALL OPERATE MAIN LINE VALVES FOR THE CONTRACTOR.
9. EASEMENTS, IN A FORM SATISFACTORY TO AQUA, SHALL BE REQUIRED FOR ALL WATER FACILITIES LOCATED OUTSIDE THE PUBLIC RIGHT OF WAY.
10. ALL FIRE HYDRANTS SHALL INCLUDE A 6" GATE VALVE ON THE HYDRANT LATERAL.
11. THE USE OF FITTINGS SHALL BE MINIMIZED, AND MUST BE APPROVED BY AQUA. INSTEAD, CONTRACTOR SHALL DEFLECT PIPE SEGMENTS AS NECESSARY.
12. METER BOXES SHALL BE INSTALLED IN AN AREA BEHIND THE CURB (IF APPLICABLE) FOR DWELLINGS THAT ARE GREATER THAN 100 FEET FROM THE CURB. METER BOX LOCATIONS ARE SUBJECT TO FINAL APPROVAL BY AQUA. METER BOXES MUST MEET THE SPECIFICATIONS OF AQUA.
13. DEVELOPER SHALL OBTAIN ALL NECESSARY ROAD OPENING PERMITS REQUIRED FOR THE INSTALLATION OF THE WATER FACILITIES, AND SHALL BE RESPONSIBLE FOR THE PAYMENT OF ALL APPLICATION FEES AND INSPECTION COSTS ASSOCIATED WITH THESE PERMITS.

LEGEND & ABBREVIATIONS

- CENTERLINE OF ROAD
- PROPERTY BOUNDARY
- ADJOINER BOUNDARY
- RIGHT OF WAY LINE
- EXISTING FENCE
- BUILDING SETBACK LINE
- 95 EXISTING CONTOURS
- 295.60 EXISTING SPOT ELEVATION
- EXISTING TREELINE
- OH EXISTING OVERHEAD WIRE
- W EXISTING WATER LINE
- C EXISTING TELCO LINE
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- S EXISTING SANITARY LINE
- EXISTING STORM SEWER LINE
- EXISTING CURB
- DEPRESSED CURB
- U/G - A/G UNDER/ABOVE GROUND
- SIGN
- UTILITY POLE (UP)
- UTILITY POLE WITH ROAD LIGHT
- HYDRANT
- (D) STORM MANHOLE
- (S) SANITARY MANHOLE
- (E) ELECTRIC MANHOLE
- (W) WATER MANHOLE
- STORM INLET
- GM GAS METER
- WM WATER METER
- TSB TRAFFIC SIGNAL BOX
- EV ELECTRIC VAULT
- GV GAS VALVE
- WV WATER VALVE
- CO CLEAN OUT
- MW MONITORING WELL
- CONCRETE MONUMENT FOUND
- IRON PIN FOUND
- IRON PIPE FOUND
- NAIL FOUND

Cornerstone
Consulting Engineers & Design Services, Inc.
213 West Main Street . Lansdale . PA 19446
Phone: 215-362-2600 . Fax: 215-362-8400
WWW.CORNERSTONENET.COM
Philadelphia Region 215-362-2600
Lehigh Valley Region 610-820-8200
Pocono Region 570-839-1770

CLIENT DATA

REVISIONS

NO	BY	DESCRIPTION	DATE
1	DJB	REVISED PER TOWNSHIP COMMENTS	6/22/2026

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania
15122 - 1078
811
BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776

JBA JAMES B. ANDERSON REGISTERED PROFESSIONAL JAMES B. ANDERSON PE055536 CIVIL ENGINEER COMMONWEALTH OF PENNSYLVANIA LICENSED

PROJECT LOCATION

PRELIMINARY LAND DEVELOPMENT PLAN
410 S. HIGH STREET
WEST CHESTER, PA 19382
BOROUGH OF WEST CHESTER
CHESTER COUNTY, PA

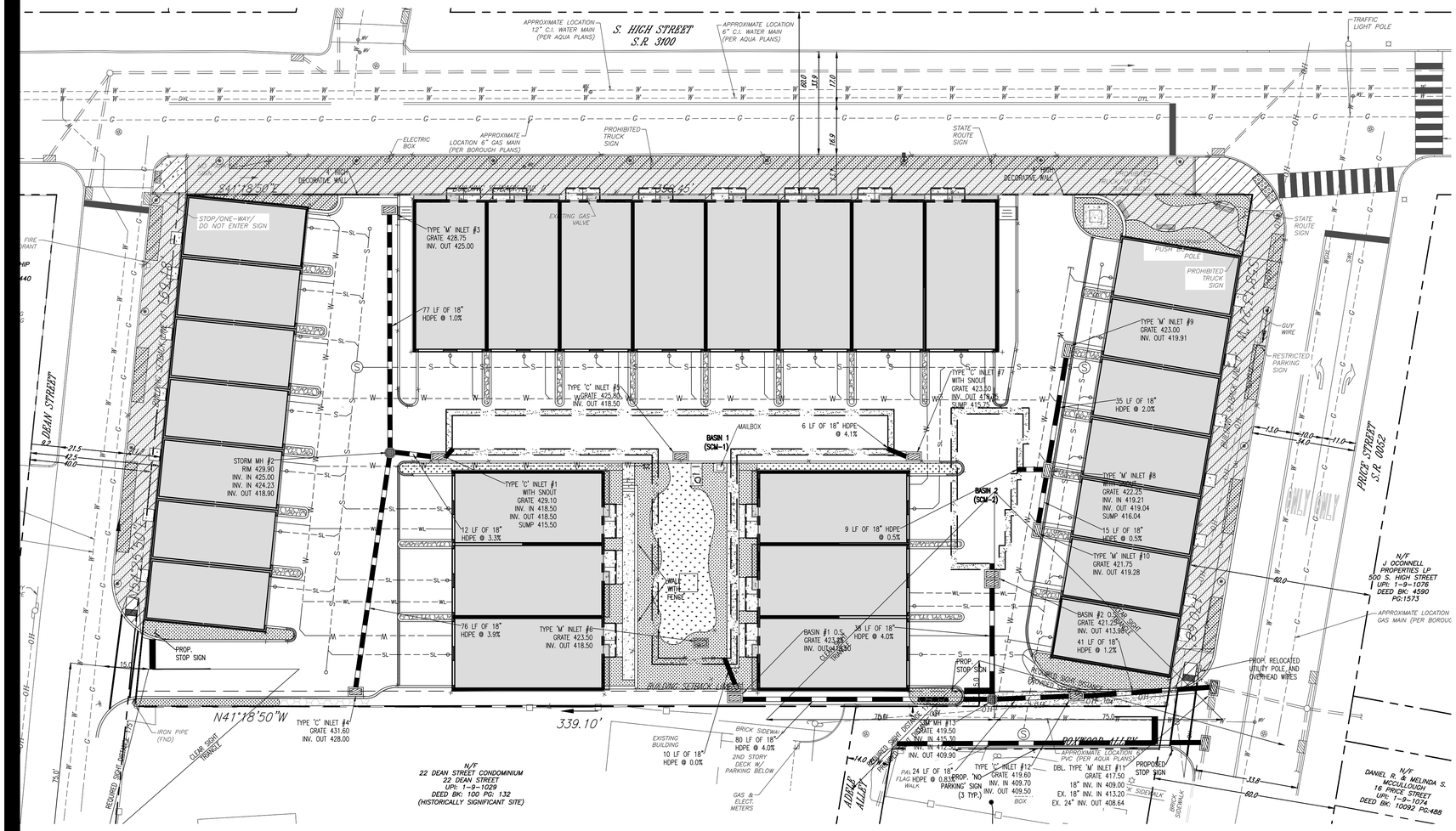
TITLE

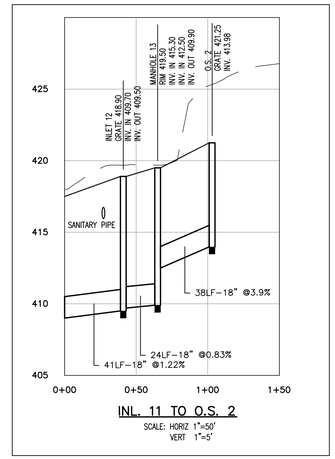
UTILITY PLAN

PROJ. #	26-0118	DATE	03-09-2026
CAD ID.	26-0118	DRN BY	RTH
SCALE	AS NOTED	CHK BY	JBA

SHEET 7 OF 14

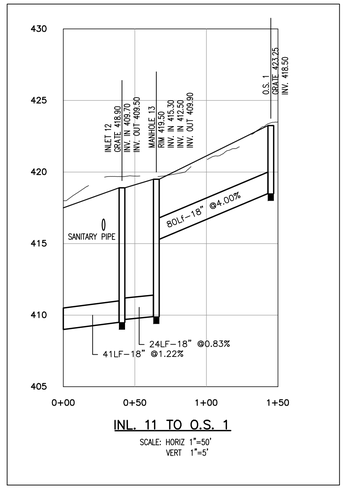
REV 1





INL. 11 TO O.S. 2

SCALE: HORIZ 1"=50'
VERT 1"=5'



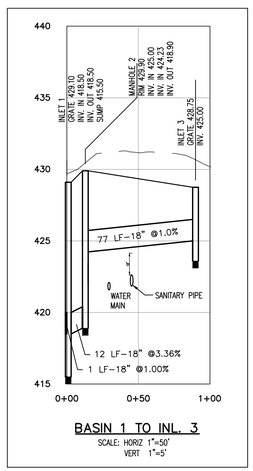
INL. 11 TO O.S. 1

SCALE: HORIZ 1"=50'
VERT 1"=5'

GRAPHIC SCALE

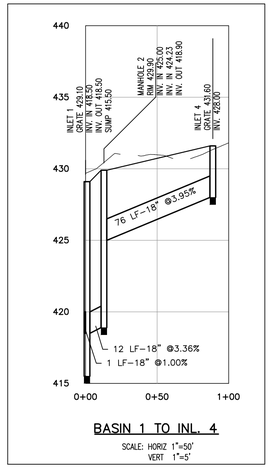
20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.



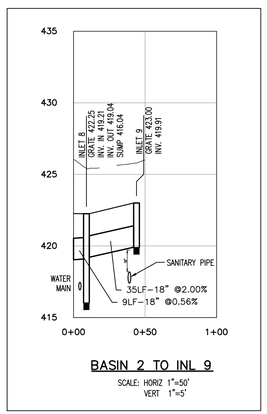
BASIN 1 TO INL. 3

SCALE: HORIZ 1"=50'
VERT 1"=5'



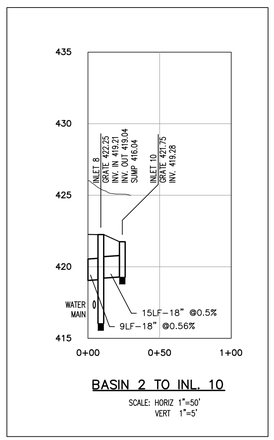
BASIN 1 TO INL. 4

SCALE: HORIZ 1"=50'
VERT 1"=5'



BASIN 2 TO INL. 9

SCALE: HORIZ 1"=50'
VERT 1"=5'



BASIN 2 TO INL. 10

SCALE: HORIZ 1"=50'
VERT 1"=5'

LEGEND & ABBREVIATIONS

- CENTERLINE OF ROAD
- PROPERTY BOUNDARY
- ADJOINER BOUNDARY
- RIGHT OF WAY LINE
- EXISTING FENCE
- BUILDING SETBACK LINE
- 95 EXISTING CONTOURS
- +295.60 EXISTING SPOT ELEVATION
- EXISTING TREELINE
- OH EXISTING OVERHEAD WIRE
- W EXISTING WATER LINE
- C EXISTING TELCO LINE
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- S EXISTING SANITARY LINE
- EXISTING STORM SEWER LINE
- EXISTING CURB
- DEPRESSED CURB
- U/G - A/G UNDER/ABOVE GROUND
- SIGN
- UTILITY POLE (UP)
- UTILITY POLE WITH ROAD LIGHT
- HYDRANT
- (D) STORM MANHOLE
- (S) SANITARY MANHOLE
- (E) ELECTRIC MANHOLE
- (W) WATER MANHOLE
- STORM INLET
- GM GAS METER
- WM WATER METER
- TSB TRAFFIC SIGNAL BOX
- EV ELECTRIC VAULT
- GV GAS VALVE
- WV WATER VALVE
- CO CLEAN OUT
- MW MONITORING WELL
- CONCRETE MONUMENT FOUND
- IRON PIN FOUND
- IRON PIPE FOUND
- NAIL FOUND

CLIENT DATA

Cornerstone
Consulting Engineers & Design Services, Inc.
213 West Main Street . Lansdale . PA 19446
Phone: 215-362-2600 . Fax: 215-362-8400
WWW.CORNERSTONENET.COM
Philadelphia Region 215-362-2600
Lehigh Valley Region 610-820-8200
Pocono Region 570-839-1770

REVISIONS

NO.	BY	DESCRIPTION	DATE
1	DB	REVISED PER TOWNSHIP COMMENTS	6/22/2026

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania
15122 - 1076

811

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776

J. PATRICK CARLSON
COMMONWEALTH OF PENNSYLVANIA
PROFESSIONAL
ENGINEER
JOHN P. CARLSON
PE055536
REGISTERED PROFESSIONAL ENGINEER

PROJECT LOCATION

PRELIMINARY LAND DEVELOPMENT PLAN
410 S. HIGH STREET
WEST CHESTER, PA 19382
BOROUGH OF WEST CHESTER
CHESTER COUNTY, PA

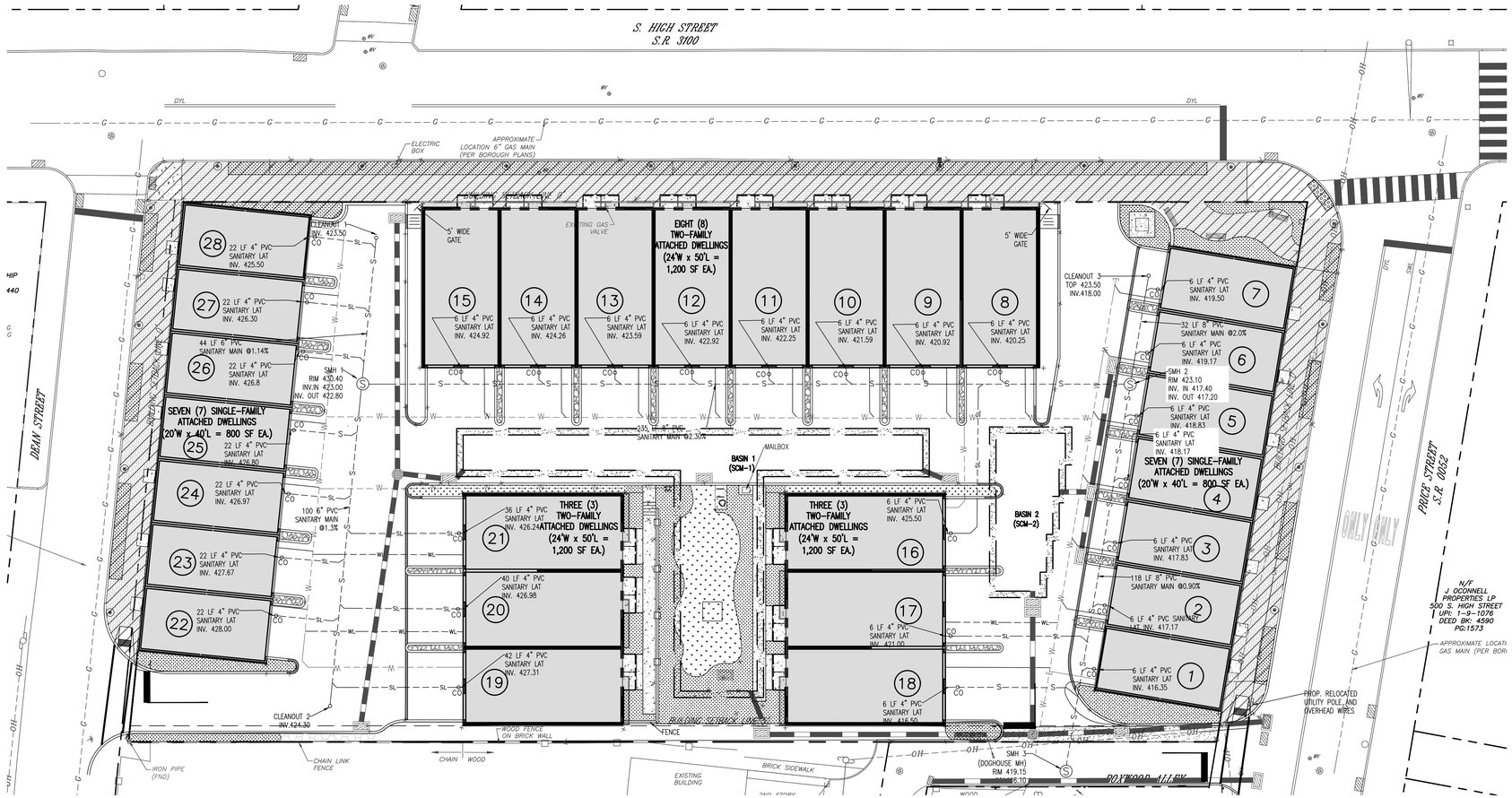
TITLE

STORMWATER DRAINAGE PLAN

PROJ. #	26-0118	DATE	03-09-2026
CAD ID.	26-0118	DRN BY	RTH
SCALE	AS NOTED	CHK BY	JBA

SHEET 8 OF 14

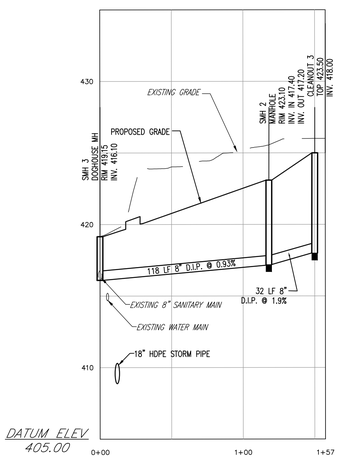
REV 1



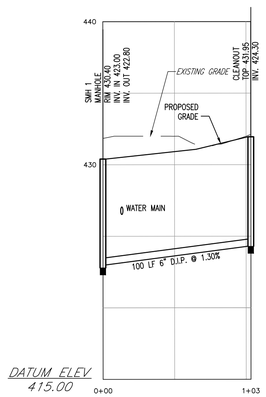
GRAPHIC SCALE

20 0 10 20 40 80

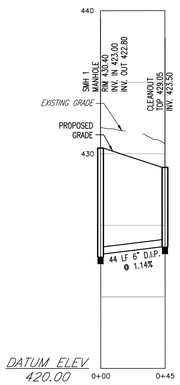
(IN FEET)
1 inch = 20 ft.



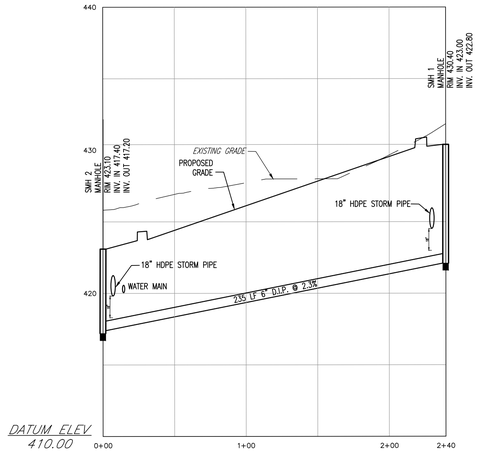
SMH 3 TO CLEANOUT 3
SCALE: HORIZ 1"=50'
VERT 1"=5'



SMH 1 TO CLEANOUT 2
SCALE: HORIZ 1"=50'
VERT 1"=5'



SMH 1 TO CLEANOUT 1
SCALE: HORIZ 1"=50'
VERT 1"=5'



SMH 1 TO SMH 2
SCALE: HORIZ 1"=50'
VERT 1"=5'

LEGEND & ABBREVIATIONS

- CENTERLINE OF ROAD
- PROPERTY BOUNDARY
- ADJOINER BOUNDARY
- RIGHT OF WAY LINE
- EXISTING FENCE
- BUILDING SETBACK LINE
- 95 EXISTING CONTOURS
- 295.60 EXISTING SPOT ELEVATION
- EXISTING TREELINE
- OH EXISTING OVERHEAD WIRE
- W EXISTING WATER LINE
- C EXISTING TELCO LINE
- E EXISTING ELECTRIC LINE
- G EXISTING GAS LINE
- S EXISTING SANITARY LINE
- EXISTING STORM SEWER LINE
- EXISTING CURB
- DEPRESSED CURB
- U/G - A/G UNDER/ABOVE GROUND
- SIGN
- UTILITY POLE (UP)
- UTILITY POLE WITH ROAD LIGHT
- HYDRANT
- (D) STORM MANHOLE
- (S) SANITARY MANHOLE
- (E) ELECTRIC MANHOLE
- (W) WATER MANHOLE
- STORM INLET
- GM GAS METER
- WM WATER METER
- TBX TRAFFIC SIGNAL BOX
- E ELECTRIC VAULT
- GV GAS VALVE
- WV WATER VALVE
- CO CLEAN OUT
- MW MONITORING WELL
- CONCRETE MONUMENT FOUND
- IRON PIN FOUND
- IRON PIPE FOUND
- NAIL FOUND

CLIENT DATA

Cornerstone
Consulting Engineers & Design Services, Inc.
213 West Main Street . Lansdale . PA 19446
Phone: 215-362-2600 . Fax: 215-362-8400
WWW.CORNERSTONENET.COM
Philadelphia Region 215-362-2600
Lehigh Valley Region 610-820-8200
Pocono Region 570-839-1770

REVISIONS

NO	BY	DESCRIPTION	DATE
1	DB	REVISED PER TOWNSHIP COMMENTS	6/22/2026

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania 15122 - 1078
811
BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776

JBA — JOSEPH B. ANDERSON — PROFESSIONAL ENGINEER — REGISTERED — COMMONWEALTH OF PENNSYLVANIA

PROJECT LOCATION

PRELIMINARY LAND DEVELOPMENT PLAN
410 S. HIGH STREET
WEST CHESTER, PA 19382
BOROUGH OF WEST CHESTER
CHESTER COUNTY, PA

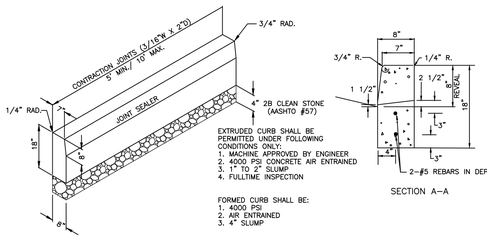
TITLE

SANITARY PROFILE PLAN

PROJ. #	26-0118	DATE	03-09-2026
CAD ID.	26-0118	DRN BY	RTH
SCALE	AS NOTED	CHK BY	JBA

SHEET 9 OF 14

REV 1

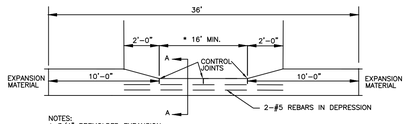


EXTRUDED CURB SHALL BE PERMITTED UNDER FOLLOWING CONDITIONS ONLY:
1. MACHINE APPROVED BY ENGINEER
2. 4000 PSI CONCRETE AIR ENTRAINED
3. 1" TO 2" SLUMP
4. FULLTIME INSPECTION

FORMED CURB SHALL BE:
1. 4000 PSI
2. AIR ENTRAINED
3. 4" SLUMP

SECTION A-A

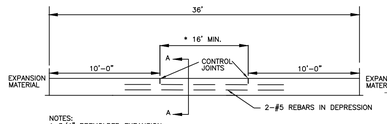
* A CONTRACTION JOINT SHALL BE PLACED EVERY 10 FEET MINIMUM



NOTES:
1. 3/4" PREMOLDED EXPANSION JOINT MATERIAL SHALL BE PLACED AT 30 FOOT MAXIMUM SPACING TO FULL DEPTH OF CURB. (40 FOOT MAXIMUM FOR EXTRUDED CURB)
2. CURB SHALL BE DOWEL PINNED INTO INLETS: 2-#8X1'-0" DOWEL BARS ON BOTH SIDES OF INLET.
3. 4" 2B CLEAN STONE UNDER CURB.
4. WEATHER PROTECTION AND CURING COMPOUNDS SHALL BE USED IN ACCORDANCE WITH PENNDOT SPECS. PUB. 408. CURRENT EDITION.
5. CURING COMPOUND AASHTO-M148, TYPE 1-D TO BE USED IN ACCORDANCE WITH PENNDOT PUB. 408 SECTION 711.2. CURRENT EDITION.

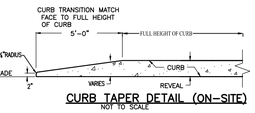
* 20' FOR DOUBLE WIDE DRIVEWAY ADDITIONAL WIDTH MUST BE PRE-APPROVED BY TOWNSHIP.

DEPRESSED CONCRETE CURB DETAIL

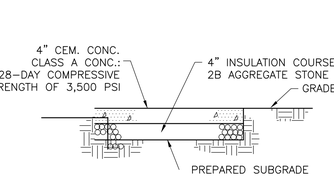


NOTES:
1. 3/4" PREMOLDED EXPANSION JOINT MATERIAL SHALL BE PLACED AT 30 FOOT MAXIMUM SPACING TO FULL DEPTH OF CURB. (40 FOOT MAXIMUM FOR EXTRUDED CURB)
2. CURB SHALL BE DOWEL PINNED INTO INLETS: 2-#8X1'-0" DOWEL BARS ON BOTH SIDES OF INLET.
3. 4" 2B CLEAN STONE UNDER CURB.
4. WEATHER PROTECTION AND CURING COMPOUNDS SHALL BE USED IN ACCORDANCE WITH PENNDOT SPECS. PUB. 408. CURRENT EDITION.
5. CURING COMPOUND AASHTO-M148, TYPE 1-D TO BE USED IN ACCORDANCE WITH PENNDOT PUB. 408 SECTION 711.2. CURRENT EDITION.

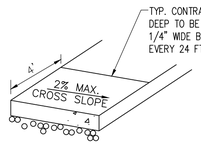
FLUSH CURB DETAIL



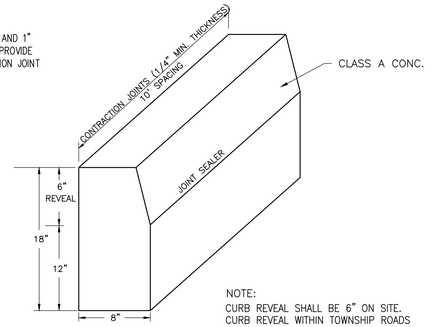
CURB TAPER DETAIL (ON-SITE)
NOT TO SCALE



SIDEWALK DETAIL
NOT TO SCALE

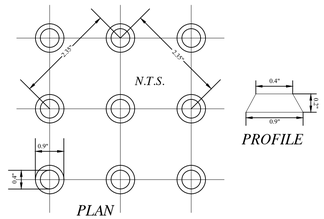


*ALL SIDEWALKS TO BE BROOMED FINISHED.



CURB DETAIL
NOT TO SCALE

NOTE:
CURB REVEAL SHALL BE 6" ON SITE. CURB REVEAL WITHIN TOWNSHIP ROADS SHALL MATCH THE EXISTING REVEAL OR AS OTHERWISE DIRECTED BY THE TOWNSHIP.



TRUNCATED DOME PATTERN FOR A.D.A CONCRETE DETECTABLE WARNING SURFACES

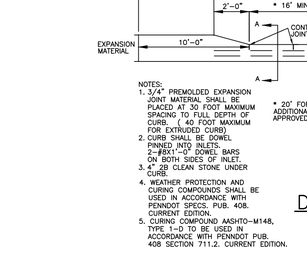
CONCRETE PAVEMENT NOTES WITHIN SITE

GENERAL:

1. CONCRETE WORK AND MATERIALS TO CONFORM TO ALL REQUIREMENTS OF THE LATEST REVISIONS OF CODES ACI 301 & ACI 318.
2. USE 4000 PSI CONCRETE (READY-MIXED ASTM C-94 OR MIXED-ON-JOB ACI 304), (SLUMP 2"-4", MIN WATER / CEMENT RATIO 0.4 TO 1, AIR CONTENT SHALL BE 4.5 % MIN AND 7.5% MAX).
3. ANCHOR BOLTS TO BE ASTM A-307 STEEL.
4. REINFORCING STEEL TO BE ASTM A-615 GRADE 60 KSI, DEFORMED BILLET STEEL BARS.
5. WIRE MESH TO BE ASTM A-185 ELECTRIC WELDED WIRE FABRIC (6" x 6"-W2.9 x W2.9), MESH IS TO BE OVERLAPPED 6" AND TO BE EXTENDED TO WITHIN 3" OF JOINTS AND EDGE OF MAT (WIRE MESH TO BE IN FLAT SHEETS, NOT ROLLS).
6. FOR SUPPORT OF ALL WIRE MESH IN SLABS USE 2" WIRE MESH CHAIRS (MAS-CON OR EQUAL), SPACED AT 4 FT INTERVALS.
7. UNSATISFACTORY SUB-GRADE MATERIAL MUST BE REMOVED.
8. FILL MATERIAL MUST MEET SPECIFICATION AST M-33 FOR CRUSHED STONE. FILL SHALL BE 6" (MINIMUM) OF CRUSHED STONE.
9. CONCRETE PLACEMENT NOT PERMITTED WHEN TEMPERATURE IS BELOW 40°F AND FALLING OR BELOW 30°F AND RISING. DO NOT POUR CONCRETE IF BACKFILL IS FROZEN.
10. TEMPORARY FORMS TO REMAIN IN PLACE FROM 24 TO 72 HOURS.
11. CONSTRUCTION LOADS NOT PERMITTED BEFORE 7 DAYS WITHOUT OWNER APPROVAL.
12. TOP OF SLABS TO RECEIVE A FINE BROOM FINISH AND BE SEALED PER SPECIFICATIONS.
13. USE HYDRAULIC CEMENT "5-STAR GROUT" OR APPROVED EQUAL FOR BASE PLATE GROUT (NON-SHRINK) AND AND BUMPER POST.
14. REINFORCING WIRE MESH MINIMUM COVER IS 2".
15. EXPOSED CORNERS ON CONCRETE FOOTINGS SHALL BE CHAMFERED 3/4".
16. VOIDS ON ANY FORMED CONCRETE SURFACES ARE TO BE POINTED-UP WITH 1:2 CEMENT MORTAR MIX AND ALL SURFACES WETTED AND RUBBED WITH CARBORUNDRUM BRICK OR OTHER ABRASIVE UNTIL UNIFORM COLOR AND TEXTURE IS PRODUCED.

EXPANSION JOINTS:

1. EXPANSION JOINTS SHOULD BE PROVIDED AT A MAXIMUM SPACING OF 15 FEET.
2. PROVIDE FIBER EXPANSION JOINT COMPOSED OF CELLULAR FIBERS BONDED WITH ASPHALT AS MFG. BY W.R. MEADOWS OR EQUIVALENT. (SEALTIGHT FIBERS EXPANSION JOINT FILLER CAPPED WITH W.R. MEADOWS SNAP CAP 1/2" SIZE) RECESS EXP JOINT, 1/4" FROM SURFACE.

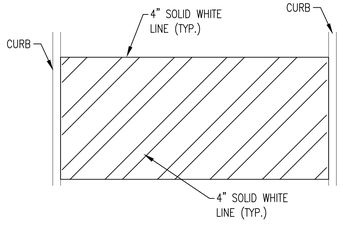


COLOR: LEGEND AND BORDER — WHITE (REFLECTORIZED)
BACKGROUND — RED (REFLECTORIZED)

SIGN SIZE	DIMENSIONS A	B	C	SERIES	BORDER	BLANK STUD
~~24 x 24~~	~~24~~	~~8~~	~~10~~	~~C~~	~~$\frac{1}{2}$~~	~~B1-24~~
* 30 x 30	30	10	12½	C	¾	B1-30
~~36 x 36~~	~~36~~	~~12~~	~~15~~	~~C~~	~~1~~	~~B1-36~~
~~48 x 48~~	~~48~~	~~16~~	~~20~~	~~C~~	~~1½~~	~~B1-48~~

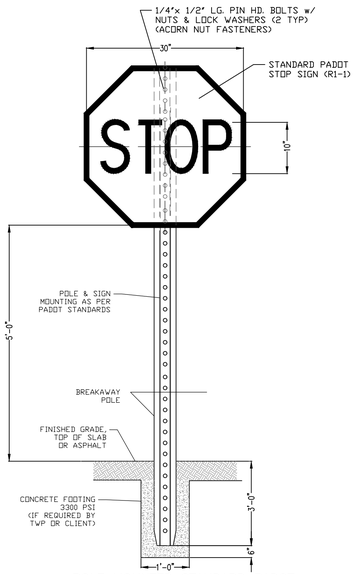
* REDUCE SPACING BY 40%

"STOP" (R1-1) SIGN DETAIL
NOT TO SCALE

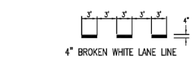


TYPICAL CROSSWALK

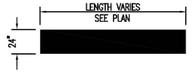
1. CROSSWALKS SHALL EXTEND FROM FACE OF CURB TO FACE OF CURB.



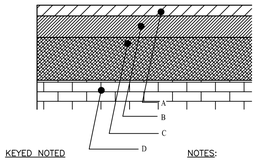
POLE MOUNTED STANDARD PADOT STOP SIGN DETAIL



PAVEMENT STRIPING DETAIL
(NOT TO SCALE)



PAINTED STOP BAR DETAIL
(NOT TO SCALE)



KEYED NOTED

A—1.5 INCHES SUPERPAVE VOLUMETRIC ASPHALT MIXTURE DESIGN. 9.5mm, PG 64-22, HMA WEARING COURSE, 3-10 MILLION Esals, SRL-E

B—2.0 INCHES SUPERPAVE VOLUMETRIC ASPHALT MIXTURE DESIGN. 19mm, PG 64-22, HMA BINDER COURSE, 3-10 MILLION Esals

C—3.5 INCHES SUPERPAVE VOLUMETRIC ASPHALT MIXTURE DESIGN. 25mm, PG 64-22, HMA BASE COURSE, 3-10 MILLION Esals

D—6.0 INCHES SUBBASE (NO. 2A)

NOTES:

THIS PAVEMENT SECTION DETAIL REFLECTS MINIMUM REQUIREMENTS. ENGINEER TO DETERMINE DESIGN BASED ON GEO-TECHNICAL DATA OF SPECIFIC PROJECT.

(FOR USE WITHIN RIGHT-OF-WAY LINES)

PAVEMENT SECTION DETAIL

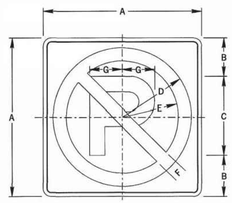
R8-3

NO PARKING SYMBOL SIGN

(a) Justification. The No Parking Symbol Sign (R8-3) shall be authorized for use to prohibit parking along a given highway. If the restriction applies to a limited area or zone, supplemental signs or messages shall be authorized to show the limits of the restriction. Authorized supplemental signs include, but are not limited to the Restricted Hours Plaque (R10-20AP), No Parking Restricted Hours Plaque (R8-3HP-1), No Parking Loading Zone Plaque (R8-3GP-1), No Parking Arrow Plaque (R7-301), Tow-Away Zone Sign (R7-201AP) and No Parking On Pavement Sign (R8-3CP). As an alternate to the use of supplemental signs, the appropriate supplemental message and the no parking symbol may be incorporated into a single sign.

(b) Size. The standard size R8-3 sign shall be 12" x 12" in business, residential, or park areas and 24" x 24" in rural areas. The standard size for expressways shall be 36" x 36", and on freeways shall be 48" x 48".

(c) Placement. Signs should be set at an angle of not less than 30° or more than 45° with a line parallel to the flow of traffic so as to be visible to approaching traffic. Care should be taken to ensure that supplemental arrows point in the proper direction to indicate the regulated area. Signs shall be placed at the beginning of and at reasonable intervals throughout the restriction.



SIGN SIZE A x A	B	C	D	E	F	G	MARGIN	BORDER	BLANK STD.
12" x 12"	3	6E(M)	4.9	3.9	1	2.4	0.4	0.4	———
24" x 24"	6	12E(M)	10.5	8.5	2	4.8	0.4	0.6	B3-24
36" x 36"	9	18E(M)	15.8	12.8	3	7.2	0.6	0.8	B3-36
48" x 48"	12	24E(M)	21	17	4	9.6	0.8	1.2	B3-48

DIMENSIONS — IN

COLOR:

SYMBOL AND BORDER: BLACK (NON-REFLECTORIZED)

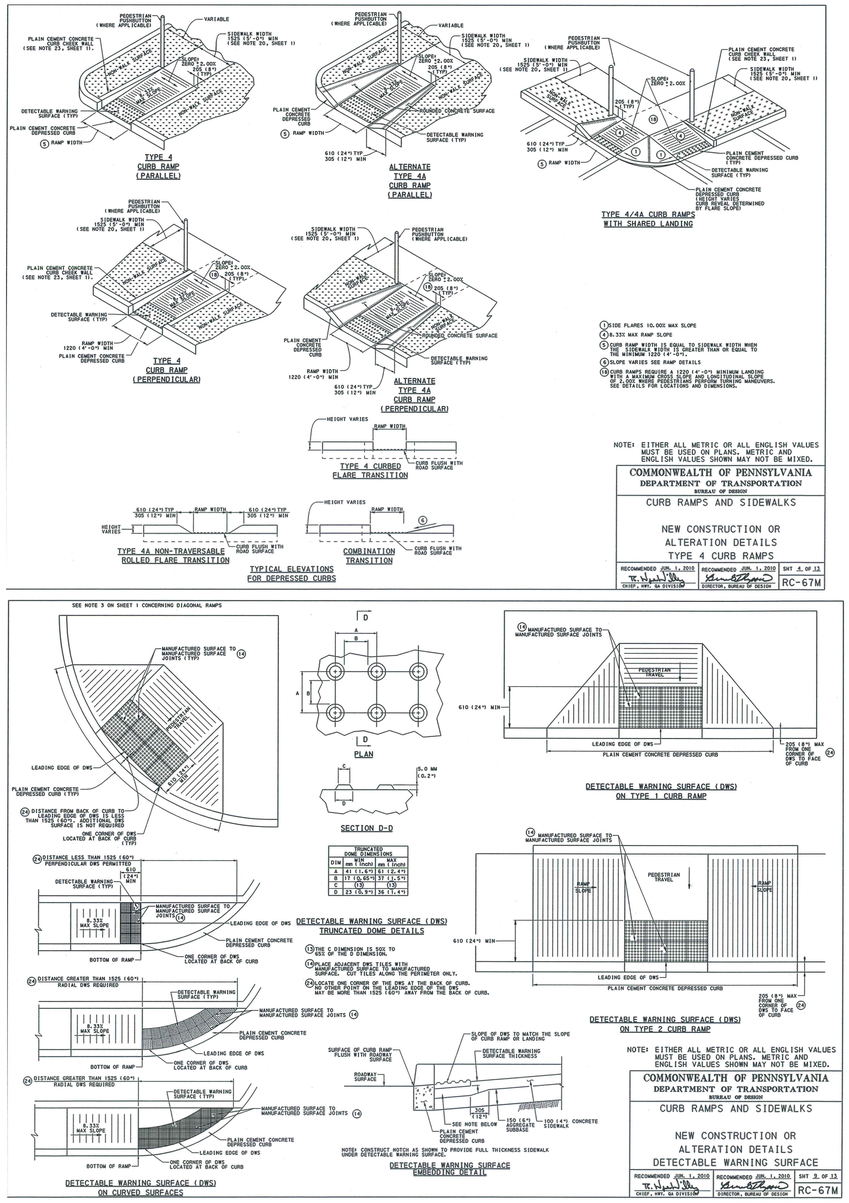
CIRCLE AND DIAGONAL: RED (REFLECTORIZED)

BACKGROUND: WHITE (REFLECTORIZED)

APPROVED FOR THE SECRETARY OF TRANSPORTATION

By : _____ Date : 02-29-12

Chief, Traffic Engineering and Permits Section
Bureau of Maintenance and Operations



CLIENT DATA

Cornerstone
Consulting Engineers & Design Services, Inc.
213 West Main Street . Lansdale . PA 19446
Phone: 215-362-2600 . Fax: 215-362-8400
WWW.CORNERSTONENET.COM
Philadelphia Region 215-362-2600
Lehigh Valley Region 610-820-8200
Pocono Region 570-839-1770

NO	BY	DESCRIPTION	DATE
1	DB	REVISED PER TOWNSHIP COMMENTS	6/22/2026

REVISIONS

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania 15122 - 1078
811
BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776

J. BRIAN CARLSON — COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ENGINEER — PE055536

PROJECT LOCATION

PRELIMINARY LAND DEVELOPMENT PLAN
410 S. HIGH STREET
WEST CHESTER, PA 19382
BOROUGH OF WEST CHESTER
CHESTER COUNTY, PA

TITLE

GENERAL SITE DETAILS

PROJ. #	26-0118	DATE	03-09-2026
CAD ID.	26-0118	DRN BY	RTH
SCALE	AS NOTED	CHK BY	JBA

SHEET 10 OF 14

REV 1

GENERAL NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED. U.S. CUSTOMARY UNITS IN ( ) PARENTHESIS.
2. METRIC UNITS INDICATED ARE SOFT CONVERTED FROM U.S. CUSTOMARY UNITS.
3. DESIGN SPECIFICATIONS AND REQUIREMENTS:
   - AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND AS SUPPLEMENTED BY THE DESIGN MANUAL, PART 4, STRUCTURES.
   - DESIGN IS IN ACCORDANCE WITH THE LOAD AND RESISTANCE FACTOR DESIGN METHOD (LRFD).
   - INLET BOXES ARE DESIGNED FOR AN ALLOWABLE FOUNDATION PRESSURE EQUAL TO 0.190 MPa (2.0 TONS/SQ. FT.) AT THE SERVICE LIMIT STATE.
4. CONSTRUCTION SPECIFICATIONS:
   - PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH THE CURRENT VERSION OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408 AND THE CONTRACT SPECIAL PROVISIONS.
5. SHOP DRAWINGS FOR INLET BOXES, TOP SLABS, AND TRANSITION SLABS ARE NOT REQUIRED IF THE ITEM IS CONSTRUCTED/FABRICATED IN ACCORDANCE WITH THIS STANDARD.
6. THIS STANDARD DEPICTS THE DIMENSIONS REQUIRED FOR UNIFORMITY AND INTERCHANGEABILITY. IT DOES NOT INCLUDE DETAILS REQUIRED FOR FABRICATION OR MANUFACTURING. FOR DEVIATIONS OR MODIFICATIONS OF THE STANDARDS, SUBMIT SHOP DRAWINGS TO THE BUREAU OF DESIGN HIGHWAY QUALITY ASSURANCE DIVISION CHIEF FOR REVIEW AND ACCEPTANCE.
7. THE DESIGNER IS RESPONSIBLE FOR DETERMINING THE TYPE OF INLET BOX REQUIRED BASED ON THE REQUIRED PIPE SIZE(S) AND PIPE OPENING(S). REFER TO TABLES A AND B ON SHEET 45 FOR ADDITIONAL INFORMATION. THE DESIGNER IS ALSO RESPONSIBLE TO DETERMINE THE REQUIRED PAY ITEM FOR AN INSTALLATION BASED ON THE OVERALL INSTALLATION HEIGHT.
8. THE SELECTION OF COMPONENTS TO ACHIEVE A SPECIFIED INLET ASSEMBLY IS THE CONTRACTOR'S RESPONSIBILITY, UNLESS OTHERWISE INDICATED ON THE CONTRACT DOCUMENTS.
9. THE SIZE OF THE INLET TOP UNITS, PER RC-45M, ARE BASED ON THE MINIMUM DIMENSIONS INDICATED FOR THE STANDARD INLET BOX.
10. MINIMUM PIPE DIAMETERS (INSIDE):
    - FILL HEIGHT LESS THAN OR EQUAL TO 7600 mm (25') = 450 mm (18") FOR CIRCULAR PIPE (OR EQUIVALENT SIZE PIPE ARCH)
    - FILL HEIGHTS GREATER THAN 7600 mm (25') = 600 mm (24")
11. INSIDE INLET BOX DIMENSIONS ARE BASED ON PROVIDING A PIPE OPENING TO ACCOMMODATE A MINIMUM 450 mm (18") PIPE TO A MAXIMUM 2438 mm (96") PIPE. IF A LARGER PIPE SIZE IS REQUIRED, THE DESIGNER IS RESPONSIBLE FOR PROVIDING DESIGN AND DETAILS IN ACCORDANCE WITH PENNDOT REQUIREMENTS.
12. INLETS THAT EXCEED THE MAXIMUM HEIGHT INDICATED REQUIRE SPECIAL DESIGN AND DETAILS. DESIGNER IS RESPONSIBLE FOR PROVIDING DESIGN AND DETAILS IN ACCORDANCE WITH PENNDOT REQUIREMENTS.
13. SHOW ORIENTATION OF INLET BOXES ON THE CONTRACT DRAWINGS.
14. THE TOP SLAB IS NOT PERMITTED TO BE POURED MONOLITHICALLY WITH THE ADJACENT BOX SECTION.
15. PROVIDE 50 mm (2") DIAMETER WEEPHOLES IN THE WALLS WHEN THE DEPTH BETWEEN THE FINISHED GRADE ELEVATION AND THE TOP OF BOTTOM SLAB ELEVATION IS GREATER THAN 3048 mm (10'-0"):
    - VERTICAL PLACEMENT: 1500 mm (5'-0") MAXIMUM SPACING
    - HORIZONTAL PLACEMENT: PLACE WEEPHOLES IN THE SIDE WALLS THAT ARE PERPENDICULAR TO TRAFFIC.
    - LOCATE WEEPHOLES A MINIMUM OF 150 mm (6") FROM PIPE OPENINGS OR JOINTS.
    - LOCATE WEEPHOLES A MINIMUM OF 300 mm (1'-0") ABOVE OUTLET PIPE INVERT.
16. PROVIDE MANHOLE STEPS WHEN THE DEPTH BETWEEN THE FINISHED GRADE ELEVATION AND THE TOP OF BOTTOM SLAB ELEVATION IS GREATER THAN 1500 mm (5'-0"). SHALLOW RECESSES, ON THE INSIDE FACE OF THE INLET, NOT GREATER THAN 10 mm (⅜") IN DEPTH, FORMED BY MAGNETIC STEP FORMERS ARE ACCEPTABLE AND DO NOT REQUIRE PATCHING. FOR DETAILS, REFER TO RC-39M.
17. IF A REQUIRED DETAIL IS NOT FOUND IN THIS STANDARD OR ON THE CONTRACT DRAWINGS A SPECIAL SUBMISSION REQUESTING ACCEPTANCE FOR SPECIFIC DETAILS MUST BE MADE TO THE BUREAU OF DESIGN HIGHWAY QUALITY ASSURANCE DIVISION CHIEF.
18. FOR INLET TOPS, GRATES, GRADE ADJUSTMENT RINGS AND FRAMES, REFER TO RC-45M.

MATERIAL NOTES:

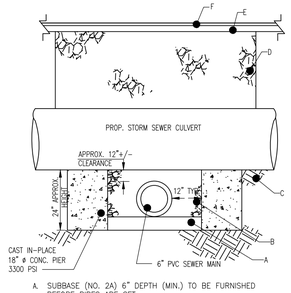
1. PROVIDE THE FOLLOWING CONCRETE CLASS:
   - CAST-IN-PLACE: CLASS A CEMENT CONCRETE (DESIGN COMPRESSIVE STRENGTH, f'c = 21 MPa (3,000 PSI))
   - PRECAST: CLASS AA CEMENT CONCRETE, MODIFIED (DESIGN COMPRESSIVE STRENGTH, f'c = 28 MPa (4,000 PSI))
2. A HIGHER STRENGTH OF CONCRETE MAY BE SUBSTITUTED FOR A LOWER STRENGTH OF CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT. SUBMIT MIX DESIGN TO THE DEPARTMENT FOR REVIEW AND ACCEPTANCE.
3. REINFORCEMENT STEEL:
   - PROVIDE GRADE 420 (GRADE 60) DEFORMED REINFORCEMENT BARS THAT MEET THE REQUIREMENTS OF ASTM A615M (A615) OR ASTM A706M (A706). DO NOT WELD REINFORCEMENT BARS WITHOUT A PENNDOT APPROVED WELDING PROCEDURE.
   - ALL REINFORCEMENT BARS SHOWN ARE SOFT CONVERTED METRIC SIZES.
   - PROVIDE MINIMUM LAP AND EMBEDMENT LENGTH FOR REINFORCING BARS OF 30 DIAMETERS OR IN ACCORDANCE WITH THE CURRENT AASHTO SPECIFICATIONS AS MODIFIED BY THE DESIGN MANUAL PART 4, WHICHEVER IS GREATER. (REFER TO TABLE ON SHEET 3)
   - BAR SPACING:
     - MINIMUM SPACING = 102 mm (4")
     - MAXIMUM SPACING = 305 mm (1'-0") OR 1.5 MEMBER THICKNESS
   - PERMITTED BAR SIZES:
     - INLET BOXES: #10 (#3), #13 (#4), #16 (#5), #19 (#6)
     - LARGER BAR SIZES ARE PERMITTED IN THE TOP SLABS AND TRANSITION SLABS.
   - MINIMUM AREA OF STEEL REQUIREMENTS FOR REINFORCEMENT BARS:
     - WALLS = 318 mm²/m (0.15 in²/ft) EACH WAY
     - BOTTOM SLAB:
       - TOP MAT = 424 mm²/m (0.20 in²/ft) EACH WAY
       - BOTTOM MAT = 424 mm²/m (0.20 in²/ft) EACH WAY
4. WELDED WIRE FABRIC (WWF):
   - PROVIDE GRADE 450 (GRADE 65) PLAIN WELDED WIRE FABRIC THAT MEET THE REQUIREMENTS OF ASTM A185 OR GRADE 480 (GRADE 70) DEFORMED WELDED WIRE FABRIC THAT MEET THE REQUIREMENTS OF ASTM A497.
   - ALL WELDED WIRE FABRIC SHOWN IS SOFT CONVERTED METRIC SIZES.
   - PROVIDE MINIMUM LAP SPLICES FOR WELDED WIRE FABRIC EQUAL TO THE LARGER OF TWO GRID SPACINGS OR 305 mm (12").
   - WIRE SPACING:
     - MINIMUM SPACING = 51 mm (2")
     - MAXIMUM SPACING = 305 mm (1'-0") OR 1.5 MEMBER THICKNESS
   - PERMITTED WIRE SIZES:
     - MINIMUM WIRE SIZE = MW26 (W4) (MD26 (D4))
     - MAXIMUM WIRE SIZE = MW129 (W20) (MD129 (D20))
     - MWF IS NOT PERMITTED IN THE CAST-IN-PLACE INLET BOXES.
     - MWF IS NOT PERMITTED IN THE TOP SLABS AND TRANSITION SLABS.
   - MINIMUM AREA OF STEEL REQUIREMENTS FOR WWF:
     - WALLS = 259 mm²/m (0.12 in²/ft) EACH WAY
     - BOTTOM SLAB:
       - TOP MAT = 424 mm²/m (0.20 in²/ft) EACH WAY
       - BOTTOM MAT = 424 mm²/m (0.20 in²/ft) EACH WAY
5. NON-SHRINK GROUT:
   - PROVIDE NON-SHRINK GROUT IN ACCORDANCE WITH PUBLICATION 408, SECTION 1001.2(d).
6. EPOXY BONDING COMPOUND:
   - PROVIDE EPOXY BONDING COMPOUND IN ACCORDANCE WITH PUBLICATION 408, SECTION 706.1.
7. MORTAR:
   - PROVIDE MORTAR IN ACCORDANCE WITH PUBLICATION 408, SECTION 705.7(b).
8. CAULKING COMPOUND:
   - PROVIDE CAULKING COMPOUND IN ACCORDANCE WITH PUBLICATION 408, SECTION 705.8(a).
9. GASKETS:
   - PROVIDE GASKETS IN ACCORDANCE WITH PUBLICATION 408, SECTION 705.5(b).
10. MANHOLE STEPS:
    - PROVIDE MANHOLE STEPS IN ACCORDANCE WITH PUBLICATION 408, SECTION 605.2(c).
11. SUBBASE MATERIAL AND PREPARATION:
    - PROVIDE NO. 2A COARSE AGGREGATE IN ACCORDANCE WITH PUBLICATION 408, SECTION 703.2 AND COMPACT IN ACCORDANCE WITH PUBLICATION 408, SECTION 350.3(e).
    - PLACE AND COMPACT IN 100 (4") MAXIMUM LAYERS.
    - PROVIDE A 300 mm (1'-0") MINIMUM DEPTH.

FIELD CONSTRUCTION NOTES:

1. CONSTRUCT OR PLACE INLET BOXES LEVEL, UNLESS OTHERWISE INDICATED OR DIRECTED.
2. CONSTRUCT OR PLACE INLET BOXES ON A SUBBASE CONSTRUCTED OF COMPACTED NO. 2A COARSE AGGREGATE. PLACE AND COMPACT IN 100 mm (4") LAYERS TO PROVIDE A 300 mm (1'-0") MINIMUM DEPTH.
3. LOCATE PIPE OR PIPES AS INDICATED OR DIRECTED.
4. CONNECT PIPES TO INLET BOXES WITH MORTAR OR WATERTIGHT RUBBER FLEXIBLE CONNECTORS.
5. FORM BOTTOM OF INLET, USING CLASS A CEMENT CONCRETE, TO CHANNEL THE FLOW TOWARD THE OUTLET PIPE. PROVIDE #13 (#4) REINFORCEMENT BARS SPACED AT 300 mm (12") CENTER TO CENTER MAXIMUM WHEN THE THICKNESS EXCEEDS 75 mm (3").
6. BACKFILL EXCAVATED SPACES AROUND THE STRUCTURE WITH ACCEPTABLE EMBANKMENT MATERIAL.
7. THE FOLLOWING ITEMS ARE INCIDENTAL TO THE COST OF THE INLET BOX PAY ITEM: EXCAVATION, COMPACTED NO. 2A COARSE AGGREGATE, INLET BOX, CLASS A CEMENT CONCRETE TO CHANNEL FLOW, TRANSITION SLAB, TOP SLAB, BACKFILL AND ANY OTHER MISCELLANEOUS ITEMS REQUIRED FOR THE CONSTRUCTION OF THE INLET BOX.

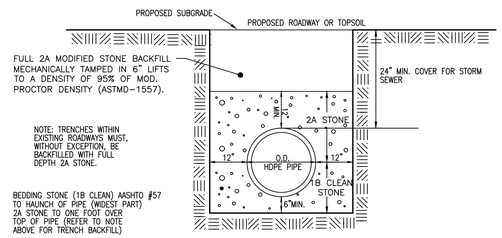
PRECAST CONCRETE INLET BOX NOTES:

1. CONSTRUCT INLET BOXES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 714.
2. PROVIDE PRECAST CONCRETE INLET BOXES SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15.
3. PROVIDE A TOP SLAB TO SUPPORT THE INLET TOP UNITS M, S, C AND C ALTERNATE WHEN A STANDARD INLET BOX IS NOT SPECIFIED. PROVIDE OPENING TO ACCOMMODATE THE STANDARD TOP COMPONENTS. PROVIDE A TOP SLAB WITH A ROUND OPENING FOR MANHOLE COVER WHEN SPECIFIED ON THE CONTRACT DRAWINGS.
4. PROVIDE A TRANSITION SLAB BETWEEN TWO SEPARATE INLET BOX SIZES, WHEN TWO SEPARATE INLET BOX SIZES ARE USED. (SEE TRANSITION SLAB NOTES.)
5. CLEAR COVER FOR STEEL:
   - WALLS: 38 mm (1½")
   - FOOTINGS (BOTTOM SLAB):
     - TOP COVER: 50 mm (2")
     - BOTTOM COVER: 38 mm (1½")
     - SIDE COVER: 38 mm (1½")
   - TOP AND TRANSITION SLABS (TOP AND BOTTOM): 38 mm (1½")
6. MINIMUM SLAB AND WALL THICKNESS:
   - MINIMUM TOP SLAB THICKNESS: 203 mm (8")
   - MINIMUM WALL THICKNESS: 152 mm (6")
   - MINIMUM BOTTOM SLAB THICKNESS: 178 mm (7")
7. THICKNESS OF WALL IS PERMITTED TO VARY FROM SECTION TO SECTION. INSIDE FACE OF WALLS MUST ALIGN BETWEEN SECTIONS.
8. FABRICATOR IS RESPONSIBLE FOR LIFTING, HANDLING AND TRANSPORTATION STRESSES.
9. LIFTING DEVICES:
   - PROVIDE GALVANIZED STEEL OR PLASTIC LIFTING DEVICES FOR HANDLING AND INSTALLATION.
   - FILL LIFTING DEVICES WITH NON-SHRINK GROUT AFTER INSTALLATION.
   - PROVIDE LIFTING DEVICES WITH A MINIMUM CAPACITY OF AT LEAST FOUR TIMES THE CALCULATED LOAD ON THE DEVICE.
10. TAPERS MAY BE PROVIDED ON THE INSIDE AND/OR OUTSIDE VERTICAL FACES OF THE INLET BOXES TO FACILITATE FORM STRIPPING. TAPERS MAY RESULT IN INTERNAL BOTTOM DIMENSIONS THAT VARY 20 mm/m (¼"/FOOT) PER SIDE TO A MAXIMUM OF 25 mm (1") PER SIDE.
11. KEYED JOINTS MAY BE CONSTRUCTED UPWARDS OR DOWNWARDS. CLEAN JOINTS AND KEYS THOROUGHLY BEFORE PLACING NEXT SEGMENT. PLACE MORTAR OR CAULKING COMPOUND BETWEEN JOINTS IN ACCORDANCE WITH THIS STANDARD.
12. PROVIDE EITHER A SHIPLAP OR KEYED JOINT BETWEEN THE BOTTOM OF THE TOP SLAB AND THE TOP OF THE BOX.
13. PROVIDE EITHER A SHIPLAP OR KEYED JOINT BETWEEN THE TRANSITION SLAB AND THE ADJACENT TOP AND BOTTOM SECTIONS.
14. PROVIDE EITHER A SHIPLAP OR KEYED JOINT BETWEEN PRECAST SECTIONS.
15. SEGMENT HEIGHTS:
    - MINIMUM HEIGHT:
      - RISER SECTIONS = 305 mm (1'-0")
      - BASE SECTIONS = 610 mm (2'-0")
    - MAXIMUM HEIGHT = 2438 mm (8'-0")



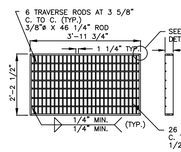
A. SUBBASE (NO. 2A) 6" DEPTH (MIN.) TO BE FURNISHED BEFORE PIPES ARE SET.
B. SUBBASE (NO. 2A) TO BE FURNISHED AFTER PIPES ARE SET. COMPACTED TO SAME AS SUBBASE.
C. SUBGRADE
D. SUBBASE (NO. 2A) DEPTH VARIES FOR SLOPE OF PIPE (APPROX. 24")
E. PAVEMENT BASE COURSE
F. PAVEMENT WEARING COURSE

UTILITY PIPE CROSSING CONCRETE PIER SUPPORT DETAIL
NOT TO SCALE

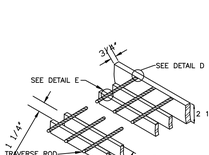


NOTE:
ALL UTILITY TRENCHES WITHIN EXISTING ROADWAYS, PROPOSED ROADWAYS, ALL RIGHT OF WAYS, EASEMENTS, PROPOSED DRIVEWAYS, APRONS AND SIDEWALKS MUST, WITHOUT EXCEPTION, BE BACKFILLED WITH FULL DEPTH 2A STONE AFTER TOP SCREENING.
ALL UTILITY TRENCHES MUST BE COMPACTED (MECHANICALLY TAMPED) IN 6" LIFTS.

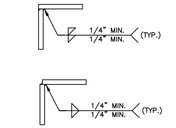
TYPICAL HDPE PIPE TRENCH DETAIL



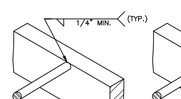
PLAN VIEW



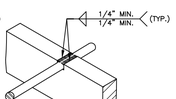
BAR AND ROD SPACING DETAIL



TYPICAL CORNER DETAILS



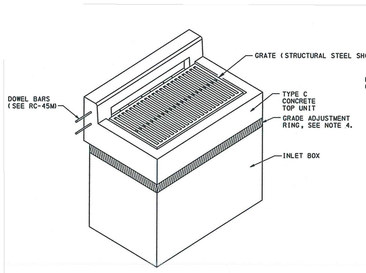
DETAIL D



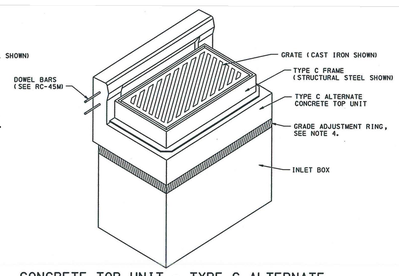
DETAIL E

NOTES:
1. THIS SHEET DEPICTS THE DIMENSIONS REQUIRED FOR UNIFORMITY AND INTERCHANGEABILITY. IT DOES NOT INCLUDE DETAILS REQUIRED FOR FABRICATION OR MANUFACTURING. ONLY GRATES SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15 SHALL BE PERMITTED. FOR A BULLETIN 15 LISTING, SUBMIT A 22"X36" REPRODUCIBLE SHOP DRAWING TO THE BUREAU OF CONSTRUCTION AND MATERIALS, MATERIALS AND TESTING DIVISION FOR REVIEW AND APPROVAL.
2. WELD STRUCTURAL STEEL GRATES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 1105.03(R).
3. PROVIDE TRANSVERSE BARS, MEETING THE REQUIREMENTS OF PUB. 408.
4. PROVIDE BICYCLE SAFE, STRUCTURAL STEEL OR CAST IRON VANE GRATES FOR INSTALLATION ONLY WHERE BICYCLE TRAFFIC IS ANTICIPATED, SUCH AS CURBED ROADWAYS OR URBAN AREAS OR ROADWAYS SPECIFICALLY ESTABLISHED AND SIGNED AS BIKEWAYS OR HAVING BIKE LANES. ALTERNATE BICYCLE-SAFE GRATE SHALL REQUIRE A SHOP DRAWING SUBMISSION. AS SPECIFIED IN NOTE 1, AND SHALL CONFORM TO THE DIMENSIONAL REQUIREMENTS FOR PROPER INSTALLATION WITH THE CURRENT CONCRETE TOP UNITS.
5. FABRICATE SLOTS BY BURNING, DRILLING, SHEARING OR PUNCHING. HAVE THE BOTTOM OF ALL BURNED OR DRILLED SLOTS CONFORM TO THE SHAPE OF THE ROD.
6. PROVIDE STRUCTURAL STEEL GRATES WITH THE GRATE SPACERS LOCATED FLUSH ALONG THE TOP SURFACE OF THE GRATE.
7. DO NOT USE CAST IRON GRATES WITHIN THE TRAVEL LANES. THESE GRATES ARE PERMITTED AT THE EDGE OF OUTSIDE SHOULDERS, SWALES, WITH WIDE MEDIAN SWALES AND INFIELD AREAS THAT ARE OUTSIDE OF THE TRAVEL LANES OR CURB TO CURB ROADWAYS.
8. COAT STRUCTURAL STEEL FRAMES AND GRATES WITH BITUMINOUS PAINT. AS AN ALTERNATIVE TO BITUMINOUS PAINT, HOT DIP GALVANIZE STRUCTURAL STEEL GRATES AND FRAMES IN ACCORDANCE WITH SECTION 1105.02(S).

STRUCTURAL STEEL GRATE BICYCLE SAFE

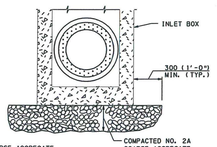


CONCRETE TOP UNIT - TYPE C

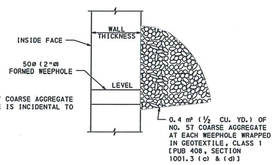


CONCRETE TOP UNIT - TYPE C ALTERNATE WITH TYPE C FRAME

NOTES:
1. FOR ADDITIONAL NOTES, SEE SHEETS 1 - 3.
2. STANDARD INLET BOXES SHOWN, PROVIDE TOP SLABS FOR OTHER INLET BOX TYPES.
3. SEE RC-45M FOR DETAILS FOR THE CONCRETE TOP UNITS, FRAMES, AND GRATES.
4. PROVIDE GRADE ADJUSTMENT RINGS WHEN REQUIRED. SEE RC-45M FOR DETAILS.



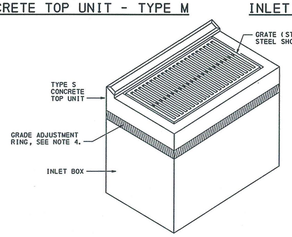
INLET BOX SUBBASE PREPARATION DETAIL
(SEE FIELD CONSTRUCTION NOTES ON SHEET 1)



WEEPHOLE DETAIL
(SEE GENERAL NOTE 15 ON SHEET 1)

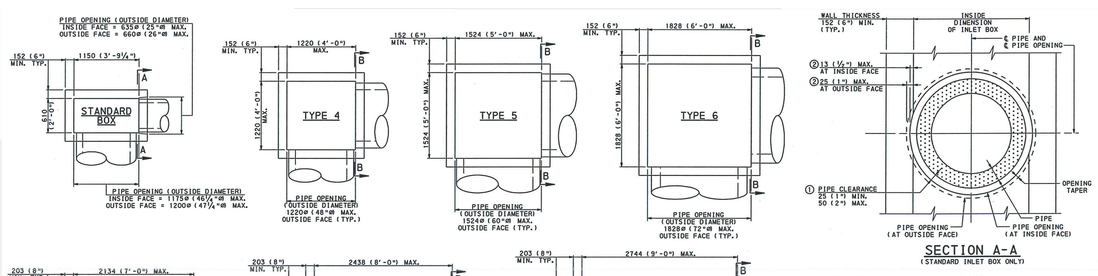
CONCRETE TOP UNIT - TYPE M

INLET BOX WITH TYPE M FRAME



CONCRETE TOP UNIT - TYPE S

*ALL INLETS SHALL BE IDENTIFIED WITH AN ENVIRONMENTAL TYPE STORM DRAIN MARKER



NOTES
1. FOR ADDITIONAL NOTES, SEE SHEETS 1 - 3.
2. FOR PIPE LOCATION AND PIPE OPENING NOTES, SEE SHEET 2.

LEGEND
OUTSIDE FACE - OUTSIDE FACE OF INLET BOX WALL
INSIDE FACE - INSIDE FACE OF INLET BOX WALL

LEGEND
1. OUTSIDE DIAMETER OF PIPE TO PIPE OPENING
2. REDUCTION IN WALL THICKNESS DIMENSION
3. INSIDE FACE OF BOX WALL TO OUTSIDE DIAMETER OF PIPE OPENING

REVISIONS

NO.	BY	DESCRIPTION	DATE
1	DB	REVISED PER TOWNSHIP COMMENTS	6/22/2026

CLIENT DATA

Cornerstone
Consulting Engineers & Design Services, Inc.
213 West Main Street . Lansdale . PA 19446
Phone: 215-362-2600 . Fax: 215-362-8400
WWW.CORNERSTONENET.COM
Philadelphia Region 215-362-2600
Lehigh Valley Region 610-820-8200
Pocono Region 570-839-1770

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania 15122 - 1076
811
BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776

J. PATTERSON
PROFESSIONAL ENGINEER
JOHN G. PATTERSON
COMMONWEALTH OF PENNSYLVANIA
REGISTERED ENGINEER
PE055536

PROJECT LOCATION

PRELIMINARY LAND DEVELOPMENT PLAN
410 S. HIGH STREET
WEST CHESTER, PA 19382
BOROUGH OF WEST CHESTER
CHESTER COUNTY, PA

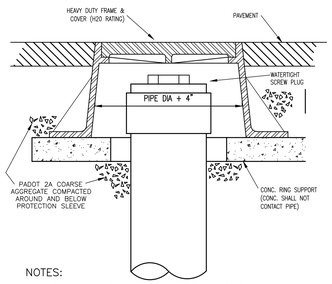
TITLE

GENERAL SITE DETAILS

PROJ. #	26-0118	DATE	03-09-2026
CAD ID.	26-0118	DRN BY	RTH
SCALE	AS NOTED	CHK BY	JBA

SHEET 11 OF 14

REV 1



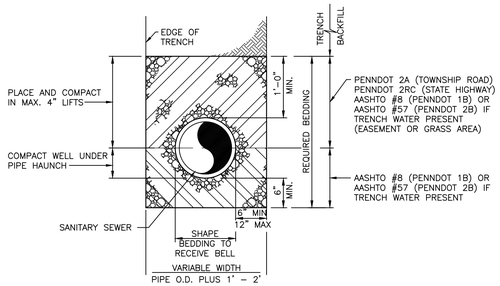
NOTES:

1. FRAME AND COVER SHALL BE NEENAH FOUNDRY COMPANY MODEL R-1976 OR APPROVED EQUAL
2. CLEAN-OUT PROTECTION SLEEVES ARE TO BE INSTALLED FOR CLEAN-OUTS LOCATED IN PAVED AREAS, OR LESS THAN 3 FEET FROM A PAVED AREA.

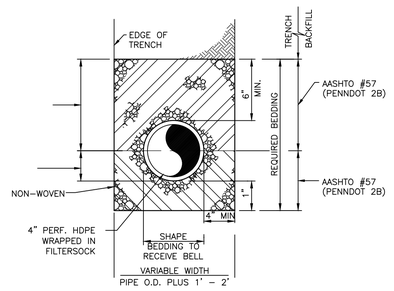
CLEAN-OUT PROTECTION SLEEVE

(FOR USE IN OR NEAR PAVED AREAS)

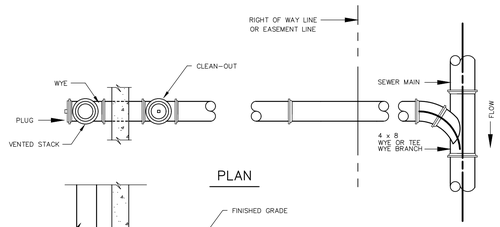
N.T.S.



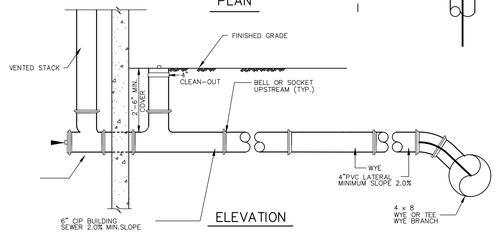
P.V.C. PIPE EMBEDMENT



UNDERDRAIN DETAIL



PLAN



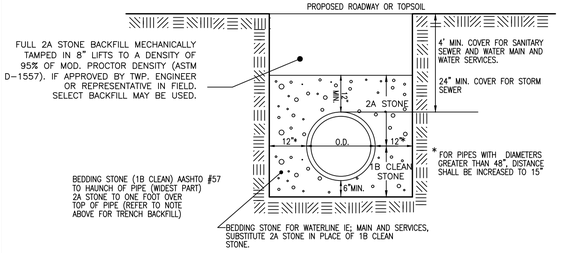
ELEVATION

NOTES :

1. BUILDING SEWER FROM RIGHT-OF-WAY LINE TO BUILDING PLUMBING SYSTEM SHALL CONFORM TO THE INTERNATIONAL PLUMBING CODE ADOPTED BY THE BOROUGH.
2. TEMPORARY PIPE PLUG TO REMAIN IN LATERAL UNTIL CONSTRUCTION OF BUILDING SEWER OCCURS. BUILDING SEWER SHALL BE PLUGED AT TEST TEE UNTIL CONSTRUCTION IS COMPLETED AND TESTED.
3. PIPE TO BE EMBEDDED IN 1B STONE OR SCREENINGS AS PER ENGINEER.
4. VENTED TRAP IS NOT REQUIRED ON NEW CONSTRUCTION.
5. A VENTED TRAP SHALL BE PROVIDED AT THE RIGHT OF WAY LINE ON EXISTING HOMES CONNECTING TO THE SANITARY SYSTEM.
6. CLEANOUT TO BE LOCATED @ R.O.W. THEN AT EVERY 100' INTERVALS FOR 6" PVC PIPE.

SANITARY SEWER SERVICE CONNECTION

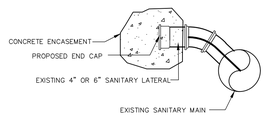
N.T.S.



NOTE:
ALL UTILITY TRENCHES WITHIN EXISTING ROADWAYS, PROPOSED ROADWAYS, ALL RIGHT OF WAYS, EASEMENTS, PROPOSED DRIVEWAYS, APRONS AND SIDEWALKS MUST, WITHOUT EXCEPTION, BE BACKFILLED WITH FULL DEPTH 2A STONE AFTER TOP SCREENING.

ALL UTILITY TRENCHES MUST BE COMPACTED (MECHANICALLY TAMPED) IN 8" LIFTS.
I.E. GAS, ELECTRIC, WATER, CABLE ETC.

TYPICAL TRENCH DETAIL



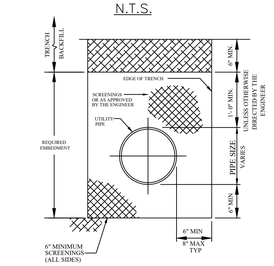
EXSITING SANITARY SEWER LATERAL ABANDONEDMENT

N.T.S.

NOTES :

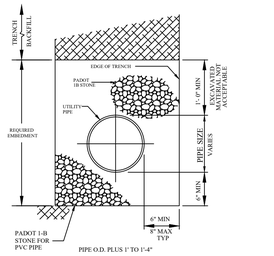
ABANDONED SEWER LATERALS IN WEST CHESTER BOROUGH MUST BE HERMETICALLY SEALED WITH AN APPROVED CAP OR PLUG. PER MUNICIPAL SPECIFICATIONS, THE OPEN END OF THE LATERAL PIPE MUST BE STRUCTURALLY PLUGGED AND SECURELY ENCASED IN CONCRETE AT THE PROPERTY'S CURB LINE OR RIGHT-OF-WAY TO PREVENT GROUNDWATER INFILTRATION AND DEBRIS ENTRY.

1. SEALING MECHANISM: THE PIPE MUST BE HERMETICALLY SEALED USING AN APPROPRIATE CAP OR PLUG.
2. FERNCO COUPLINGS ARE ALLOWABLE WHERE NEEDED. (1) STRONG BACK RC REPAIR COUPLINGS. (2) 5000 SERIES RC COUPLINGS.
3. CONCRETE ENCASEMENT: THE CAP/PLUG MUST BE FULLY ENCASED IN CONCRETE AT THE CURB LINE OR RIGHT OF WAY LINE TO ENSURE STABILITY.
4. HOUSE TRAP REMOVAL: PRIOR TO CAPPING, ANY EXISTING HOUSE TRAPS MUST BE COMPLETELY REMOVED FROM THE ABANDONED LATERAL.
5. PERMITTING: PERMIT MUST BE OBTAINED FROM THE DIRECTOR OF PUBLIC WORKS BEFORE ALTERING, DISCONNECTING, OR CAPPING ANY BOROUGH SEWER CONNECTION.
6. RIGHT-OF-WAY WORK: A SEPARATE HIGHWAY PERMIT IS REQUIRED FOR EXCAVATING AND PERFORMING WORK WITHIN THE PUBLIC RIGHT-OF-WAY.
7. REQUIRED INSPECTIONS:ALL ABANDONMENTS, CAPS, AND PIPING MUST BE INSPECTED AND APPROVED BY THE BOROUGH BEFORE BEING COVERED. CONTRACTOR MUST PROVIDE THE BOROUGH WITH AT LEAST 48 HOURS NOTICE TO SCHEDULE AN INSPECTION.

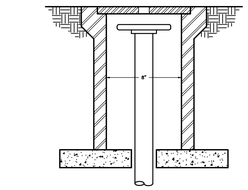


COPPER PIPE

PIPE EMBEDMENT
NOT TO SCALE

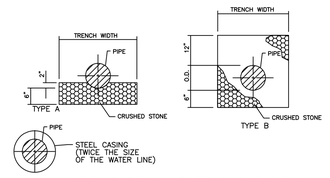


P.V.C. OR CIP PIPE

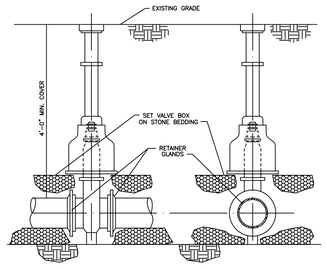


CURB-BOX PROTECTION SLEEVE – PAVED AREAS

NOT TO SCALE



TYPES OF CRUSHED STONE PIPE CRADLES AND STEEL CASING



NOTES:
1. RETAINER GLANDS REQUIRED ON ALL MECHANICAL JOINT FITTINGS.
2. VALVE BOX SHALL BE 2 PIECE SCREW TYPE.

GATE VALVE INSTALLATION

WATER GENERAL NOTES:

1. ALL WATER FACILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH AQUA PA WATER FACILITIES LINE EXTENSION AGREEMENT SPECIFICATIONS.
2. LOCATION OF EXISTING WATER FACILITIES SHOWN ARE APPROXIMATE. ANY UTILITIES NOT SHOWN, OR NOT LOCATED AS SHOWN, SHALL NOT BE THE CAUSE OF THE CONTRACTOR TO DENY RESPONSIBILITY FOR PROTECTION AND/OR REPAIR DURING CONSTRUCTION. EXACT LOCATION SHALL BE VERIFIED IN THE FIELD.
3. ALL WATER MAINS REQUIRE A MINIMUM OF FOUR (4) FEET COVER UNLESS OTHERWISE APPROVED BY AQUA PA.
4. WATER AND SANITARY SEWER LINES SHALL HAVE A MINIMUM OF TEN (10) FEET HORIZONTAL SEPARATION.
5. WATER AND STORM SEWER LINES SHALL HAVE A MINIMUM OF FOUR (4) FEET HORIZONTAL SEPARATION.
6. SANITARY AND STORM SEWER LINES SHALL HAVE A MINIMUM OF EIGHTEEN (18) INCH VERTICAL SEPARATION FROM THE WATER LINE UNLESS OTHERWISE APPROVED BY AQUA PA.
7. HYDRANT LOCATION IS SUBJECT TO THE APPROVAL OF THE FIRE OFFICIALS CLAIMING JURISDICTION OVER THE PROJECT LOCATION.
8. ONLY AQUA PA PERSONNEL SHALL OPERATE MAIN LINE VALVES FOR THE CONTRACTOR.
9. EASEMENTS, IN A FORM SATISFACTORY TO AQUA PA, SHALL BE REQUIRED FOR ALL WATER FACILITIES LOCATED OUTSIDE THE PUBLIC RIGHT OF WAY.
10. ALL FIRE HYDRANTS SHALL INCLUDE A 6" GATE VALVE ON THE HYDRANT LATERAL.
11. THE USE OF FITTINGS SHALL BE MINIMIZED, AND MUST BE APPROVED BY AQUA PA. INSTEAD, CONTRACTOR SHALL DEFLECT PIPE SEGMENTS AS NECESSARY.
12. METER BOXES SHALL BE INSTALLED IN AN AREA BEHIND THE CURB (IF APPLICABLE) FOR DWELLINGS THAT ARE GREATER THAN 100 FEET FROM THE CURB. METER BOX LOCATIONS ARE SUBJECT TO FINAL APPROVAL BY AQUA PA. METER BOXES MUST MEET THE SPECIFICATIONS OF AQUA PA.
13. DEVELOPER SHALL OBTAIN ALL NECESSARY ROAD OPENING PERMITS REQUIRED FOR THE INSTALLATION OF THE WATER FACILITIES, AND SHALL BE RESPONSIBLE FOR THE PAYMENT OF ALL APPLICATION FEES AND INSPECTION COSTS ASSOCIATED WITH THESE PERMITS.

CLIENT DATA

Cornerstone
Consulting Engineers & Design Services, Inc.
213 West Main Street . Lansdale . PA 19446
Phone: 215-362-2600 . Fax: 215-362-8400
WWW.CORNERSTONENET.COM
Philadelphia Region 215-362-2600
Lehigh Valley Region 610-820-8200
Pocono Region 570-839-1770

REVISIONS

NO	BY	DESCRIPTION	DATE
1	DB	REVISED PER TOWNSHIP COMMENTS	6/22/2026

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania
15122 - 1078

811

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776

J.B. ANDERSON — COMMONWEALTH OF PENNSYLVANIA — PROFESSIONAL — JOHN B. ANDERSON — ENGINEER — PE055536 — LICENSE — REGISTERED PROFESSIONAL ENGINEER

PROJECT LOCATION

PRELIMINARY LAND DEVELOPMENT PLAN
410 S. HIGH STREET
WEST CHESTER, PA 19382
BOROUGH OF WEST CHESTER
CHESTER COUNTY, PA

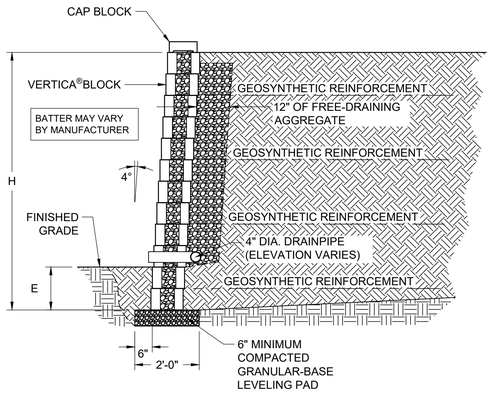
TITLE

GENERAL SITE DETAILS

PROJ. #	26-0118	DATE	03-09-2026
CAD ID.	26-0118	DRN BY	RTH
SCALE	AS NOTED	CHK BY	JBA

SHEET 12 OF 14

REV 1

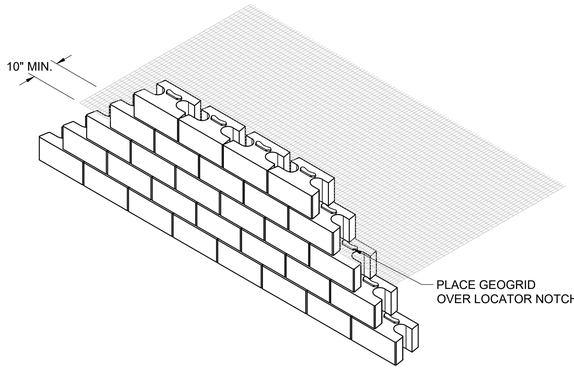


TYPICAL RETAINING WALL CROSS SECTION

NO SCALE

NOTE:
1.) ENGINEERED RETAINING WALL DRAWINGS SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER SHALL BE PROVIDED FOR TOWNSHIP APPROVAL PRIOR TO CONSTRUCTION.

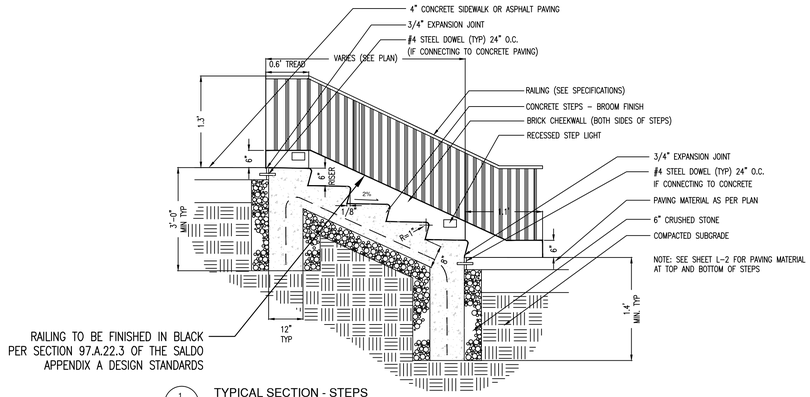
2.) WALLS OVER 32" SHALL BE PROVIDED WITH A FENCE.



TYPICAL BLOCK RETAINING WALL DETAIL

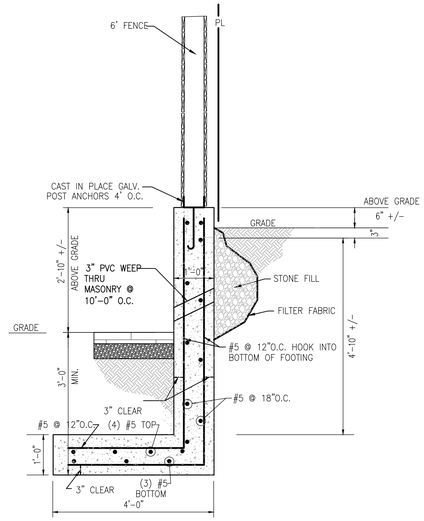
NO SCALE

NOTE:
1. ENGINEERED RETAINING WALL DRAWINGS SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER SHALL BE PROVIDED FOR TOWNSHIP APPROVAL PRIOR TO CONSTRUCTION.



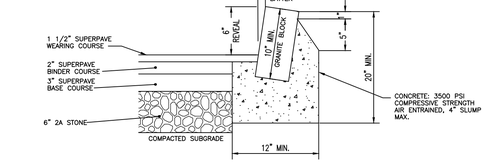
1 / L-6 TYPICAL SECTION - STEPS

3/4" = 1'-0"

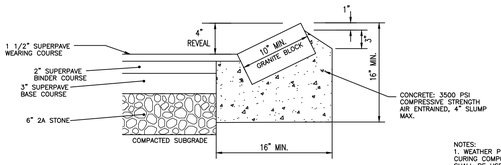


RETAINING WALL SECTION VIEW

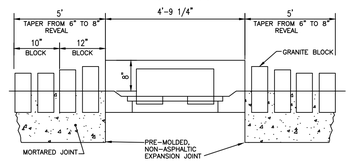
NOT TO SCALE



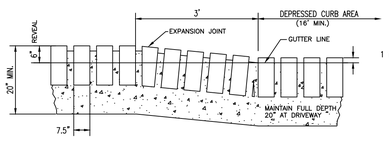
STANDARD CURB



MOUNTABLE CURB



ELEVATION ADJACENT TO 4FT. SPECIAL OR TYPE 'C' INLET TOP FOR BELGIAN BLOCK CURB



DEPRESSED BELGIAN BLOCK CURB AT DRIVEWAY AND CURB RAMPS

NOTES:
1. WEATHER PROTECTION AND CURING COMPOUNDS SHALL BE USED IN ACCORDANCE WITH PENNDOT SPECIFICATIONS PUB. 408 CURRENT EDITION.

2. CURING COMPOUND SHALL BE AASHTO M148 TYPE 1-D TO BE USED IN ACCORDANCE WITH PENNDOT PUB. 408, SEC. 711.2, CURRENT EDITION.

3. ANY EXCAVATION BELOW DESIRED GRADE DUE TO OVER EXCAVATION OR WET SOIL CONDITIONS SHALL BE BACKFILLED WITH 3/4" CLEAN CRUSHED STONE. ALL SUBGRADES SHALL BE APPROVED BY THE TOWNSHIP ENGINEER PRIOR TO POURING.

4. JOINTS SHALL BE NOT MORE THAN 1/4" WIDE FOR DRESSED BLOCK AND 3/8" WIDE FOR QUARRY SPLIT BLOCK. THE JOINTS SHALL BE POINTED WITH 1:1 CEMENT-SAND MORTOR.

BELGIAN BLOCK CURB DETAILS

CONCRETE RETAINING WALL SPECIFICATIONS

CONCRETE:
1. ALL CONCRETE SHALL BE NORMAL-WEIGHT (DENSITY=145pcf) AND SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 3500 psi

2. THE SLUMP OF ALL CONCRETE SHALL NOT EXCEED 4" UNLESS A HIGH RANGE WATER-REDUCING ADMIXTURE IS USED. THE SLUMP OF CONCRETE PRIOR TO ADDITION OF A HIGH-RANGE WATER-REDUCING ADMIXTURE SHALL NOT EXCEED 4". THE SLUMP OF CONCRETE CONTAINING A HIGH RANGE WATER-REDUCING ADMIXTURE SHALL NOT EXCEED 10".

3. ALL EXTERIOR CONCRETE EXPOSED TO FREEZING TEMPERATURES SHALL BE AIR-ENTRAINED WITH 5% (±1.5%) AIR CONTENT.

4. THE COARSE AGGREGATE SIZE SHALL BE #57 OR LARGER.

5. THE MINIMUM PORTLAND CEMENT CONTENT (ASTM C150) OF ALL CONCRETE SHALL CONFORM TO THE FOLLOWING TABLE (FLY ASH NOT PERMITTED):

SPECIFIED COMPRESSIVE STRENGTH (psi)	NON AIR-ENTRAINED CONCRETE (lbs.)	AIR-ENTRAINED CONCRETE (lbs.)
3000	470	517
4000	564	611

6. THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS FOR REVIEW A MINIMUM OF TWO WEEKS PRIOR TO THE PLACEMENT OF ANY CONCRETE. THE CONCRETE MIX DESIGNS SHALL INCLUDE ALL STRENGTH DATA NECESSARY TO SHOW COMPLIANCE WITH THE PROJECT SPECIFICATIONS FOR EITHER THE TRIAL BATCH OR FIELD EXPERIENCE METHOD.

BRICK EXECUTION
I. COURSING
A. LAY BRICK PLUMB, LEVEL AND TRUE TO LINE IN FULL BEDS OF MORTAR. BOND OF BRICK IN EXTERIOR WALLS AND INTERIOR EXPOSED WALLS SHALL BE RUNNING BOND. ALL JOINTS IN BRICKWORK AND JOINTS BETWEEN BRICK AND OTHER MATERIALS REQUIRED IN CONNECTION THEREWITH SHALL BE FILLED WITH MORTAR AS EACH COURSE IS LAID.
B. BRICK JOINTS SHALL BE TOOLED OR RAKED AS SPECIFIED OR SELECTED BY THE ARCHITECT.

II. PREPARATION
A. PROVIDE TEMPORARY BRACING DURING INSTALLATION OF MASONRY WORK. MAINTAIN IN PLACE UNTIL BUILDING STRUCTURE PROVIDES PERMANENT BRACING.
B. BRICK SHALL BE UNIFORMLY WETTED BEFORE THEY ARE USED. ALL UNITS SHALL BE FREE FROM WATER ADHERING TO THEIR SURFACES WHEN THEY ARE LAID IN THE WALL.
C. CONSULT OTHER TRADES IN ADVANCE AND MAKE PROVISIONS FOR INSTALLATION OF THEIR WORK IN ORDER TO AVOID CUTTING AND PATCHING. BUILD IN WORK SPECIFIED UNDER OTHER SECTIONS OF THE SPECIFICATIONS AS THE WORK PROGRESSES.

III.PLACING AND BONDING
A. INTERLOCK INTERSECTIONS AND EXTERNAL CORNERS.
B. DO NOT SHIFT OR TAP MASONRY UNITS AFTER MORTAR HAS ACHIEVED INITIAL SET. WHERE ADJUSTMENT MUST BE MADE, REMOVE MORTAR AND REPLACE.
C. PERFORM JOB SITE CUTTING OF MASONRY UNITS WITH PROPER TOOLS TO PROVIDE STRAIGHT, CLEAN, UNCHIPPED EDGES. PREVENT BROKEN MASONRY UNIT CORNERS OR EDGES.
D. ALL BRICK VENEER WALLS SHALL BE BONDED TO STUDS BY THE USE OF 22 GAUGE CORRUGATED GALVANIZED WALL TIES SPACED NOT MORE THAN 16" APART VERTICALLY AND 32" APART HORIZONTALLY. INSERT TIES INTO MASONRY JOINTS IN FULL BED OF MORTAR.

GENERAL NOTES
1. DESIGN BASED ON 100 PCF WEIGHT OF EARTH AND AN ANGLE OF REPOSE AT 61 DEG.
2. NO SURCHARGING OF EARTH ALLOWED OVER 7'-0" OF RETAINED SOIL.
3. CONCRETE DESIGN BASED ON CONCRETE STRENGTH, FC' = 3,500PSI
4. INSTALL EXPANSION JOINTS @ 50'-0" O.C. MAX. IN CONCRETE 25'-0" O.C. FOR BRICK FACE.

CONCRETE REINFORCING STEEL:
1. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE. ALL WELDED REINFORCING BARS SHALL CONFORM TO ASTM A706.

2. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

3. ALL REINFORCING SHALL BE DETAILED, FABRICATED, AND PLACED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE DETAILING MANUAL.

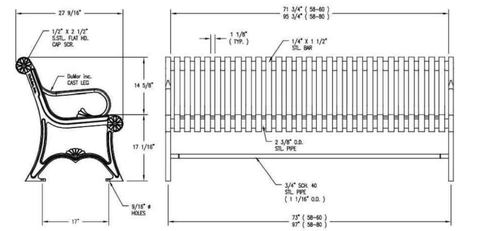
4. ALL REINFORCING SHALL BE SUPPORTED IN FORMS, SPACED WITH NECESSARY ACCESSORIES AND SHALL BE SECURELY WIRED TOGETHER, IN ACCORDANCE WITH THE LATEST EDITION OF THE CRSI "MANUAL OF STANDARD PRACTICE".

5. MINIMUM CONCRETE COVER, UNLESS NOTED OTHERWISE:
UNFORMED SURFACE IN CONTACT WITH THE GROUND.....3 in.
FORMED SURFACES EXPOSED TO EARTH OR WEATHER:
#6 BARS AND LARGER.....2 in.
#5 BARS AND SMALLER.....1½ in.
FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER:
BEAMS, GIRDERS, AND COLUMNS.....1½ in.
SLABS, WALLS, AND JOISTS:
#11 BARS AND SMALLER.....¾ in.
#14 AND #18 BARS.....1½ in.

6. ALL LAP SPLICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE. WHERE CLASSES ARE NOT CALLED OUT ON DRAWINGS, USE CLASS "B" SPLICES.

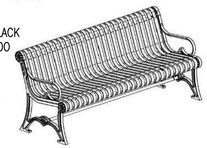
BAR SIZE	TENSION SPLICES (in.) TOP BARS A	TOP BARS B	OTHER BARS A	OTHER BARS B	COMPRESSION SPLICES (in.)
#3	16	21	12	16	12
#4	21	28	16	21	15
#5	27	35	21	27	19
#6	35	46	27	35	23
#7	48	62	37	48	26
#8	63	82	48	63	30
#9	80	104	61	80	34
#10	101	131	78	101	38
#11	125	162	96	125	42

-COMPRESSION DOWEL EMBEDMENT: 22 BAR DIAMETERS
LAP WELDED WIRE FABRIC ONE SPACING OF CROSS WIRES PLUS 2".



NOTE:
LENGTH OPTIONS ALL BENCHES TO BE FINISHED IN BLACK
■ 6' BENCH PER SECTION 97.A.22.3 OF THE SALDO
□ 8' BENCH APPENDIX A DESIGN STANDARDS

NOTES
1.) ALL STL. MEMBERS COATED W/ ZINC RICH EPOXY THEN FINISHED W/ POLYESTER POWDER COATING.
2.) 1/2" X 3 3/4" EXPANSION ANCHOR BOLTS PROVIDED.
3.) CUSTOM LETTERING AVAILABLE FOR RECESSED SIDE PANELS (TOTAL OF 37 SPACES)
□ CUSTOM LETTERING (37 SPACES)



DuMor, Inc. | BENCH | DATE DRAWN : 3/22/04 | DRAWN BY : AH | DATE REV. : 11/31/98 | REV. BY : JSB | REV. D | DRAWING NUMBER 58 SERIES | SHEET 1 OF 2

2 BENCH - CUTSHEET, TYP.
CONTRACTOR TO SUBMIT SHOP DWGS FOR REVIEW.

CLIENT DATA

Cornerstone
Consulting Engineers & Design Services, Inc.
213 West Main Street . Lansdale . PA 19446
Phone: 215-362-2600 . Fax: 215-362-8400
WWW.CORNERSTONENET.COM
Philadelphia Region 215-362-2600
Lehigh Valley Region 610-820-8200
Pocono Region 570-839-1770

REVISIONS

NO	BY	DESCRIPTION	DATE
1	DH	REVISED PER TOWNSHIP COMMENTS	6/22/2026

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania
15122 - 1076
811
BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776

J. BRYAN PATTERSON — COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — ENGINEER — PE055536

PROJECT LOCATION

PRELIMINARY LAND DEVELOPMENT PLAN
410 S. HIGH STREET
WEST CHESTER, PA 19382
BOROUGH OF WEST CHESTER
CHESTER COUNTY, PA

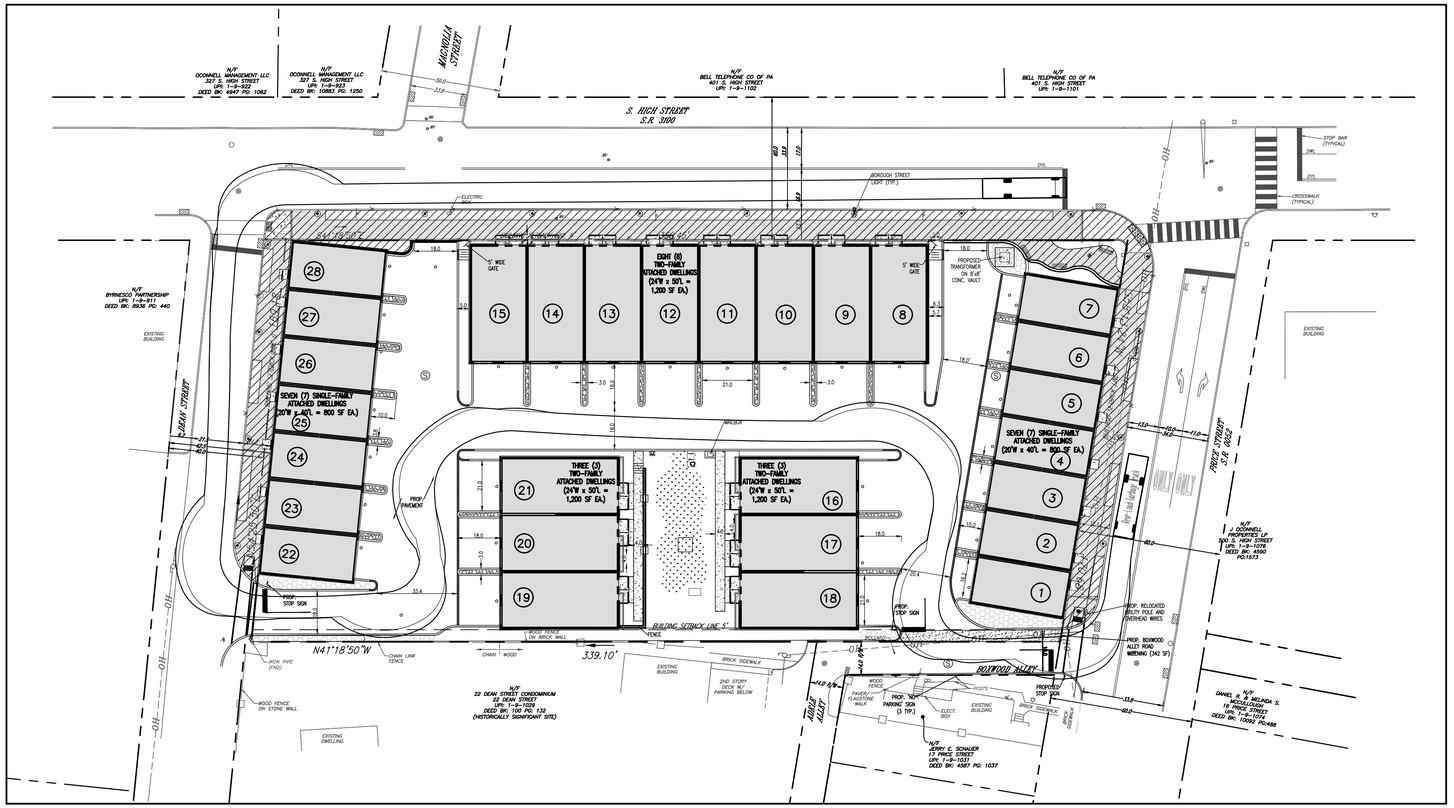
TITLE

GENERAL SITE DETAILS

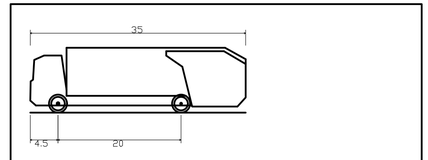
PROJ. #	26-0118	DATE	03-09-2026
CAD ID.	26-0118	DRN BY	RTH
SCALE	AS NOTED	CHK BY	JBA

SHEET 13 OF 14

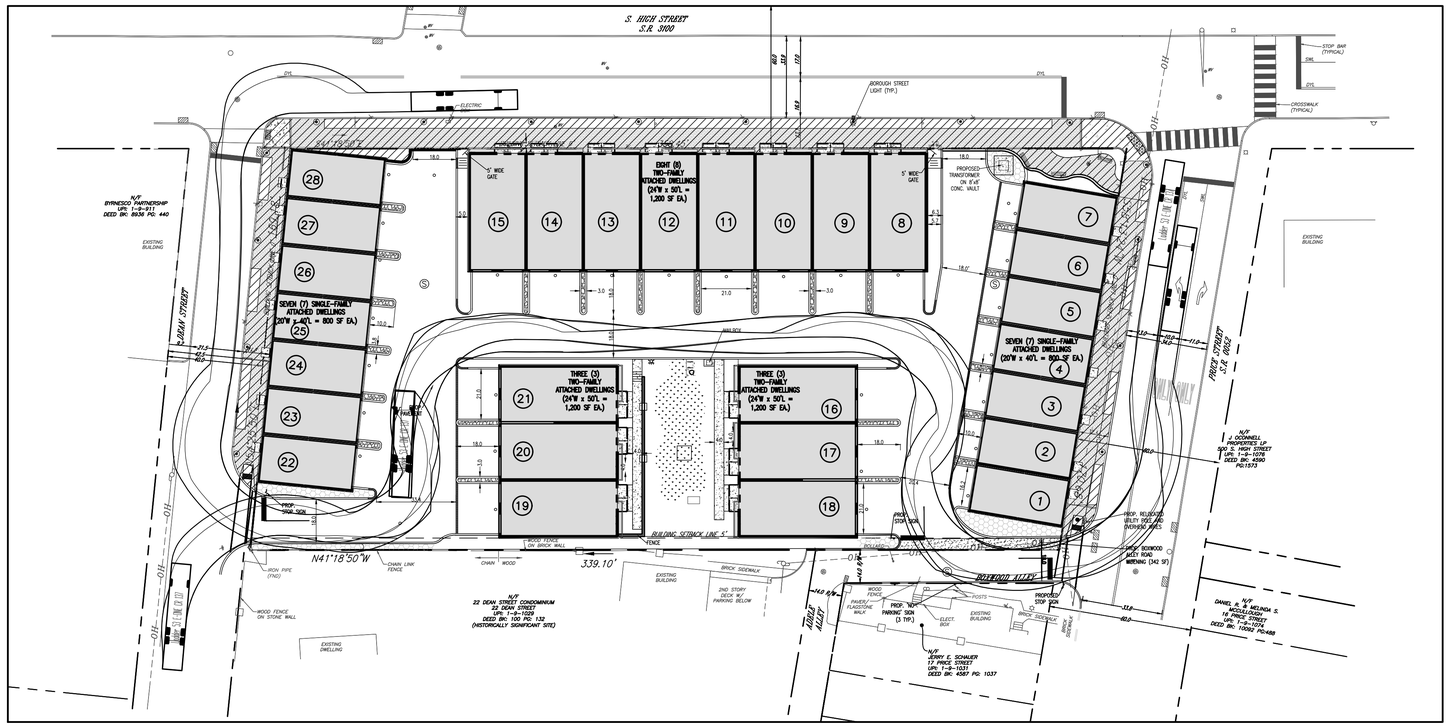
REV 1

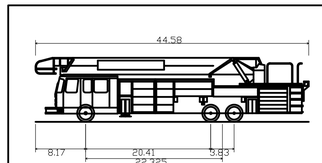






Rear-Load Garbage Truck	
Overall Length	35.000ft
Overall Width	8.375ft
Overall Body Height	10.546ft
Min Body Ground Clearance	1.000ft
Track Width	8.375ft
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	29.300ft





Ladder 53 E-ONE CR 137	
Overall Length	44.580ft
Overall Width	8.167ft
Overall Body Height	10.432ft
Min Body Ground Clearance	0.862ft
Track Width	8.000ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

CLIENT DATA

Cornerstone
Consulting Engineers & Design Services, Inc.
213 West Main Street . Lansdale . PA 19446
Phone: 215-362-2600 . Fax: 215-362-8400
WWW.CORNERSTONENET.COM
Philadelphia Region 215-362-2600
Lehigh Valley Region 610-820-8200
Pocono Region 570-839-1770

REVISIONS			
NO.	BY	DESCRIPTION	DATE
1	DB	REVISED PER TOWNSHIP COMMENTS	6/22/2026

PENNSYLVANIA ONE CALL SYSTEM, INC.
925 Irwin Run Road
West Mifflin, Pennsylvania 15122 - 1076
811
BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1-800-242-1776

J. BRYAN PATTERSON
PROFESSIONAL ENGINEER
COMMONWEALTH OF PENNSYLVANIA
PE055536

PROJECT LOCATION

PRELIMINARY LAND DEVELOPMENT PLAN
410 S. HIGH STREET
WEST CHESTER, PA 19382
BOROUGH OF WEST CHESTER
CHESTER COUNTY, PA

TITLE

TRUCK TURNING PLAN

PROJ. #	26-0118	DATE	03-09-2026
CAD ID.	26-0118	DRN BY	RTH
SCALE	AS NOTED	CHK BY	JBA

SHEET 14 OF 14

REV 1

stuart
LANDSCAPE ARCHITECTS
PLANNERS | DESIGNERS

STUART & ASSOCIATES, LLC.
P.O. Box 62286
King of Prussia, PA 19406
P : 610.337.2100

June 15th, 2026

Rockwell Associates
P.O. BOX 542 | Ridley Park, PA 19078
John Rockwell Hosbach Jr.
Urban Forester

RE: **WCB Shade Tree Commission**
410 S. High Street - Response Letter

Dear WCB Shade Tree Commission & John Hosbach

We are in receipt of your Memorandum dated April 18th, 2026. We offer the following response for your consideration:

1. CONCLUSION

a. As requested, the street tree palette has been revised to provide a minimum of four total species. The two additional tree species that have been added to the plan are as follows:

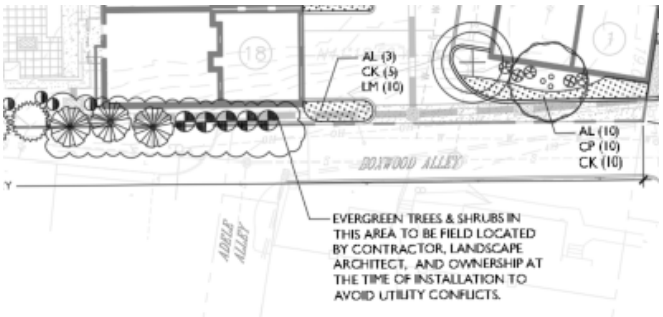
Tilia Americana – American Linden
Ginkgo Biloba – Maidenhair Tree

b. As requested, a note has been added to General Planting notes citing Section 102-7.B.:

GENERAL PLANTING NOTES:

1. **PROPERTY OWNERS ARE REQUIRED TO MAINTAIN APPROVED TREES IN PERPETUITY AS PER THE BOROUGH CODE SECTION 102-7.B** WHICH STATES "WHEN TREES HAVE BEEN REQUIRED PURSUANT TO APPROVED SALDO PLANS, PROPERTY OWNERS ARE REQUIRED TO MAINTAIN TREES IN THE LOCATIONS APPROVED ON THE SALDO PLANS IN PERPETUITY, UNLESS THE PROPERTY OWNER HAS EXTENUATING CIRCUMSTANCES AS TO WHY SUCH TREES MAY NOT BE PERPETUALLY MAINTAINED. TREES THAT ARE REMOVED MUST BE REPLANTED WITHIN 60 DAYS. OWNERS DESIRING PERMANENT TREE REMOVAL MUST FILE A FORMAL REQUEST WITH THE BOROUGH ARBORIST, WHICH SHALL BE REVIEWED AND APPROVED OR DENIED BY THE TREE COMMISSION WITHIN 35 DAYS OF THE FILING DATE OF THE FORMAL REQUEST."

c. Per the request, coordination between tree locations and underground utilities has been reviewed. A revcloud and note has been added to the landscape plan adjacent to Boxwood Alley which states “evergreen trees & shrubs in this area to be field located by contractor, landscape architect, and ownership at the time of installation to avoid utility conflicts.”



stuart
LANDSCAPE ARCHITECTS
PLANNERS | DESIGNERS

STUART & ASSOCIATES, LLC.
P.O. Box 62286
King of Prussia, PA 19406
P : 610.337.2100

d. As requested, a note pertaining to the project's soil specification, titled Soil Amendment, has been added to Borough Landscape Schedule + Details, Sheet L9.00. The specification provided herein has been selected through discussion and coordination with the township arborist.

SOIL AMENDMENT NOTES:

1. **SPEC / MANUFACTURE**: CORNELL UNIVERSITY
   TYPE : CU-STRUCTUAL SOIL
   DEPTH : 36" MINIMUM, SEE DETAIL/THIS SHEET.
2. **SUITABLE ROOTING MEDIUM MUST PROVIDE**
   - 2.1 MINIMUM OF 36" SOIL DEPTH TO ACCOUNT FOR ROOT EXPANSION
   - 2.2 SUFFICIENT PORE SPACE FOR OXYGEN
   - 2.3 APPROPRIATE TEXTURE & STRUCTURE
   - 2.4 SUFFICIENT DRAINAGE WHILE RETAINING MOISTURE CONDITIONS THAT SUPPORT MICROBIAL ACTIVITY AND NUTRIENT CYCLING
   - 2.5 PLANTING STRIPS FILLED WITH SOIL SHOULD ACCOUNT FOR RADIAL AND LONGITUDINAL ROOT GROWTH
3. **SOIL SAMPLE TO BE SUBMITTED AND REVIEWED BY THE BOROUGH CONSULTING ARBORIST AND LANDSCAPE ARCHITECT.**

e. To meet the request for additional Soil Volume and Root Zone Requirements, the streetscape design has been modified. The landscape plan and planting details have been revised to increase the overall square footage of usable soil available to each tree. Increasing soil volume for large canopy trees accounts for the tree's mature potential and longevity. Therefore, structural soils are proposed to be beneath the entirety of the brick sidewalks areas on High, Dean, and Price Street.

As requested, the Tree Planting and Street Tree Planting details 1+5/L9.00 have been updated to illustrate a soil depth of 3'-0" minimum to be required for all deciduous trees.
The 8 required street trees along High Street are proposed to be planted in a 305 LF continuous planting strip.
Street trees within the sidewalks along Dean and Price Street to be planted at a minimum of:

Size of tree pit for 1 tree: 4'x 18'
Size of tree pit for 2 trees: 4'x 30'

Please contact our office if there are any other inquiries.

Regards,

Patrick J. Stuart, RLA, MCRP, LLA

cc: West Chester Borough Officials, Staff, and Consultants

CHESTER COUNTY Planning COMMISSION

COUNTY COMMISSIONERS
Josh Maxwell
Marian D. Moskowitz
Eric M. Roe

PLANNING COMMISSION
601 Westtown Road, Suite 270
West Chester, PA 19380
610-344-6285
www.chescoplanning.org

Matthew J. Edmond, AICP
Executive Director

May 8, 2026

Sean Metrick, Borough Manager
West Chester Borough
401 E. Gay Street
West Chester, PA 19380

Re: Preliminary Land Development - 410 South High Street III Townhomes
West Chester Borough – LD-04-26-18882

Dear Mr. Metrick:

A Preliminary Land Development Plan entitled "410 South High Street III Townhomes", prepared by Cornerstone Consulting Engineers & Design Services, Inc., and dated March 9, 2026, was received by this office on April 8, 2026. This plan is reviewed by the Chester County Planning Commission in accord with the provisions of Section 502 of the Pennsylvania Municipalities Planning Code. We offer the following comments on the proposed land development for your consideration.

PROJECT SUMMARY:

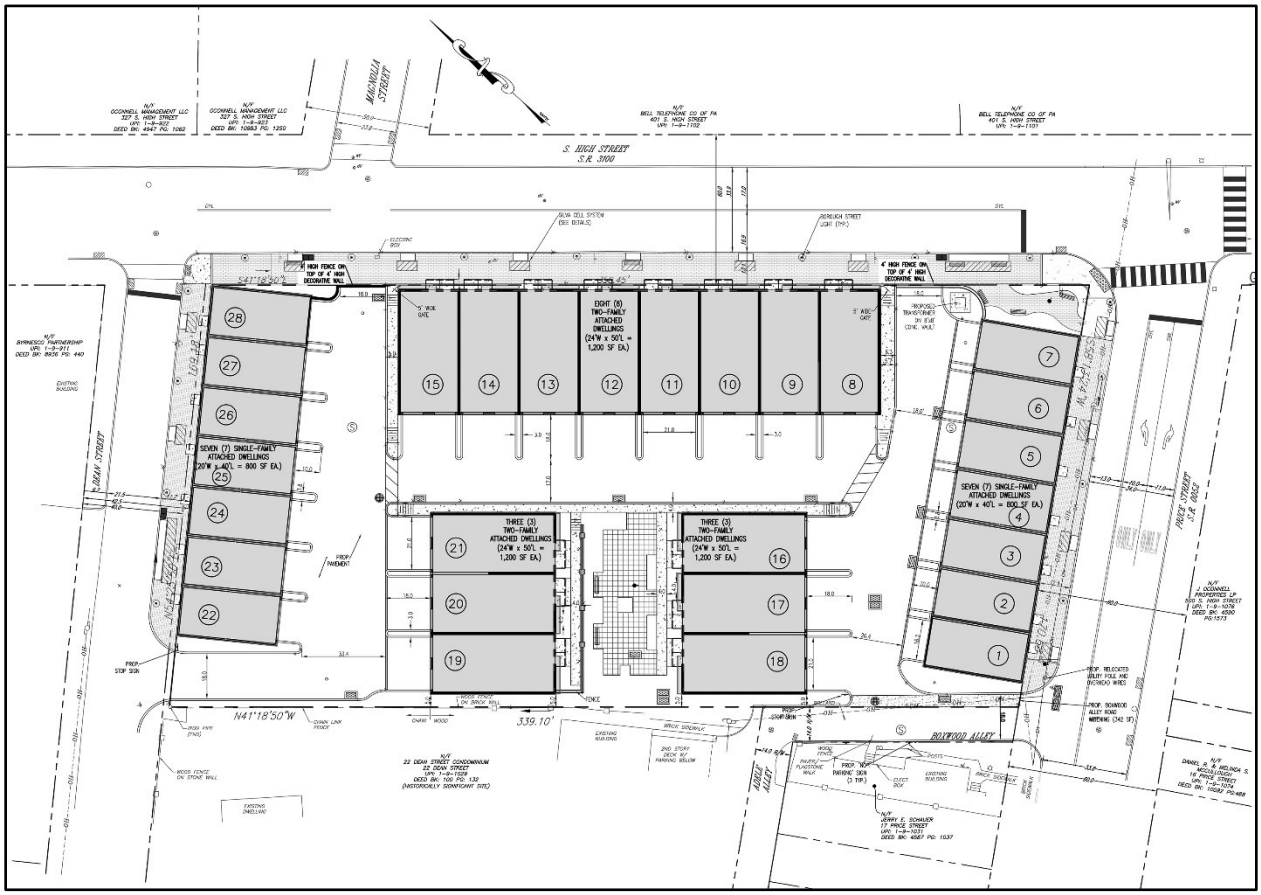
Location:	West side of South High Street, between Dean Street and Price Street
Site Acreage:	1.29
Lots/Units:	1 existing lot
Non-Res. Square Footage:	0
Proposed Land Use:	42 townhouse units
Municipal Land Use Plan Designation:	Town Center
UPI#:	1-9-1030

PROPOSAL:

The applicant proposes the construction of 42 townhouse units. The Zoning Information table on Sheet 4 indicates that the maximum building height will be 45 feet. Vehicular access will be provided from Dean Street, and from Price Street via Boxwood Alley (the site plan indicates that the section of Boxwood Alley from Price Street to the entrance will be widened to 18 feet). A plaza/public space area will be provided at the South High Street/Price Street intersection. The vacant commercial building will be demolished. The project site, which will be served by public water and public sewer, is located in the TC Town Center zoning district.

RECOMMENDATION: The County Planning Commission recommends that the issues raised in this letter should be addressed, particularly the design issues discussed in comment #5, and all Borough issues should be resolved before action is taken on this land development plan.





Site Plan Detail, Sheet 4: Preliminary Land Development - 410 South High Street III Townhomes

BACKGROUND:

1. The Chester County Planning Commission has previously reviewed two land development plans for this site. CCPC# LD-02-23-17573, dated March 29, 2023, addressed the construction of a mixed-use building containing 125 apartment units, 9,200 square feet of commercial retail space, and 170 parking spaces. It is our understanding that, on December 20, 2023, the Borough granted preliminary plan approval for a revised plan (dated February 6, 2023 and last revised September 22, 2023) proposing the construction of 128 apartment units. We have no record of the Borough granting final plan approval for this submission.

   Subsequently, the County Planning Commission reviewed a preliminary land development plan for the construction of a 139 unit apartment building (CCPC# LD-05-24-18082, dated June 6, 2024). We have no record of the Borough taking action on this submission.

2. The Zoning Information table on Sheet 4 indicates that the project site is being developed under the Unified Residential Development standards set forth in Section 112-916 of the Borough Zoning Ordinance. The County Planning Commission reviewed these draft ordinance standards on November 14, 2025 (CCPC# ZA-10-25-18691). According to our records, this zoning amendment was adopted by the Borough on November 19, 2025.

COUNTY POLICY:

LANDSCAPES:

3. The project site is located within the **Urban Center Landscape** designation of ***Landscapes3***, the 2018 County Comprehensive Plan. The vision for the **Urban Center Landscape** is historic downtown and established neighborhoods serving as civic, economic, and population centers with a traditional town character, accommodating substantial future growth at a medium to high intensity. Transportation infrastructure improvements and amenities supporting a walkable community should be provided and integrated into the public transportation and roadway systems. The proposed land development is consistent with the objectives of the **Urban Center Landscape.**

WATERSHEDS 2045:

4. *Watersheds 2045*, the County-wide integrated water resources plan and Act 167 Stormwater Management Plan, indicates the proposed development is located within the Lower Brandywine Creek watershed. The *Watersheds 2045* plan's highest priority objectives within this watershed are: addressing water quality impairments; implementing flood mitigation strategies; promoting stewardship of preserved open space; protecting and restoring vegetated riparian buffers and floodplain connectivity; and protecting and increasing water-based recreational opportunities. *Watersheds 2045* can be accessed at www.chesco.org/watersheds2045.

PRIMARY ISSUES:

Design Issues:

5. Prior to granting preliminary plan approval, the Borough should ensure that this proposal fully complies with the application requirements for Unified Residential Development set forth in Section 112-916.C(1) of the Borough Zoning Ordinance. In particular, Section 112-916.C(1)(e) states that the Design Guidelines for the West Chester Historic District shall be used for the design elements of the buildings, structures, and the overall development, and that the preliminary land development application shall include plans, conceptual building elevations, diagrams, photographs, and other

documentation to demonstrate compliance with the Design Guidelines. Building elevations/renderings were not included with the plan submission to the County Planning Commission.

Additional information on design elements for building character, site amenities, and transportation is provided in the County Planning Commission's Urban Center Landscapes Design Guide, which is available online at:
https://www.chescoplanning.org/MuniCorner/PDF/UrbanCenterDesignGuide.pdf.

Furthermore, Map 2: Historic Resources Inventory in the Borough's 2011 Historic Preservation Plan indicates that parcels to the north, west, and south of the project site contain historic resources that contributed to the 2005 West Chester Borough National Register Historic District Boundary increase. The applicant and Borough should ensure that the design of the proposed development respects the design, materials, and massing of the neighboring historic resources. "Appreciate" Objective A of ***Landscapes3***, the 2018 County Comprehensive Plan, is to preserve historic resources in their context while supporting appropriate reuse as a vital part of our community infrastructure and character. Additional information on this topic is available at:
https://www.chescoplanning.org/Landscapes3/Appreciate.cfm.

6. The project site is located within the study limits of the Borough's 2020 South High Street Corridor Plan. The plan identifies that the development of this portion of the corridor, from Union Street to Lacey Street, is critical to realize the community's vision to connect the Borough's Historic and Commercial core to the West Chester University campus (page 48). The applicant and Borough should ensure that this proposal is generally consistent with the recommendations set forth in the plan, which is currently available online at:
https://www.chescoplanning.org/municorner/PDF/VPP-HighStreetCorridorStudy.pdf.

7. We acknowledge, and endorse, that the design of the Landscape Plan (Drawing L8.00) includes the planting of street trees, which are an essential design element in the Urban Center Landscape. We also note that decorative streetlights and benches will be provided for this development.

8. The site plan depicts the location of two areas along South High Street where a four foot high fence on top of a four foot high decorative wall will be located. The applicant should provide all applicable design details of these walls/fences.

9. The Recreation Land Requirements table on Sheet 1 indicates that a 710 square foot public recreation area, and a 2,252 square foot passive recreation area, will be provided. While the site plan clearly depicts the location of the plaza/public space area at the South High Street/Price Street intersection, the location of the passive recreation area is not shown on the plan. This should be clarified by the applicant.

Access and Circulation:

10. The Borough's emergency service providers should be requested to review the plan to ensure that they can safely navigate the proposed development when completed, particularly regarding the ability of emergency vehicles (such as fire trucks) to access the site via the alleys and driveways.

11. We acknowledge, and endorse, the installation of sidewalks, which are an essential design element in the Urban Center Landscapes, along with crosswalks provided within the development. Painted crosswalk stripes should be provided on the Dean Street driveway entrance, and on Price Street at its intersection with Boxwood Alley. Consideration should also be provided for updating the crosswalk markings on Dean Street at its intersection with South Main Street.

12. There is an existing bus stop for SEPTA Bus Route 104 on the project site. The applicant and Borough should coordinate with SEPTA regarding any potential bus stop improvements at this location. We note that there is only an existing bus stop signed affixed to a pole at this location. Consideration should be provided for making this bus stop more visible and user friendly.

Stormwater Management:

13. Land disturbance and land development activities that occur within Chester County must comply with the ***County-wide Act 167 Stormwater Management Plan for Chester County, PA*** (August 2022) and the associated Act 167 stormwater management ordinance standards adopted by each municipality.

14. According to the Waivers Requested table on Sheet 1, the applicant is requesting a waiver from the infiltration requirements set forth in Section 94-306.J(3) of the Borough Code, so that the infiltration facilities be set back a minimum of 2 feet while the Code requires a minimum of 10 feet, along with a waiver from Section 94-306.J(4) so that the bottom elevation of the infiltration facilities be allowed to be above the proposed subgrade elements at certain locations. We recommend that the Borough not grant these waivers considering subgrade basements are habitable spaces. The applicant should consider lowering the elevations of the infiltration facilities to be below the habitable area of the proposed buildings or incorporating managed release concept (MRC) strategies into the designs.

15. The applicant should provide the Borough Engineer with an updated stormwater report for the proposed development plan, if not yet provided. The Borough Engineer should confirm that peak rates for all the required design storms frequencies for pre- to post-construction are met as identified in the stormwater ordinance.

16. The applicant should consider connecting the proposed tree wells on the sidewalk along South High Street with a subsurface system for distributing runoff among street trees.

17. The applicant should consider using permeable pavers for areas where the sidewalk will be replaced and other proposed paved surfaces.

ADMINISTRATIVE ISSUES:

18. The applicant should provide all pertinent details on the design and location of trash collection areas, gas meters, and HVAC equipment. The applicant and Borough should ensure that trash collection areas and utilities are not visible from High Street or Price Street.

19. The Act 247 County Referral Form indicates that a Homeowners' Association will be responsible for the proposed common facilities/areas. Ownership, maintenance, use provisions, restrictions, and liability responsibilities associated with any commonly held amenities should be written into the Homeowners' Association (HOA) document. The HOA document should include provisions which allow the Borough to: intervene and maintain common owned facilities; determine the schedule for Association formation; timing for construction of common facilities; and determine

the schedule for transfer of ownership from the developer to the HOA of common facilities. The HOA document should be submitted as part of the application to the municipality to be reviewed by an attorney versed in homeowners' association documents to evaluate the document for its completeness and compliance. We also recommend that the HOA document allow for rooftop solar installations and other energy efficiency and environmental conservation actions.

20. The applicant should contact the office of the Chester County Conservation District (telephone #610-455-1360) for information and clarification on erosion control measures. The provisions of the Commonwealth Erosion Control Regulations may apply to the project and may require an Earth Disturbance Permit or a National Pollutant Discharge Elimination System permit for discharge of stormwater from construction activities. Additional information on this topic is provided online at: https://www.chesco.org/284/ErosionStormwater.

21. A minimum of four (4) copies of the plan should be presented at the Chester County Planning Commission for endorsement to permit recording of the final plan in accordance with the procedures of Act 247, the Pennsylvania Municipalities Planning Code, and to meet the requirements of the Recorder of Deeds, the Assessment Office, and the municipality.

This report does not review the plan for compliance to all aspects of your ordinance, as this is more appropriately done by agents of West Chester Borough. However, we appreciate the opportunity to review and comment on this plan. The staff of the Chester County Planning Commission is available to you to discuss this and other matters in more detail.

Sincerely,

Paul Farkas

Paul Farkas
Senior Review Planner

cc: High Street 410, LLC
Casey Lehmann
Cornerstone Consulting Engineers & Design Services, Inc.
Gary Saluti & Suzanne M. Dunphy
Anthony Antonelli, District Permits Manager, PennDOT
Mirlene SaintVal, P.E., Senior Manager of Transportation Services, PennDOT
John R. Otten, Senior Civil Engineer Supervisor, PennDOT
SEPTA (Attn. Planning Division)
Chester County Conservation District
Chester County Water Resources Authority

410 S HIGH ST.

GNOME ARCHITECTS
HIGH STREET 410 LLC
LAND DEVELOPMENT APPLICATION
06.29.2026



GNOME

TABLE OF CONTENTS

2-4	SITE CONTEXT
5-6	SUN/SHADOW STUDY
7-8	FLOOR PLANS
9	PROPOSED HEIGHT DIAGRAM
10-22	ELEVATIONS



1



2



3



4



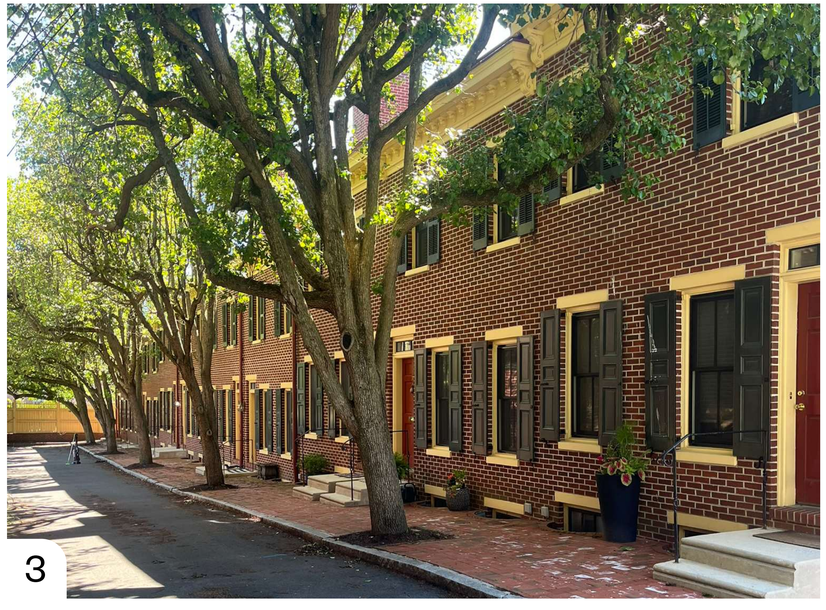
5



EXISTING NEIGHBORHOOD CONTEXT


1


2


3


4


5



GNOME ARCHITECTS LLC | HIGH STREET 410 LLC

EXISTING NEIGHBORHOOD CONTEXT

410 S. HIGH STREET | PAGE 3



1



2



3



4



5



EXISTING COMMERICAL CORRIDOR CONTEXT

GNOME ARCHITECTS LLC | HIGH STREET 410 LLC

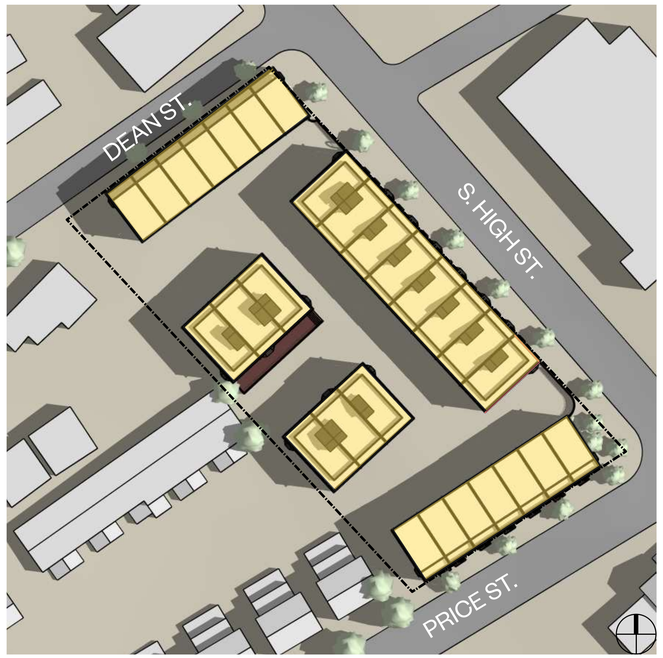
410 S. HIGH STREET | PAGE 4

MORNING - 9AM

NOON - 12PM

AFTERNOON - 4PM

SUMMER

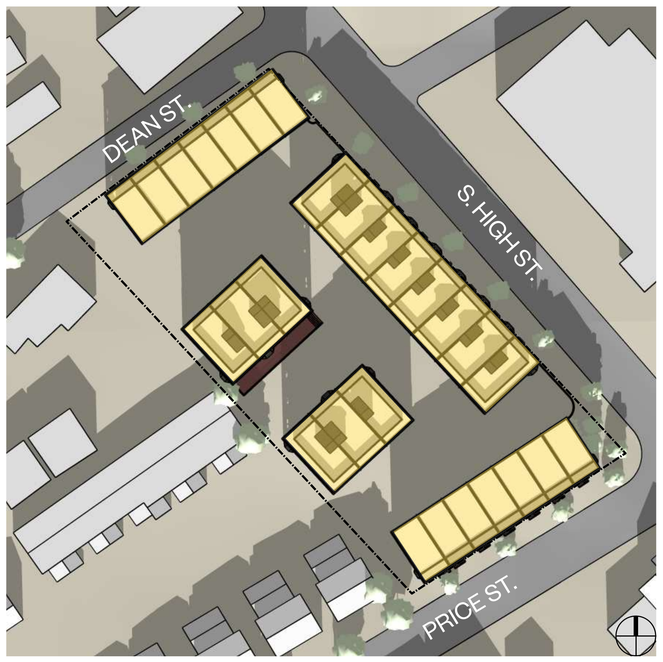


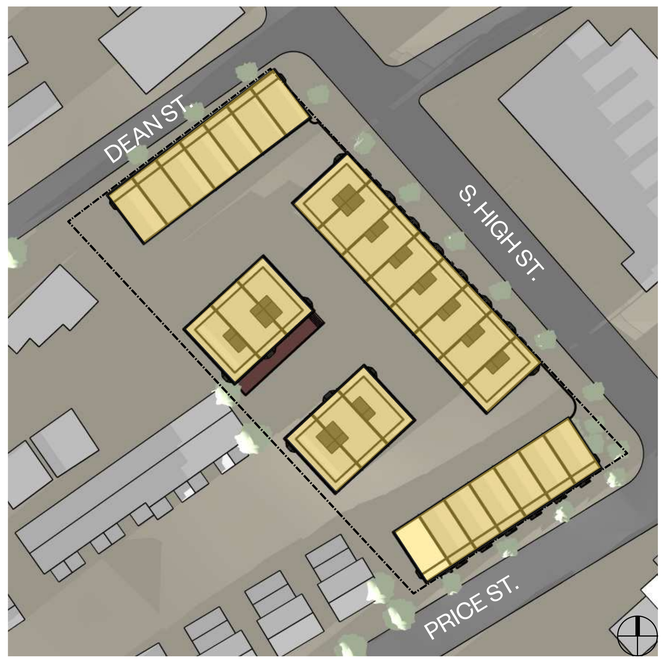




WINTER







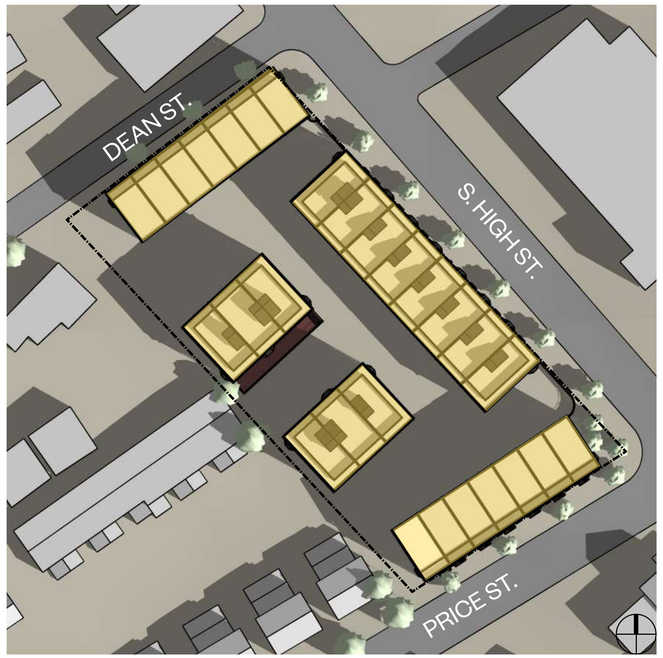
SHADOW STUDY - SUMMER/WINTER SOLSTICE

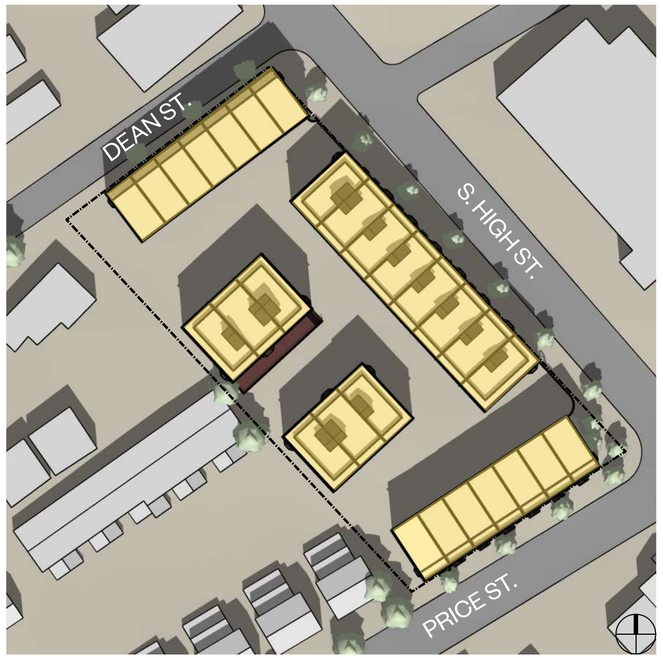
MORNING - 9AM

NOON - 12PM

AFTERNOON - 4PM

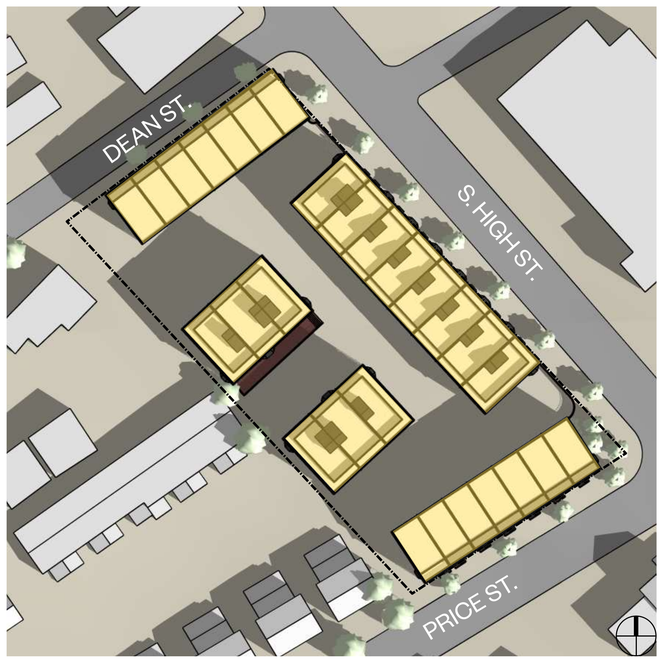
SPRING

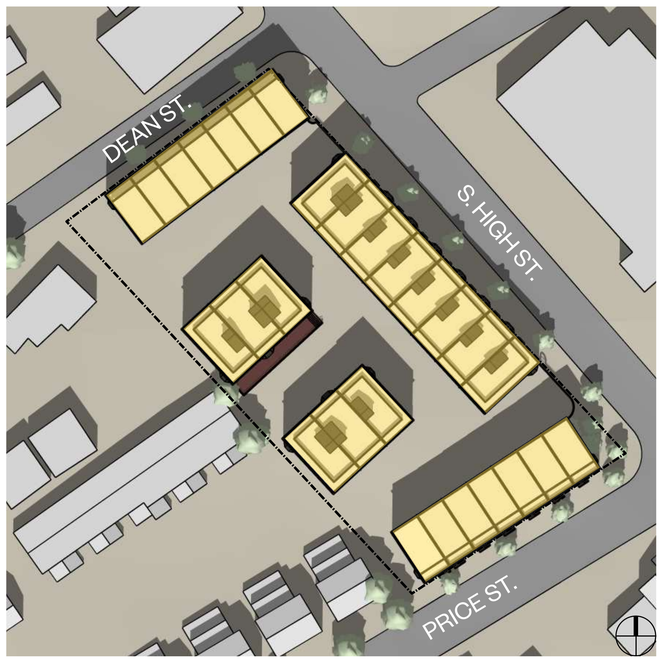






FALL

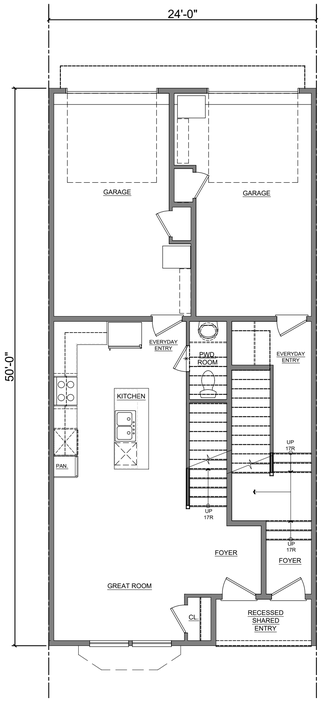


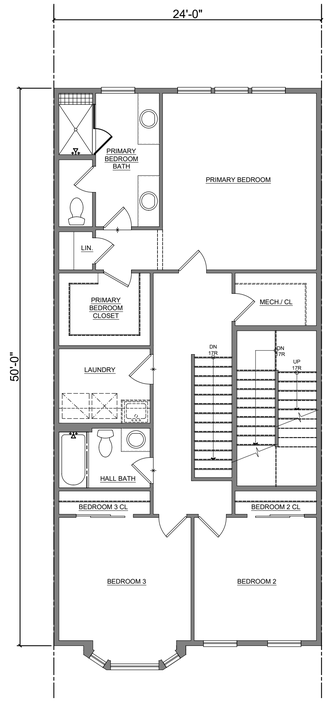


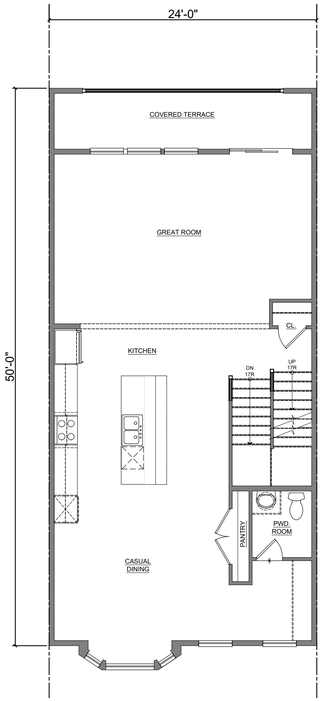


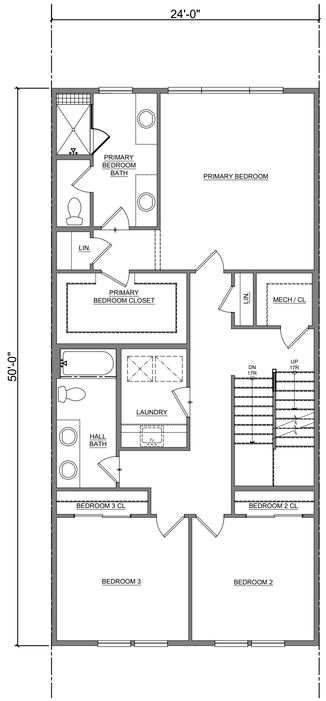
SHADOW STUDY - SPRING/FALL EQUINOX

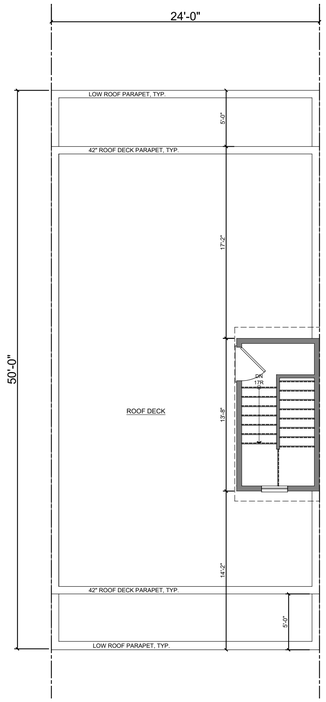
INFILL



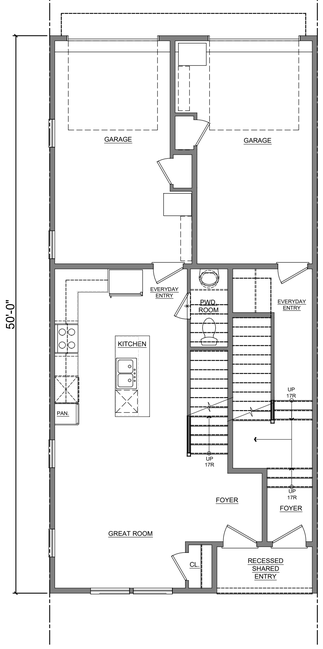


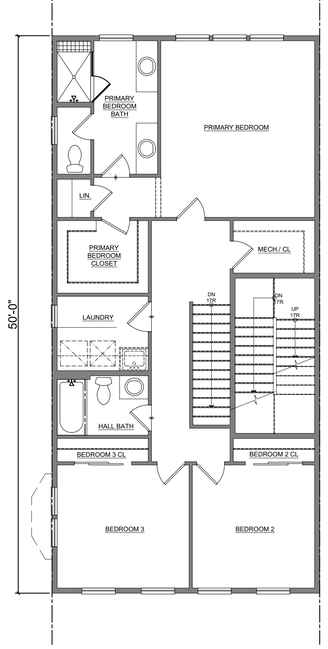


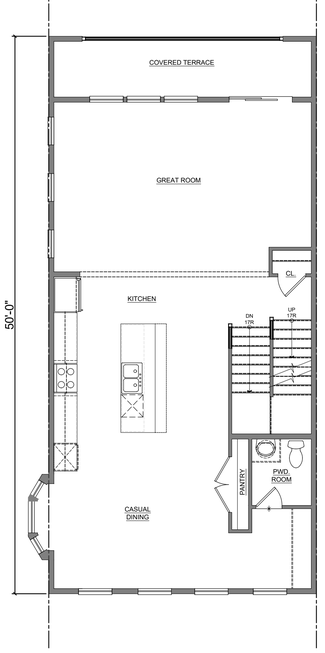


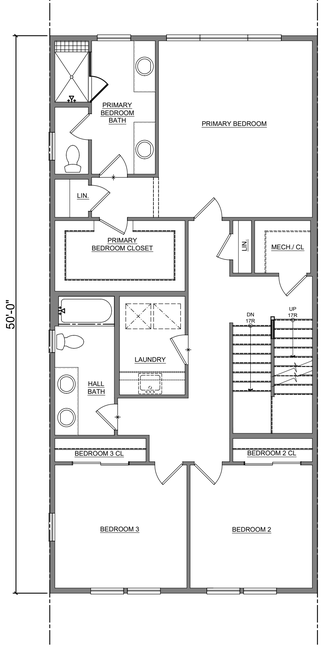


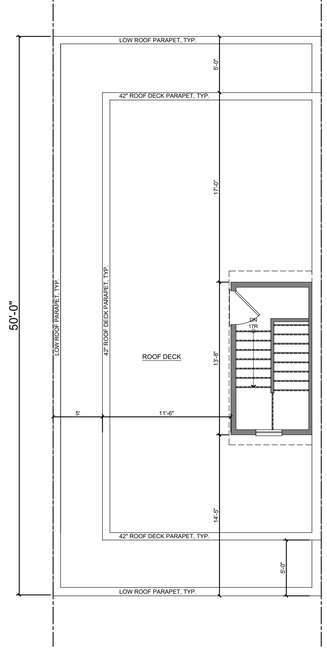
CORNER











FIRST FLOOR

SECOND FLOOR

THIRD FLOOR

FOURTH FLOOR

ROOF

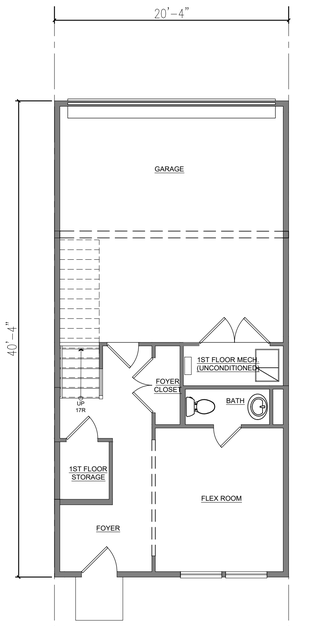


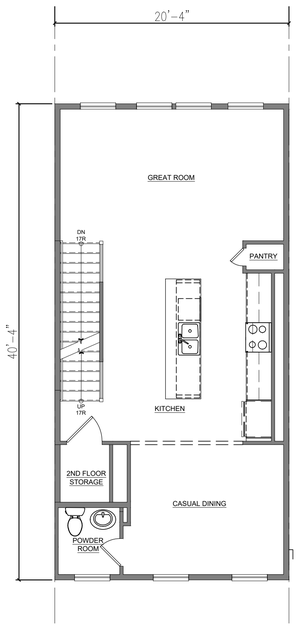
TYP. DUPLEX FLOOR PLANS

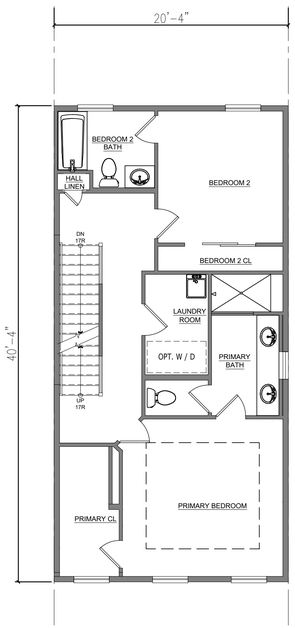
410 S. HIGH STREET | PAGE 7

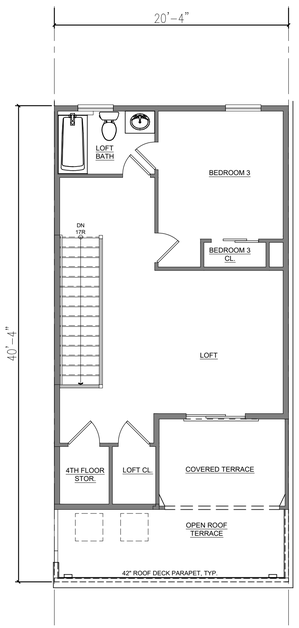
INFILL

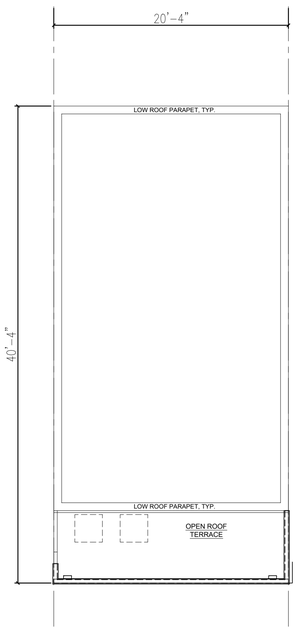
CORNER

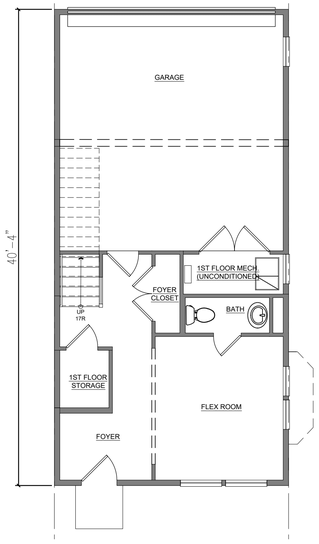


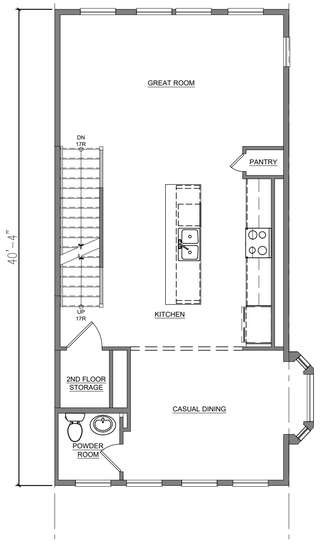


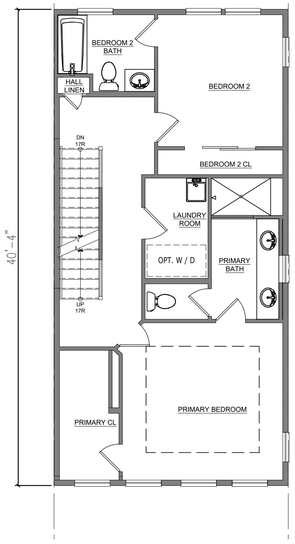


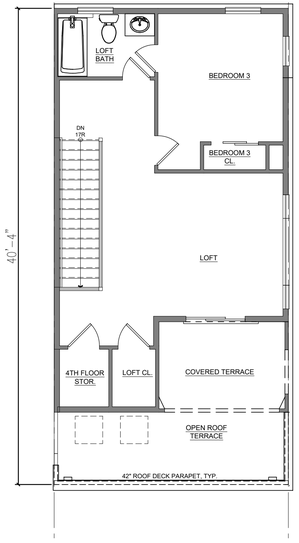


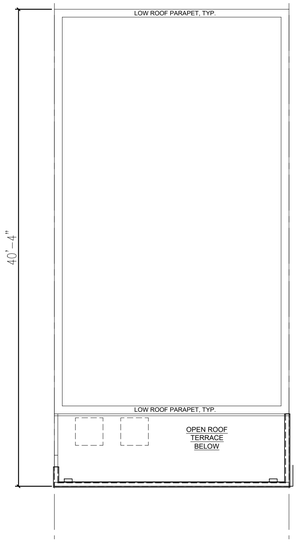












FIRST FLOOR

SECOND FLOOR

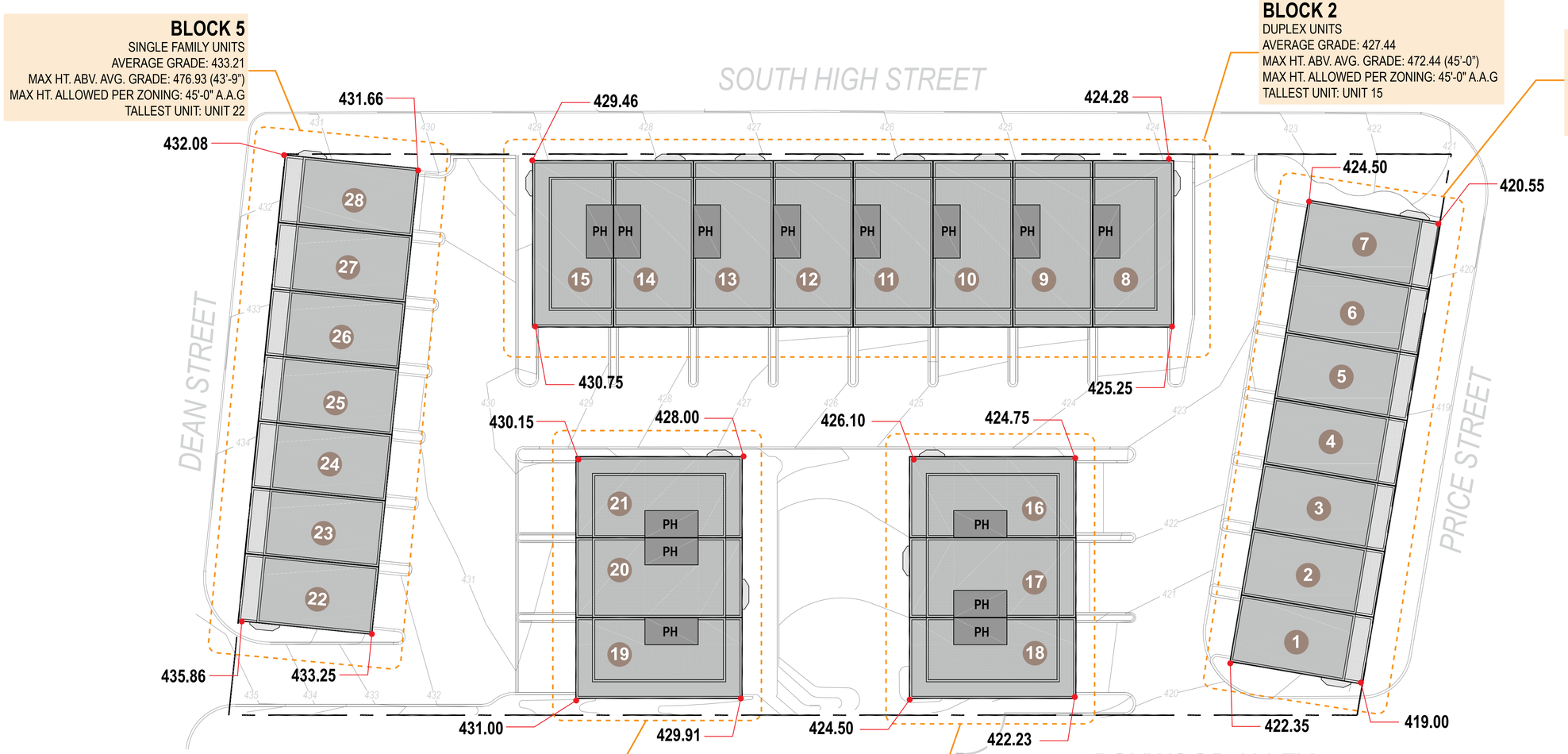
THIRD FLOOR

FOURTH FLOOR

ROOF



TYP. SINGLE FAMILY FLOOR PLANS



BLOCK 5
SINGLE FAMILY UNITS
AVERAGE GRADE: 433.21
MAX HT. ABV. AVG. GRADE: 476.93 (43'-9")
MAX HT. ALLOWED PER ZONING: 45'-0" A.A.G
TALLEST UNIT: UNIT 22

BLOCK 2
DUPLEX UNITS
AVERAGE GRADE: 427.44
MAX HT. ABV. AVG. GRADE: 472.44 (45'-0")
MAX HT. ALLOWED PER ZONING: 45'-0" A.A.G
TALLEST UNIT: UNIT 15

BLOCK 1
SINGLE FAMILY UNITS
AVERAGE GRADE: 421.60
MAX HT. ABV. AVG. GRADE: 466.60 (45'-0")
MAX HT. ALLOWED PER ZONING: 45'-0" A.A.G
TALLEST UNIT: UNIT 7

BLOCK 4
DUPLEX UNITS
AVERAGE GRADE: 429.77
MAX HT. ABV. AVG. GRADE: 474.08 (44'-4")
MAX HT. ALLOWED PER ZONING: 45'-0" A.A.G
TALLEST UNIT: UNIT 19

BLOCK 3
DUPLEX UNITS
AVERAGE GRADE: 424.40
HT. ABV. AVG. GRADE: 466.84 (44'-4")
MAX HT. ALLOWED PER ZONING: 45'-0" A.A.G
TALLEST UNIT: UNIT 16

HEIGHT CALCULATIONS

GRADE PLANE
A REFERENCE PLANE REPRESENTING THE AVERAGE OF FINISHED GROUND LEVEL ADJOINING THE BUILDING OR STRUCTURE AT EXTERIOR WALLS. SEE ATTACHMENT 5 - APPENDIX E - "METHOD FOR CALCULATION OF GRADE PLANE AND HEIGHT OF BUILDING OR STRUCTURE."

HEIGHT OF BUILDING OR STRUCTURE
THE VERTICAL DISTANCE MEASURED FROM THE GRADE PLANE TO:
A. *THE HIGHEST POINT OF THE ROOF, IN CASE OF A FLAT ROOF.*
B. *THE MEAN HEIGHT BETWEEN EAVES AND RIDGE, IN THE CASE OF A PITCHED ROOF.*
C. *THE HIGHEST POINT OF ANY STRUCTURE WHICH RISES WHOLLY OR PARTLY ABOVE THE ROOFLINE AND WHOSE FLOOR AREA EQUALS OR EXCEEDS 20% OF THE GROUND FLOOR AREA OF THE BUILDING WHICH SUPPORTS IT.*

§ 112-803EXCEPTIONS TO HEIGHT REGULATIONS.
THE BOROUGH COUNCIL MAY DETERMINE THAT THE HEIGHT REGULATIONS PRESCRIBED WITHIN THIS CHAPTER MAY BE EXEMPTED FOR CHURCH SPIRES, STEEPLES OR BELFRIES; CUPOLAS OR DOMES; SOLAR PANELS; CLOCK TOWERS; CHIMNEYS; VENTILATING FANS; AIR-CONDITIONING EQUIPMENT; ROOF STRUCTURES FOR THE HOUSING OF ELEVATORS AND/OR STAIRWAYS; FIRE OR PARAPET WALLS; SKYLIGHTS; FLAGPOLES; WATER TOWERS OR WATER TANKS; UTILITY POLES; WINDMILLS; SILOS; SMOKESTACKS; AND ORNAMENTAL OR OTHER NECESSARY MECHANICAL APPURTENANCES, PROVIDED THAT SUCH STRUCTURES ARE NOT USED FOR HUMAN OCCUPANCY AND ARE SET BACK A DISTANCE EQUAL TO THEIR HEIGHT (FROM GROUND LEVEL TO THE TOP OF THE STRUCTURE) FROM A LOT LINE.

HEIGHT EXECEPTIONS

DUPLEX GROUND FLOOR AREA = 1,200 SF
PARAPETS & PILOT HOUSE AREA ABV. ROOF LINE = 236 SF
ABOVE ROOF LINE STRUCTURES = 19%

SINGLE FAMILY GROUND FLOOR = 820 SF
PARAPET AREA ABV. ROOF LINE = 72 SF
ABOVE ROOF LINE STRUCTURES = 8%

THESE RENDERINGS REMAIN SUBJECT TO CHANGE AT THE TIME OF BUILDING PERMIT APPLICATION PROVIDED THAT SAME COMPLY WITH APPLICABLE PROVISIONS OF THE WEST CHESTER BOROUGH ZONING ORDINANCE

BLOCK 1 (AVG. GRADE 421.60)

UNIT	FF ELEV.	GF ELEV.	ROOF ELEV.	HEIGHT A.A.G.
1	421.67	421.00	463.60	42.0
2	422.34	421.67	464.27	42.67
3	423.00	423.33	464.93	43.33
4	423.33	422.67	465.26	43.66
5	424.00	423.33	465.93	44.33
6	424.33	423.67	466.26	44.66
7	424.67	424.00	466.60	45.0

BLOCK 2 (AVG. GRADE 427.44)

UNIT	FF ELEV.	GF ELEV.	ROOF ELEV.	HEIGHT A.A.G.
8	425.33	424.75	467.77	40.33
9	426.00	425.42	468.44	41.0
10	426.67	426.09	469.11	41.67
11	427.33	426.75	469.77	42.33
12	428.00	427.42	470.44	43.0
13	428.67	428.09	471.11	43.67
14	429.34	428.76	471.78	44.34
15	430.00	429.42	472.44	45.0

BLOCK 3 (AVG. GRADE 424.40)

UNIT	FF ELEV.	GF ELEV.	ROOF ELEV.	HEIGHT A.A.G.
16	426.30	424.25	468.74	44.34
17	424.50	422.33	466.94	42.54
18	424.50	421.73	466.94	42.54

BLOCK 4 (AVG. GRADE 429.77)

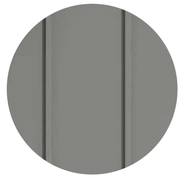
UNIT	FF ELEV.	GF ELEV.	ROOF ELEV.	HEIGHT A.A.G.
19	431.64	432.22	474.08	44.31
20	431.31	431.89	473.75	43.98
21	430.64	431.22	473.08	43.31

BLOCK 5 (AVG. GRADE 433.21)

UNIT	FF ELEV.	GF ELEV.	ROOF ELEV.	HEIGHT A.A.G.
22	435.00	432.33	476.93	43.72
23	434.50	432.00	476.43	43.22
24	434.25	431.67	476.18	42.97
25	434.00	431.50	475.93	42.72
26	433.50	431.50	475.43	42.22
27	433.00	431.00	474.93	41.72
28	432.50	430.20	474.43	41.22

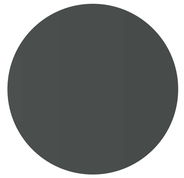
PROPOSED HEIGHT DIAGRAM

1



FIBER CEMENT BOARD & BATTEN.
COLOR; GRAY SLATE

2



FIBER CEMENT PANEL & TRIM.
COLOR; IRON GRAY

3



CAST STONE.
COLOR; MATCH TO BRICK TONE

4



ALUMINUM CLAD WINDOWS WITH S.D.L.
COLOR; BLACK

5



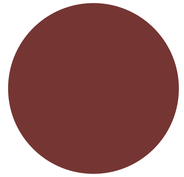
ROYAL PLUM FULL RANGE BRICK. RUNNING BOND W/ MATCHING GROUT

6



FIBER CEMENT LAP SIDING.
COLOR; COUNTRYLANE RED

7



EXTERIOR ARCHITECTURAL ACCENTS.
COLOR; SW7592

8



VERTICAL PICKET, BLACK RAILING

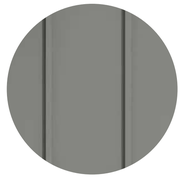


THESE RENDERINGS REMAIN SUBJECT TO CHANGE AT THE TIME OF BUILDING PERMIT APPLICATION PROVIDED THAT SAME COMPLY WITH APPLICABLE PROVISIONS OF THE WEST CHESTER BOROUGH ZONING ORDINANCE



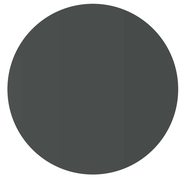
BLOCK 1 FRONT ELEVATION

1



FIBER CEMENT BOARD & BATTEN.
COLOR; GRAY SLATE

2



FIBER CEMENT PANEL & TRIM.
COLOR; IRON GRAY

3



CAST STONE.
COLOR; MATCH TO BRICK TONE

4



ALUMINUM CLAD WINDOWS WITH S.D.L.
COLOR; BLACK

5



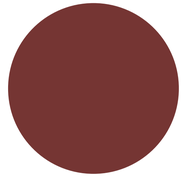
ROYAL PLUM FULL RANGE BRICK. RUNNING BOND W/ MATCHING GROUT

6



FIBER CEMENT LAP SIDING.
COLOR; COUNTRYLANE RED

7



EXTERIOR ARCHITECTURAL ACCENTS.
COLOR; SW7592

8



VERTICAL PICKET, BLACK RAILING

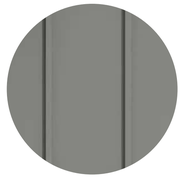


THESE RENDERINGS REMAIN SUBJECT TO CHANGE AT THE TIME OF BUILDING PERMIT APPLICATION PROVIDED THAT SAME COMPLY WITH APPLICABLE PROVISIONS OF THE WEST CHESTER BOROUGH ZONING ORDINANCE



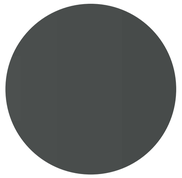
BLOCK 1 REAR ELEVATION

1



FIBER CEMENT BOARD & BATTEN.
COLOR; GRAY SLATE

2



FIBER CEMENT PANEL & TRIM.
COLOR; IRON GRAY

3



CAST STONE.
COLOR; MATCH TO BRICK TONE

4



ALUMINUM CLAD WINDOWS WITH S.D.L.
COLOR; BLACK

5



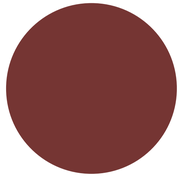
ROYAL PLUM FULL RANGE BRICK. RUNNING BOND W/ MATCHING GROUT

6



FIBER CEMENT LAP SIDING.
COLOR; COUNTRYLANE RED

7



EXTERIOR ARCHITECTURAL ACCENTS.
COLOR; SW7592

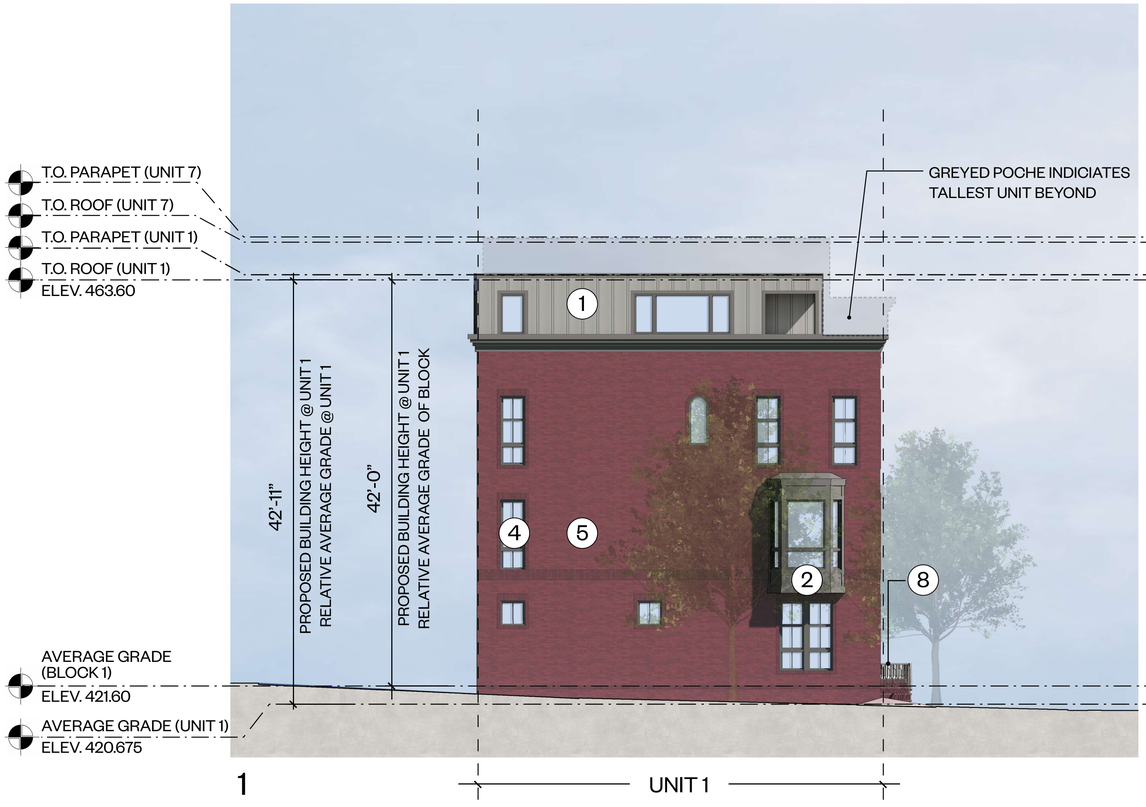
8

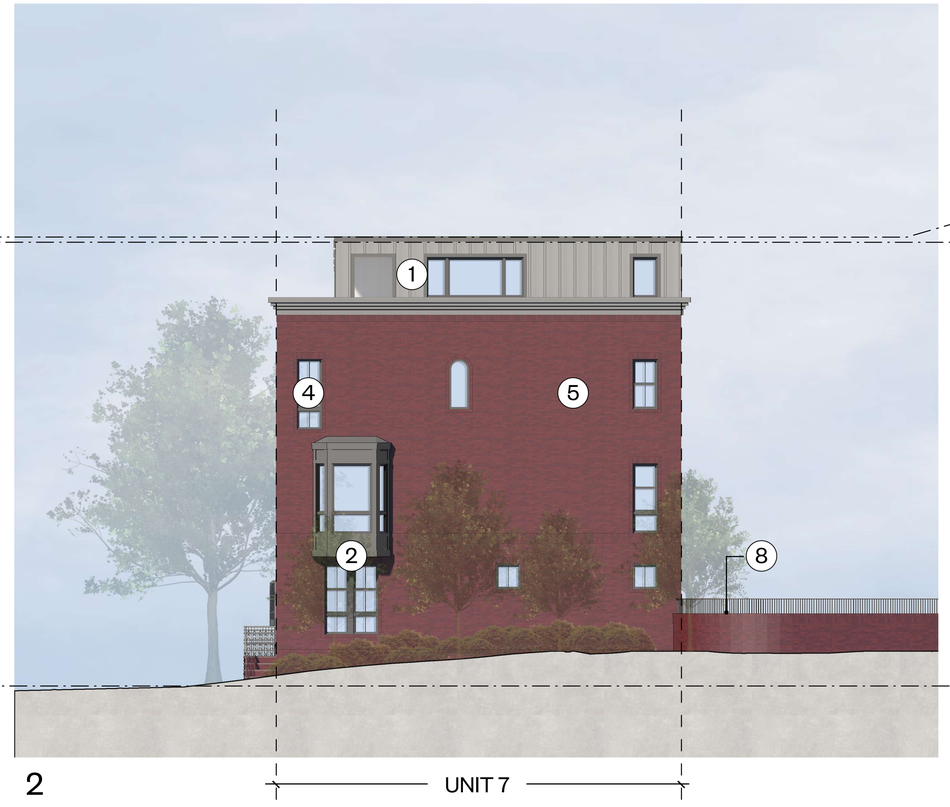


VERTICAL PICKET, BLACK RAILING



THESE RENDERINGS REMAIN SUBJECT TO CHANGE AT THE TIME OF BUILDING PERMIT APPLICATION PROVIDED THAT SAME COMPLY WITH APPLICABLE PROVISIONS OF THE WEST CHESTER BOROUGH ZONING ORDINANCE





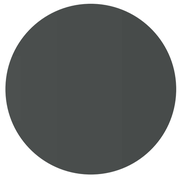
BLOCK 1 SIDE ELEVATIONS

1



FIBER CEMENT BOARD & BATTEN.
COLOR; GRAY SLATE

2



FIBER CEMENT PANEL & TRIM.
COLOR; IRON GRAY

3



CAST STONE.
COLOR; MATCH TO BRICK TONE

4



ALUMINUM CLAD WINDOWS WITH S.D.L.
COLOR; BLACK

5



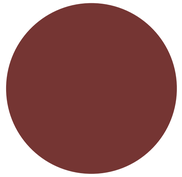
ROYAL PLUM FULL RANGE BRICK. RUNNING BOND W/ MATCHING GROUT

6



FIBER CEMENT LAP SIDING.
COLOR; COUNTRYLANE RED

7



EXTERIOR ARCHITECTURAL ACCENTS.
COLOR; SW7592

8



VERTICAL PICKET, BLACK RAILING

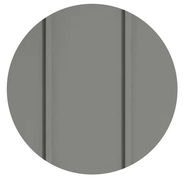


THESE RENDERINGS REMAIN SUBJECT TO CHANGE AT THE TIME OF BUILDING PERMIT APPLICATION PROVIDED THAT SAME COMPLY WITH APPLICABLE PROVISIONS OF THE WEST CHESTER BOROUGH ZONING ORDINANCE



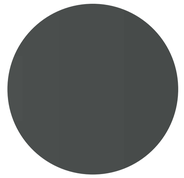
BLOCK 2 FRONT ELEVATION

1



FIBER CEMENT BOARD & BATTEN.
COLOR; GRAY SLATE

2



FIBER CEMENT PANEL & TRIM.
COLOR; IRON GRAY

3



CAST STONE.
COLOR; MATCH TO BRICK TONE

4



ALUMINUM CLAD WINDOWS WITH S.D.L.
COLOR; BLACK

5



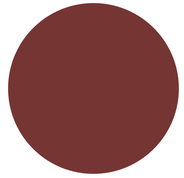
ROYAL PLUM FULL RANGE BRICK. RUNNING BOND W/ MATCHING GROUT

6



FIBER CEMENT LAP SIDING.
COLOR; COUNTRYLANE RED

7



EXTERIOR ARCHITECTURAL ACCENTS.
COLOR; SW7592

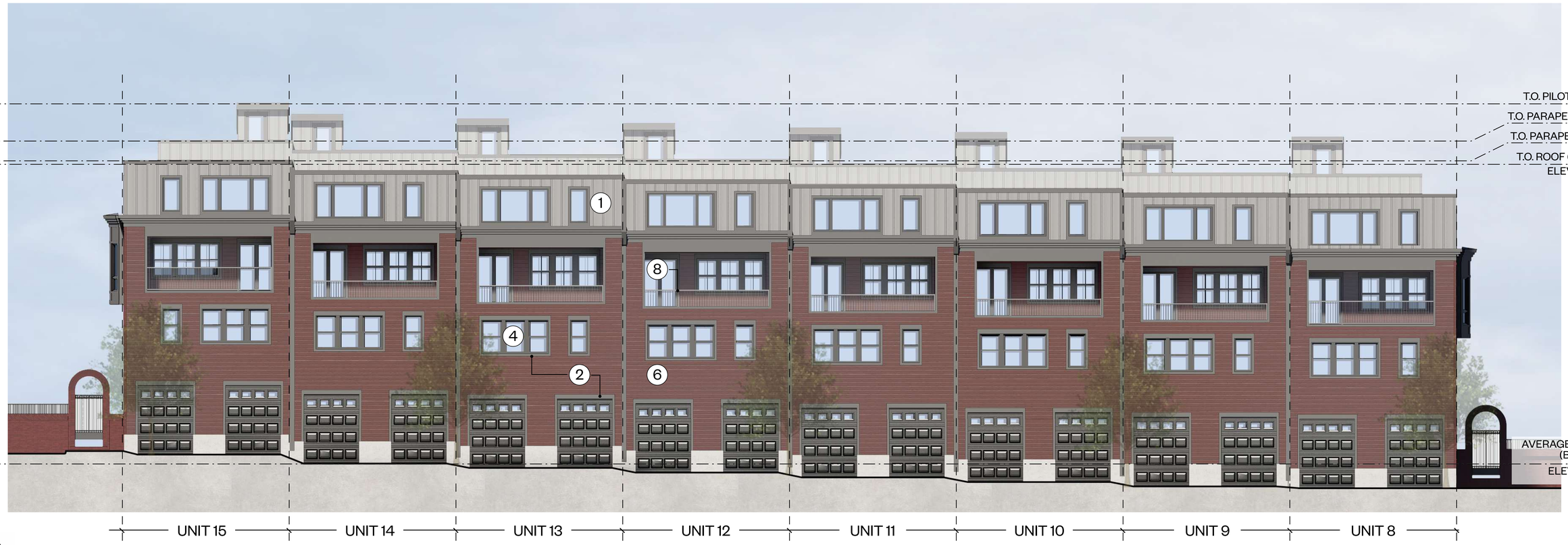
8



VERTICAL PICKET, BLACK RAILING

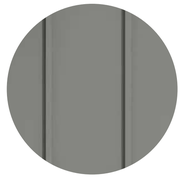


THESE RENDERINGS REMAIN SUBJECT TO CHANGE AT THE TIME OF BUILDING PERMIT APPLICATION PROVIDED THAT SAME COMPLY WITH APPLICABLE PROVISIONS OF THE WEST CHESTER BOROUGH ZONING ORDINANCE



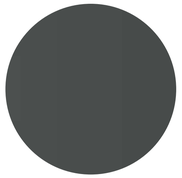
BLOCK 2 REAR ELEVATION

1



FIBER CEMENT BOARD & BATTEN.
COLOR; GRAY SLATE

2



FIBER CEMENT PANEL & TRIM.
COLOR; IRON GRAY

3



CAST STONE.
COLOR; MATCH TO BRICK TONE

4



ALUMINUM CLAD WINDOWS WITH S.D.L.
COLOR; BLACK

5



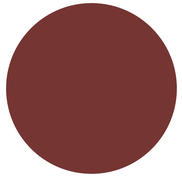
ROYAL PLUM FULL RANGE BRICK. RUNNING BOND W/ MATCHING GROUT

6



FIBER CEMENT LAP SIDING.
COLOR; COUNTRYLANE RED

7



EXTERIOR ARCHITECTURAL ACCENTS.
COLOR; SW7592

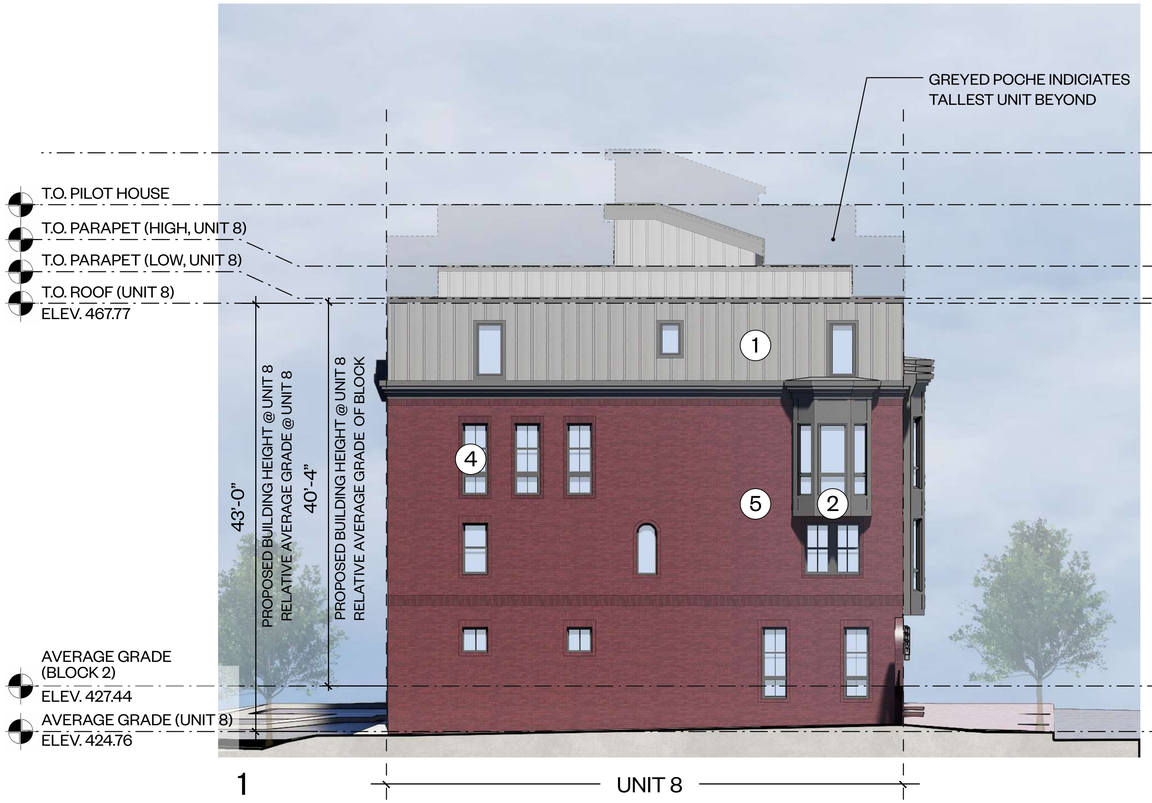
8

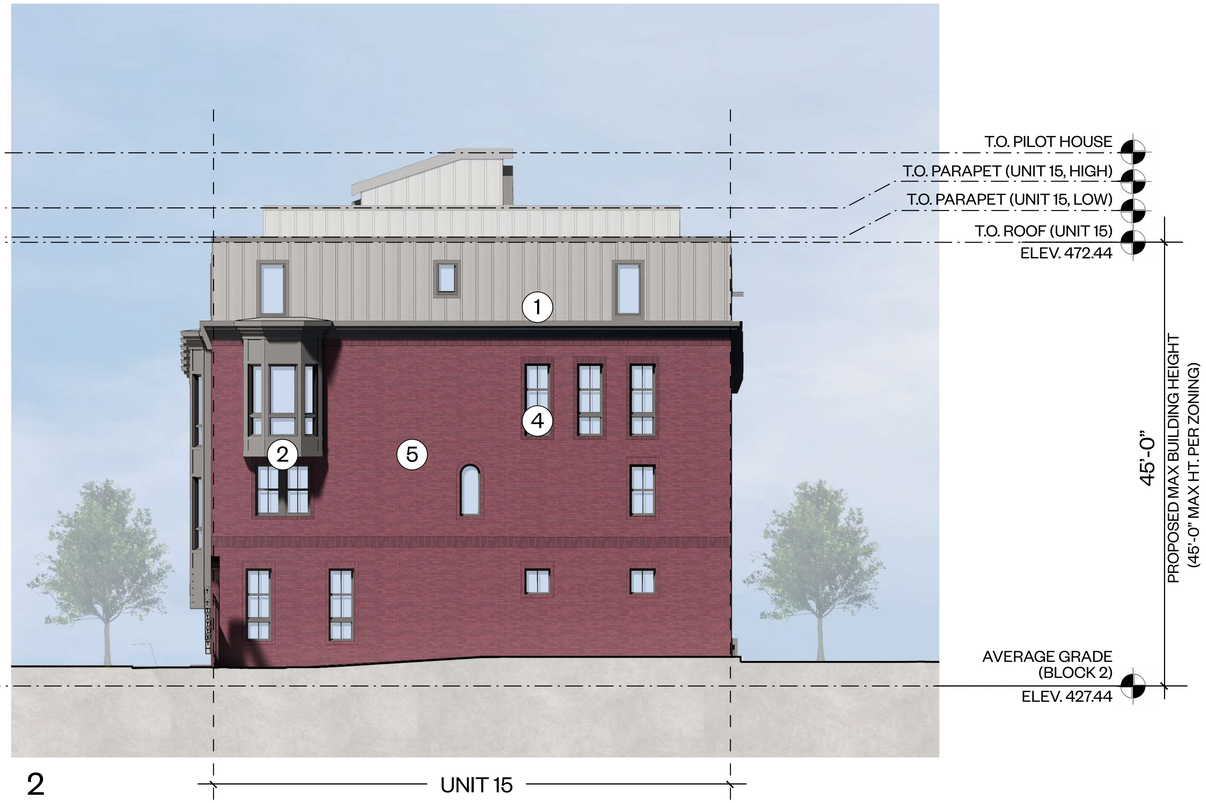


VERTICAL PICKET, BLACK RAILING



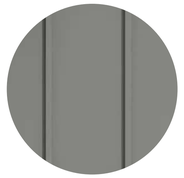
THESE RENDERINGS REMAIN SUBJECT TO CHANGE AT THE TIME OF BUILDING PERMIT APPLICATION PROVIDED THAT SAME COMPLY WITH APPLICABLE PROVISIONS OF THE WEST CHESTER BOROUGH ZONING ORDINANCE





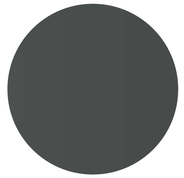
BLOCK 2 SIDE ELEVATIONS

1



FIBER CEMENT BOARD & BATTEN.
COLOR; GRAY SLATE

2



FIBER CEMENT PANEL & TRIM.
COLOR; IRON GRAY

3



CAST STONE.
COLOR; MATCH TO BRICK TONE

4



ALUMINUM CLAD WINDOWS WITH S.D.L.
COLOR; BLACK

5



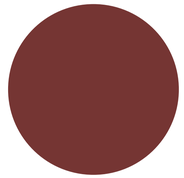
ROYAL PLUM FULL RANGE BRICK. RUNNING BOND W/ MATCHING GROUT

6



FIBER CEMENT LAP SIDING.
COLOR; COUNTRYLANE RED

7



EXTERIOR ARCHITECTURAL ACCENTS.
COLOR; SW7592

8



VERTICAL PICKET, BLACK RAILING



THESE RENDERINGS REMAIN SUBJECT TO CHANGE AT THE TIME OF BUILDING PERMIT APPLICATION PROVIDED THAT SAME COMPLY WITH APPLICABLE PROVISIONS OF THE WEST CHESTER BOROUGH ZONING ORDINANCE



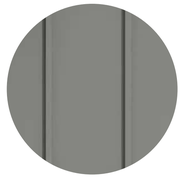
1 UNIT 16 UNIT 17 UNIT 18



2 UNIT 18 UNIT 17 UNIT 16

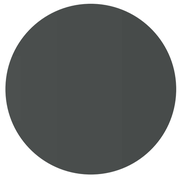
BLOCK 3 ELEVATIONS

1



FIBER CEMENT BOARD & BATTEN.
COLOR; GRAY SLATE

2



FIBER CEMENT PANEL & TRIM.
COLOR; IRON GRAY

3



CAST STONE.
COLOR; MATCH TO BRICK TONE

4



ALUMINUM CLAD WINDOWS WITH S.D.L.
COLOR; BLACK

5



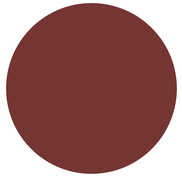
ROYAL PLUM FULL RANGE BRICK. RUNNING BOND W/ MATCHING GROUT

6



FIBER CEMENT LAP SIDING.
COLOR; COUNTRYLANE RED

7

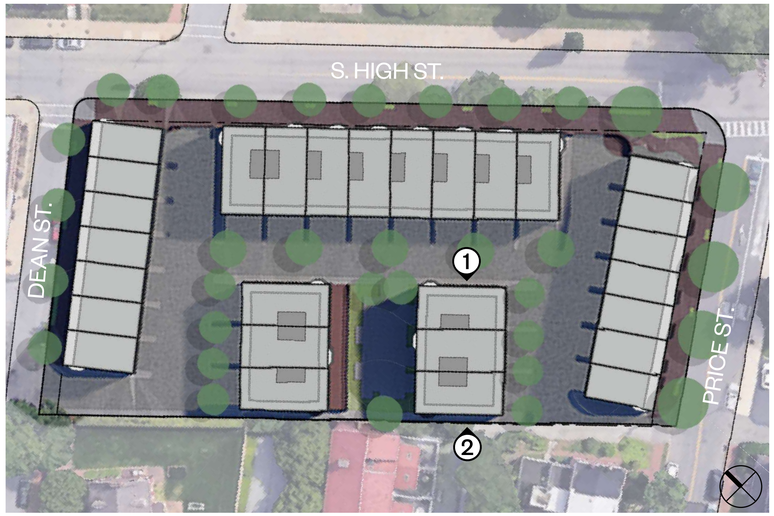


EXTERIOR ARCHITECTURAL ACCENTS.
COLOR; SW7592

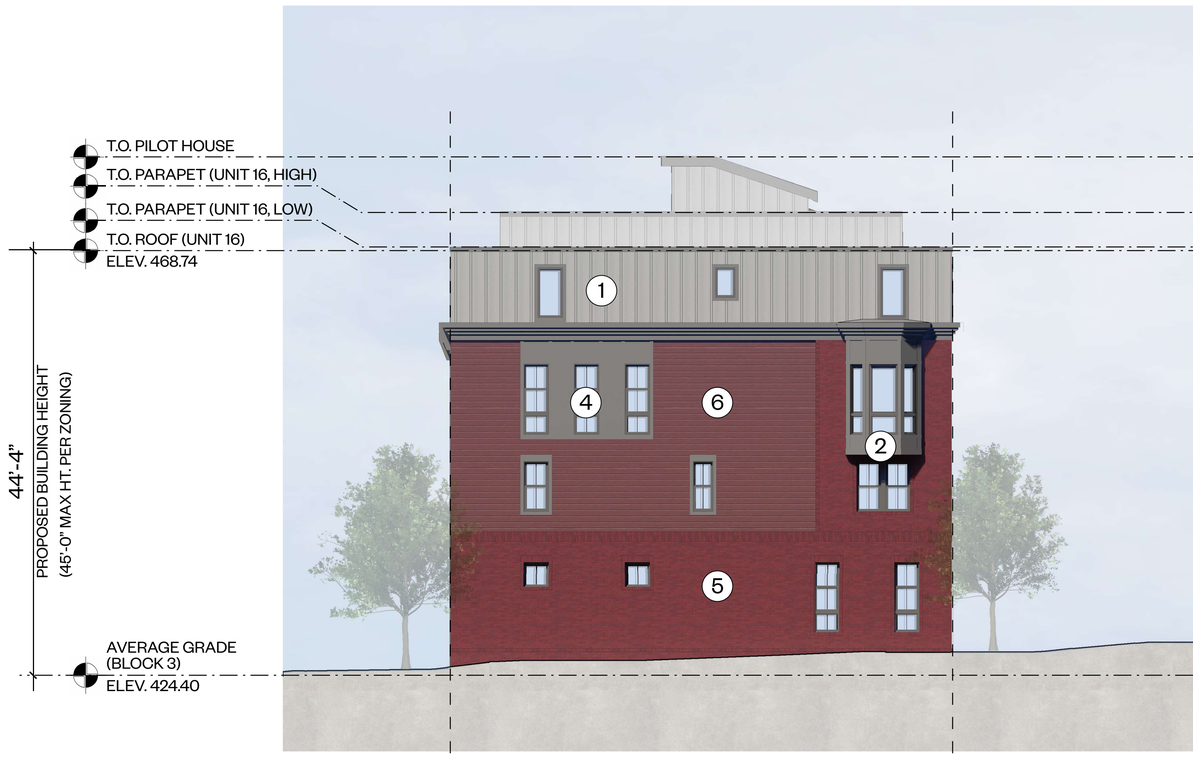
8



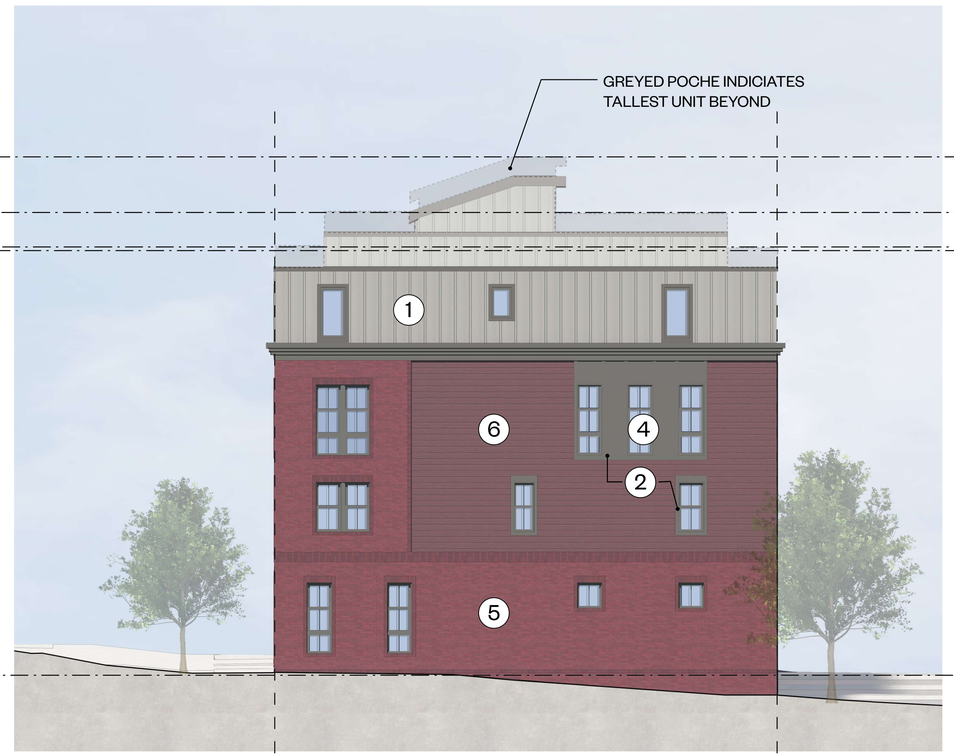
VERTICAL PICKET, BLACK RAILING



THESE RENDERINGS REMAIN SUBJECT TO CHANGE AT THE TIME OF BUILDING PERMIT APPLICATION PROVIDED THAT SAME COMPLY WITH APPLICABLE PROVISIONS OF THE WEST CHESTER BOROUGH ZONING ORDINANCE



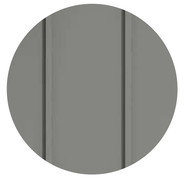
1 UNIT 16



2 UNIT 18

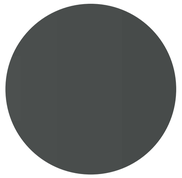
BLOCK 3 SIDE ELEVATIONS

1



FIBER CEMENT BOARD & BATTEN.
COLOR; GRAY SLATE

2



FIBER CEMENT PANEL & TRIM.
COLOR; IRON GRAY

3



CAST STONE.
COLOR; MATCH TO BRICK TONE

4



ALUMINUM CLAD WINDOWS WITH S.D.L.
COLOR; BLACK

5



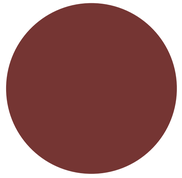
ROYAL PLUM FULL RANGE BRICK. RUNNING BOND W/ MATCHING GROUT

6



FIBER CEMENT LAP SIDING.
COLOR; COUNTRYLANE RED

7



EXTERIOR ARCHITECTURAL ACCENTS.
COLOR; SW7592

8



VERTICAL PICKET, BLACK RAILING



THESE RENDERINGS REMAIN SUBJECT TO CHANGE AT THE TIME OF BUILDING PERMIT APPLICATION PROVIDED THAT SAME COMPLY WITH APPLICABLE PROVISIONS OF THE WEST CHESTER BOROUGH ZONING ORDINANCE



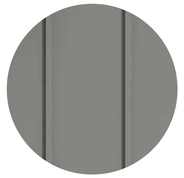
1 UNIT 19 UNIT 20 UNIT 21



2 UNIT 21 UNIT 20 UNIT 19

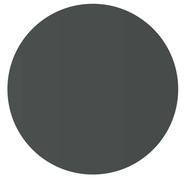
BLOCK 4 ELEVATIONS

1



FIBER CEMENT BOARD & BATTEN.
COLOR; GRAY SLATE

2



FIBER CEMENT PANEL & TRIM.
COLOR; IRON GRAY

3



CAST STONE.
COLOR; MATCH TO BRICK TONE

4



ALUMINUM CLAD WINDOWS WITH S.D.L.
COLOR; BLACK

5



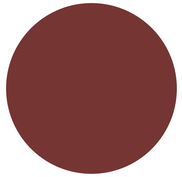
ROYAL PLUM FULL RANGE BRICK. RUNNING BOND W/ MATCHING GROUT

6



FIBER CEMENT LAP SIDING.
COLOR; COUNTRYLANE RED

7



EXTERIOR ARCHITECTURAL ACCENTS.
COLOR; SW7592

8



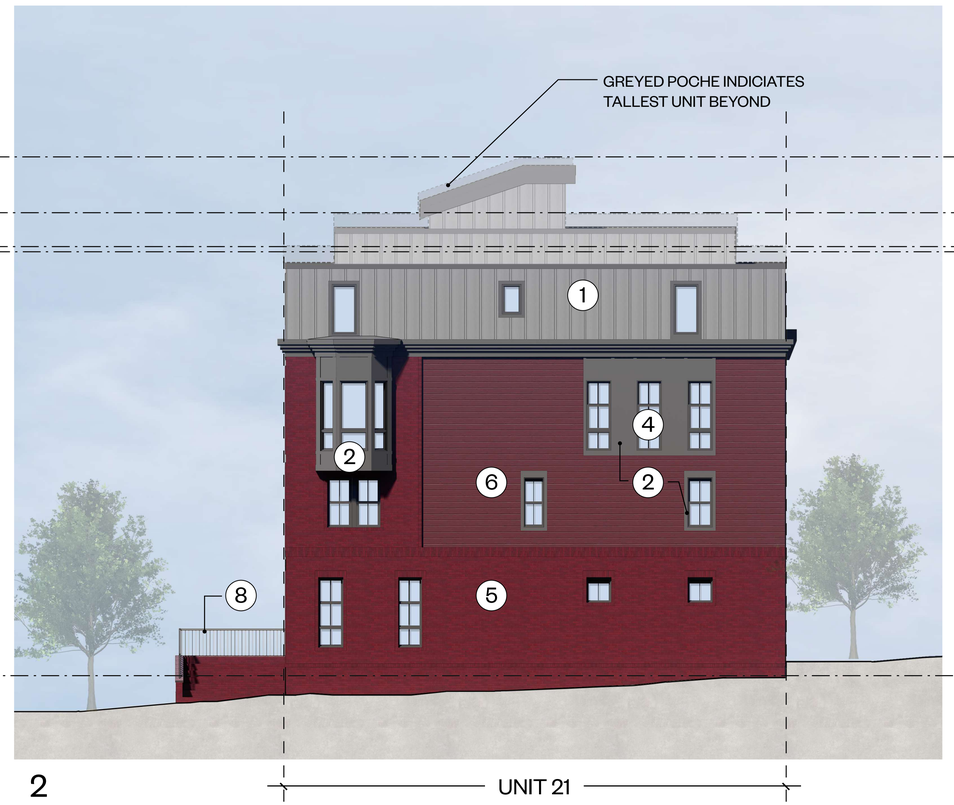
VERTICAL PICKET, BLACK RAILING



THESE RENDERINGS REMAIN SUBJECT TO CHANGE AT THE TIME OF BUILDING PERMIT APPLICATION PROVIDED THAT SAME COMPLY WITH APPLICABLE PROVISIONS OF THE WEST CHESTER BOROUGH ZONING ORDINANCE



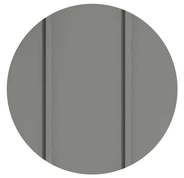
1 UNIT 19



2 UNIT 21

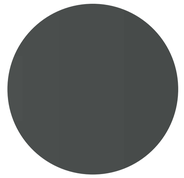
BLOCK 4 SIDE ELEVATIONS

1



FIBER CEMENT BOARD & BATTEN.
COLOR; GRAY SLATE

2



FIBER CEMENT PANEL & TRIM.
COLOR; IRON GRAY

3



CAST STONE.
COLOR; MATCH TO BRICK TONE

4



ALUMINUM CLAD WINDOWS WITH S.D.L.
COLOR; BLACK

5



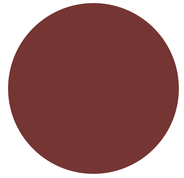
ROYAL PLUM FULL RANGE BRICK. RUNNING BOND W/ MATCHING GROUT

6



FIBER CEMENT LAP SIDING.
COLOR; COUNTRYLANE RED

7



EXTERIOR ARCHITECTURAL ACCENTS.
COLOR; SW7592

8



VERTICAL PICKET, BLACK RAILING

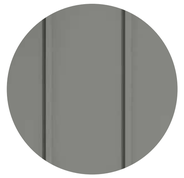


THESE RENDERINGS REMAIN SUBJECT TO CHANGE AT THE TIME OF BUILDING PERMIT APPLICATION PROVIDED THAT SAME COMPLY WITH APPLICABLE PROVISIONS OF THE WEST CHESTER BOROUGH ZONING ORDINANCE



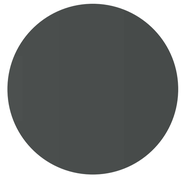
BLOCK 5 FRONT ELEVATION

1



FIBER CEMENT BOARD & BATTEN.
COLOR; GRAY SLATE

2



FIBER CEMENT PANEL & TRIM.
COLOR; IRON GRAY

3



CAST STONE.
COLOR; MATCH TO BRICK TONE

4



ALUMINUM CLAD WINDOWS WITH S.D.L.
COLOR; BLACK

5



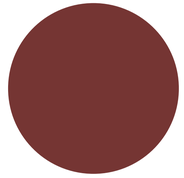
ROYAL PLUM FULL RANGE BRICK. RUNNING BOND W/ MATCHING GROUT

6



FIBER CEMENT LAP SIDING.
COLOR; COUNTRYLANE RED

7



EXTERIOR ARCHITECTURAL ACCENTS.
COLOR; SW7592

8



VERTICAL PICKET, BLACK RAILING

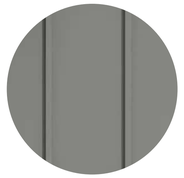


THESE RENDERINGS REMAIN SUBJECT TO CHANGE AT THE TIME OF BUILDING PERMIT APPLICATION PROVIDED THAT SAME COMPLY WITH APPLICABLE PROVISIONS OF THE WEST CHESTER BOROUGH ZONING ORDINANCE



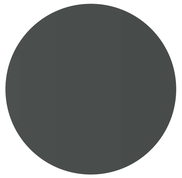
BLOCK 5 REAR ELEVATION

1



FIBER CEMENT BOARD & BATTEN.
COLOR; GRAY SLATE

2



FIBER CEMENT PANEL & TRIM.
COLOR; IRON GRAY

3



CAST STONE.
COLOR; MATCH TO BRICK TONE

4



ALUMINUM CLAD WINDOWS WITH S.D.L.
COLOR; BLACK

5



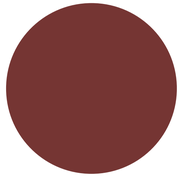
ROYAL PLUM FULL RANGE BRICK. RUNNING BOND W/ MATCHING GROUT

6



FIBER CEMENT LAP SIDING.
COLOR; COUNTRYLANE RED

7



EXTERIOR ARCHITECTURAL ACCENTS.
COLOR; SW7592

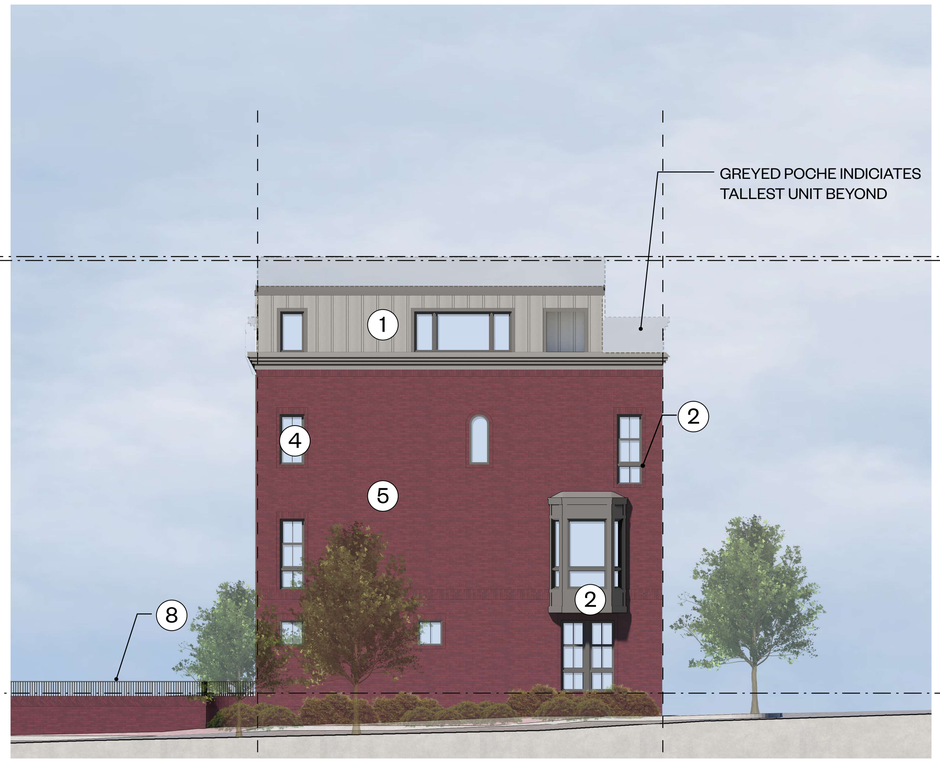
8



VERTICAL PICKET, BLACK RAILING

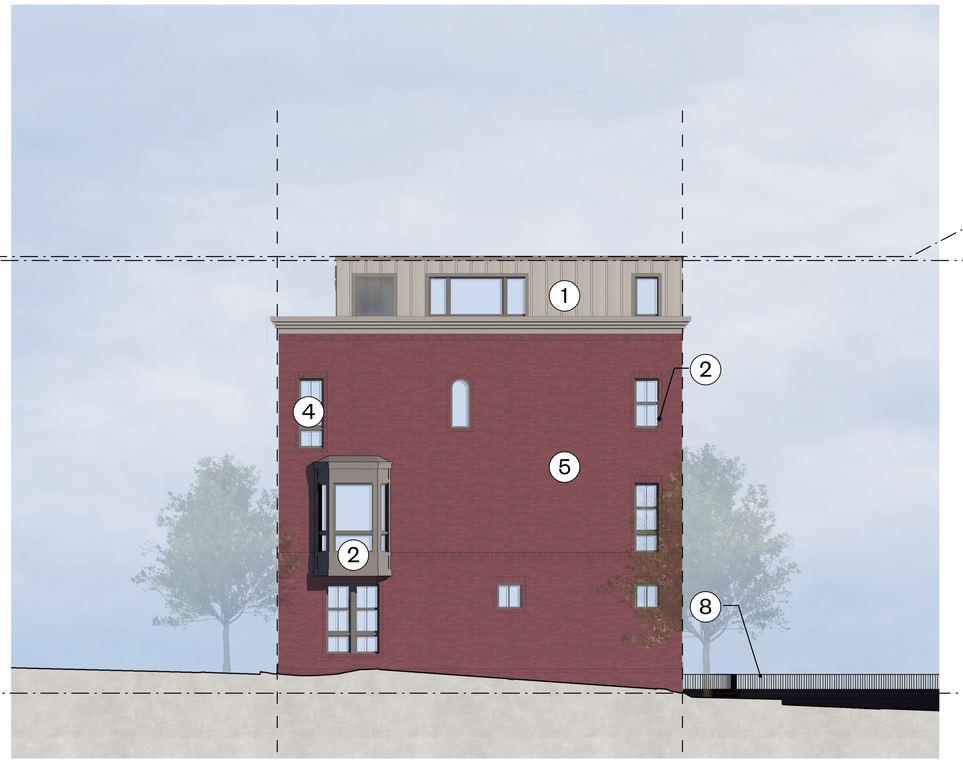


THESE RENDERINGS REMAIN SUBJECT TO CHANGE AT THE TIME OF BUILDING PERMIT APPLICATION PROVIDED THAT SAME COMPLY WITH APPLICABLE PROVISIONS OF THE WEST CHESTER BOROUGH ZONING ORDINANCE



1

UNIT 28



2

UNIT 22

BLOCK 5 SIDE ELEVATIONS

July 13, 2026

WCHBO 10025

Attn: Sean Metrick, Borough Manager
Borough of West Chester
401 East Gay Street
West Chester, PA 19380

RE: **410 South High Street III Townhomes**
Preliminary Subdivision/Land Development – 2nd Review

Dear Sean:

As requested, we have reviewed the following information, prepared by Cornerstone Consulting Engineers and Design Services, Inc., unless otherwise noted, regarding the referenced project:

- "*Preliminary Land Development Plans for 410 South High Street III Townhomes*" (***14*** sheets) dated March 9, 2026, ***last revised June 22, 2026***;
- "*Trip Generation Comparison Letter*", prepared by Bowman, dated January 26, 2026, ***last revised May 6, 2026***;
- "*Post-Construction Stormwater Management Report*" dated March 9, 2026;
- Waiver Request Letter dated March 9, 2026, ***last revised June 22, 2026***; and
- Application and other supporting documents.

The applicant, High Street 410 LLC, on behalf of the owners, Gary Saluti and Suzanne Dunphy, proposes to construct twenty-eight (28) townhouses (14 single family attached and 14 two family attached dwellings) on UPI 1-9-1030 (±1.29 acres). Associated stormwater management, parking, lighting, and landscaping are additionally proposed. The site is located on the southwest side of South High Street (SR 3100), between Dean Street and Price Street (SR 52), within the Town Center (TC) Zoning District. The site will be served by public water and sewer. Access is proposed via Price Street and Dean Street.

Please note, the applicant has previously submitted to the Borough two separate land development plans for an apartment complex. The new application is an entirely new layout and plan and all comments pertain only to this new submission.

The applicant is requesting the following f***our (4)*** waivers:

1. From §94-306.J(3) to set back the infiltration facilities by two feet from all buildings and features with subgrade elements instead of the required 10 feet; and
2. From §94-306.J(4) to allow the bottom elevation of the infiltration facilities to be above the proposed building subgrade elements at certain locations.
3. ***From §97-27.F(7) requiring 75-foot clear sight triangles at all street intersections.***
4. ***From §97-27.F(8) requiring sight distance requirement based on stop conditions at intersecting streets.***

See additional comments regarding the waivers below.

Commented [SR1]: SWM Waiver not needed anymore. Proposed townhomes do not have subgrade elements

We offer the following comments (***new comments in bold/italics***):

ZONING

1. All setback lines shall be graphically indicated on the plans to confirm compliance with the Town Center requirements.

   Resolved. A rear yard setback line has been added to the plans. There are no front or side yard setback requirements within the Town Center Zoning District for buildings not exceeding 45 feet in height.

SUBDIVISION AND LAND DEVELOPMENT (§97)

2. We'll defer to the Borough Traffic Engineer regarding Code requirements for parking, signage/striping, access, road improvements and similar, however, note the following:

   a. Sidewalks shall be provided along the full length of a building, along any building facade adjacent to a parking area or drive aisle. (§97-28.A(8)(a)) Sidewalk should be considered adjacent to Units 1 & 22.
   Resolved. Per discussions with the Borough Planning Commission, it was determined that residents can use the internal private drive as means of access and additional sidewalk is not necessary.
   b. A crosswalk shall be provided where a sidewalk crosses a parking lot drive aisle or other paved surface. The crosswalk shall be distinguished from the paved surface through the use of pavers, bricks, scored concrete, or stamped concrete, per Appendix A, Article IV Design Standards. (§97-28.A(8)(e)) Further, no new asphalt driveway shall be installed to cover or replace a concrete and/or brick sidewalk; the proposed entrance on Dean Street will replace existing brick sidewalk. (§97-31.E) It may be appropriate to consider the same for both access drives.
   Outstanding. The crosswalks along both access drives are proposed to be striped. No paver or brick crosswalks are being proposed.
   c. It is recommended a signage/striping plan should be provided noting crosswalks, stop bars, parking restrictions, stop bars, one-way signs/arrows and similar.
   Pending. Stop bars, stop signs, and crosswalk striping have been added to the plans. It may be appropriate to provide a crosswalk to the proposed community patio/recreational area.

3. Permanent concrete monuments shall be set at all corners and angle points. (§97-39.A)

   Resolved. Due to physical site limitations, concrete monuments cannot be placed at all lot corners. General Note No. 9 on Sheet 4 has been revised to state "In instances where iron pins cannot be set at lot corners due to physical features, a permanent marking shall be made on said structure for lot and deeds to reference."

4. The applicant shall procure from appropriate sources statements of availability of public water and public sewer capacity. (§97-43.B(3)) A "will serve" letter shall be provided to confirm availability of public water and sewer connections.

   Outstanding. The applicant stated in the response letter that a will serve letter regarding public water service was included in this submission. No will serve letter was included in this submission. Please clarify.

STORMWATER MANAGEMENT (§94)

5. A PADEP NPDES Permit will be required. (§94-303.A(1)(b), §94-402.A(2)(a))

   Pending. The applicant has acknowledged that an NPDES Permit is required for this project.

6. The proposed stormwater system conveys to the storm sewer within Price Street (SR 52), clarification regarding maintenance responsibilities and the need for a separate agreement (in conjunction with PENNDOT HOP) should be provided. (§94-402.H)

Pending. The applicant has acknowledged that a Highway Occupancy Permit (HOP) will be required for improvements, and that a maintenance agreement will be developed for the improvement in concert with the HOP.

7. For improved control and conveyance of surface runoff, it is suggested that the flush curbs adjacent to Units 1-7 & 19-21 should be depressed curbs with a curb reveal.

   Outstanding. It appears that the curb in front of Units 1-7 &19-21 is still proposed as a flush curb with no reveal. We recommend that, at minimum, the curbs be revised to depressed curb with 1.5 inch reveal to intercept and redirect runoff. However, in conjunction with comment 11 below, depending on the upstream drainage area further grading and design changes may be needed to protect Units 1-7 & 19-21 from surface flooding.

8. The infiltration testing report and/or the plans should be revised to document the ground elevations and the corresponding infiltration test elevations for each test. Infiltration tests should be at the proposed bottom elevation of the infiltration facility. It appears that testing may have been conducted higher than the bottom of the proposed infiltration system and additional testing may be necessary. (§94-306.H(2)).

   Pending. The original basin design has been revised to a concrete vault system. However, it appears that the plans and report have not been revised to list the elevations of the infiltration tests that were completed. Please clarify.

9. The drainage area plans and the infiltration testing report use different nomenclature for the testing locations, and they should be revised for consistency. (§94-306.H(2)).

   Outstanding. It appears that the infiltration testing report still refers to testing locations as SW1-8 whereas the plans refer to the testing locations as TP #1-8. Please clarify.

10. The *Stormwater Report* narrative should be revised to clearly document the volume that will be infiltrated by each infiltration facility. It appears that Basin 1 is intended to have infiltration, but the design infiltration rate calculation does not take Test Pits 3 & 4 into consideration, even though they are located within the footprint of the basin. Additionally, the narrative does not discuss infiltration for Basin 2 nor calculate a design infiltration rate at that location. If Basin 2 is not intended to infiltrate, it is unclear how the basin will drain after storm events because there is no low flow orifice at the bottom of the storage volume. (§94-306.H(3)).

    Outstanding. It appears that Test Pit #7 was excluded from the Basin 1 infiltration rate calculation even though it is adjacent to the basin area. Please clarify. Additionally, it appears that Basin 2 has not been revised to show a low flow orifice / method of draining down the basin after storm events.

11. The grading design and stormwater calculations should evaluate and document any upstream runoff that would enter the site via the proposed driveway on Dean Street, and how runoff will be prevented from impacting Units 1-3. (§94-402.B(12)).

    Outstanding. Based on the proposed grading it appears that substantial runoff could potentially enter the site through the driveway access on Dean Street. The associated upgrade drainage area from Dean Street should be included in the stormwater calculations. Please also refer to comment 7 above on this topic. The uphill area of Dean Street will flow directly over the flush curb to the garages of lots 1-7. Depending on the upstream drainage area, further grading and design changes may be needed to protect Units 1-7 & 19-21 from surface flooding.

12. The post-development drainage area plan indicates that the drainage areas to the stormwater basins include the full extent of building roofs. Information should be provided about the intended roof type. If peak roofs are proposed, the plans should clarify how runoff from the portion of the roof draining towards the outer perimeter of the site will be drained to the proposed stormwater basins. (§94-402).

Resolved. The design of the structures will incorporate a flat roof system that will allow runoff to be conveyed in the required directions.

13. The drainage areas for the stormwater management calculations do not appear to include the entire limit of disturbance as indicated on the *Erosion & Sediment Control Plan*; the stormwater calculations should be revised to account for the entire disturbed area. (§94-402).

    Outstanding. It appears that an area of proposed disturbance at the southwest corner of the project has not been included in the stormwater calculations.

14. The volume calculations for *Underground Basin 1* in the *Stormwater Report* appear to indicate separate portions of the overall combined storage volume at different elevations, but this is not documented in the infiltration basin cross sectional detail on *Details Sheet Basin 1*. Additional cross sections for Basin 1 should be added. (§94-402.B(13)).

    Outstanding. The original basin design has been revised to a concrete vault system with a consistent bottom elevation. However, site-specific basin details with length and width dimensions and any necessary interconnection piping shall be provided. Since the basins are proposed to infiltrate, the details should clarify that the StormCapture modules are to be the "infiltration" versions with no floor. The details should also include a detailed layout of the StormCapture modules and how they are located relative to and connected to drainage inlet structures.

15. Section 1.3 of the *Stormwater Report* narrative references a page that calculates the required water quality volume / infiltration volume, but it appears that this calculation was not included in the report. A summary of the required infiltration volume and infiltration volume provided should be included in the report and the narrative should identify the page number. For the runoff volume calculations for a comparison of pre- and post-development conditions, weighted averaging of runoff coefficients shall not be used. ((§94-309.G).

    Outstanding. It appears that the volume calculations are taken from the Hydraflow Hydrographs output in Section 4.0 of the stormwater report, which appears to utilize a weighted curve number. Volume management calculations shall not use weighted averaging of runoff coefficients. Runoff volume calculations shall be provided for each land cover/CN separately and shall demonstrate compliance with volume management requirements.

16. It appears that the *Infiltration Basin Maintenance Notes* within the *Operations & Maintenance Notes* relate to a surface basin and should be revised to apply to underground stormwater systems. The revised notes should include a description of how the underground system can be accessed for inspection and maintenance. (§94-402.B(13)).

    Outstanding. It appears that the Infiltration Basin Maintenance Notes have not been revised.

17. On the *PCSM Detail* sheets for Basin 1 & Basin 2, the outlet structure details should specify the internal weir wall to be monolithically cast with the structure. (§94-402.B(13)).

    Outstanding. It appears that the outlet structure details have not been revised to specify a monolithically cast weir wall.

18. On the *PCSM Detail* sheets for Basin 1 & Basin 2, the *Outlet Structure Modification Notes* do not appear to apply to the work depicted on the plans; please review and clarify and remove if needed. (§94-402.B(13)).

    Outstanding. It appears that the Outlet Structure Modification Notes have not been revised.

19. The length and slope data for the outlet pipes from Basin 1 O.S. & Basin 2 O.S. are inconsistent between the *Stormwater Drainage Plan* and the stormwater calculation report; please review and clarify. (§94-402.E).

Outstanding. It appears that the basin outlet pipe slopes need to be revised for consistency in the capacity calculations in Section 5.0 of the stormwater report.

20. The grading should be adjusted to provide a slight swale in the pavement to collect runoff to Basin 2 O.S. (§94-301.I).

    Outstanding. It appears that the pavement grading design has not been revised to direct runoff to the Basin 2 outlet structure.

21. Sheet 8 indicates proposed trees within a few feet of the underground stormwater basin, which could allow tree roots to interfere with long-term functionality of the stormwater management system. It is recommended trees be planted a minimum of 10 feet away from underground stormwater management basins, in consultation with Mr. Comitta.

    Pending. It appears that the stormwater system layout has been revised on the PCSM Plan, but those changes have not been reflected on the Landscape Plan. The landscape plans should be revised to show the most up-to-date proposed layout for the underground stormwater system so that the proximity of tree plantings may be evaluated.

22. Additional topographic spot grades should be added on the *Grading Plan* between Inlet 6 and Basin 1 O.S. to clarify whether Inlet 6 is an on-grade inlet that could have bypass flows. If Inlet 6 is in a sump condition, the topographic overflow point should be evaluated to ensure that water will not enter Unit 18 in the event the inlet grate become blocked.

    Pending. Additional spot elevations have been provided. We recommend that the top of Type M Inlet #6 be set at least 9" lower than the topographic overflow point to help ensure that runoff is fully collected and does not flow off the site.

23. The *Certificate of Conformance* on the *PCSM Site Plan* references waiver requests, but no waiver requests are indicated on that sheet, please add.

    Outstanding. It appears that the plan certifications and notes have not been revised for consistency; please clarify.

24. The design engineer certification required by §94-402.A(4) shall be added to the plans.

    Pending. The design engineer's certification is listed on the Overall PCSM Plan Set. This certification will need to be signed prior to final plan recording.

25. Prior to final plan approval, a stormwater BMP operations and maintenance agreement shall be executed (§94-402.F(2))

    Pending. The applicant has acknowledged that a SCM/BMP maintenance agreement will be executed prior to final plan approval.

26. The downstream storm sewer/inlet(s) should be televised and provided to the Borough Engineer to determine if any repairs or improvements are required.

    Pending. The applicant has acknowledged that the downstream storm sewer system will be televised and will be provided to the Borough Engineer for review.

27. The plans shall note all storm sewers and underground stormwater systems to be televised prior to release of financial security.

Resolved. The plans includes a note that requires the underground storm system to be televised prior to release of financial security. See note 24 under General Utility notes on Sheet 2.

28. The associated waiver request on the cover sheet of the plans identifies the adjacent building elements as a habitable basement, whereas the waiver request letter describes them as a parking garage.

    Resolved. The waiver requests on the cover sheet of the plans and in the waiver request letter have been revised for consistency.

29. Regarding the requested waivers, while we recognize they were granted with the prior submission, due to the possible need for future maintenance or reconstruction of underground stormwater systems, we recommend the minimum separation should not be less than 5 feet and the design be re-evaluated to determine if it is feasible to enlarge the underground stormwater management system in other portions of the site to allow a greater separation from proposed buildings.

    Resolved. The underground basin system has been revised so that it will have a separation of at least 5 feet from proposed buildings.

30. ***All BMPs, conveyances and other stormwater management facilities shall be located on the plan sheets, including design drawings, construction details, and profile drawings. Profile drawings should be included for all storm sewer conveyances. (§94-402.B(13))***

SANITARY SEWER

31. The location, length, and elevation of the upstream end of each length of service lateral shall be depicted on the plans (§97-36.D(3)).

    Outstanding. The length and elevation of <u>each</u> length of service lateral must be depicted on the plans. The plans only depict the length and elevation of the first length of each service lateral from the building to the cleanout.

32. A *Sewage Facilities Planning Module* (SFPM) shall be submitted to PADEP. (§97-36.E) Additionally, the downstream sanitary sewer collection and conveyance system does NOT currently have available capacity for the proposed project. It must be mentioned in the SFPM that this development cannot be connected to the Borough's sanitary sewer system until the following four pipe runs along Maple Alley are upgraded from 12-inch to 21-inch diameter pipe: MH 608-MH 609, MH 609-MH 610, MH 610-MH 611 & MH 611-MH 626.

    Outstanding. The SFPM has not yet been submitted to PADEP.

33. *General Note #3* under the *Utility Notes* section on Sheet 7 references "Water Company Pennsylvania Wastewater Inc." sanitary sewer standards; the note should be revised to reflect the Borough's sanitary sewer standards.

    Resolved. The note has been revised accordingly on Sheet 7.

34. Several *Sanitary Sewer Notes* under the *Utility Notes* section on Sheet 7 reference Pennsylvania Wastewater Inc., Aqua, and Township standards; the notes should be revised to reflect the Borough's sanitary sewer standards.

    Resolved. The notes have been revised accordingly on Sheet 7.

35. The callout for the proposed manhole along Boxwood Alley is labeled as "SMH 1 (Drop MH)" throughout the plan set. This manhole is a doghouse manhole, not a drop manhole. Additionally, this manhole is identified as "SMH 3" in the profiles on Sheet 9; please review and clarify.

    Resolved. The manhole has been relabeled as "SMH 3 (Doghouse MH)" throughout the plan set.

36. The slopes of the proposed sanitary sewer pipe runs on Sheet 7 from *Cleanout 3 to SMH 2* and from *SMH 2 to SMH 3* appear to be incorrect based on the provided inverts and pipe lengths.

    Resolved. The slopes have been corrected.

37. The existing storm sewer and water main crossings along Boxwood Alley that are indicated on Sheet 7 are missing from the *SMH 3 to Cleanout 3* profile on Sheet 9.

    Resolved. The existing water main crossing has been added to the profile.

38. Several pipe lengths, diameters, materials, and slopes in the profile views on Sheet 9 do not match the sanitary sewer pipe properties depicted on the plan views throughout the plan set; please review and clarify.

    Outstanding. The sanitary sewer pipe materials depicted on the profiles on Sheet 9 do not match the pipe materials in the plan views throughout the plan set. Additionally, the pipe diameter of the pipe run from SMH 1 to SMH 2 in the profile view on Sheet 9 does not match the pipe diameter depicted on the plan views.

39. The invert out elevation of SMH 1 in the *SMH 1 to SMH 2* profile on Sheet 9 does not match the invert out elevation depicted throughout the plan set.

    Resolved. The invert out elevation has been corrected.

40. Traps and vents are not required for laterals but are included in the details on Sheet 12. Please confirm if traps and vents will be provided since there is limited length on several of the laterals.

    Outstanding. The Sanitary Sewer Service Connection detail on Sheet 12 has been revised to remove the traps and vents. However, note 5 under the detail still states that a vented trap will be provided. This note should be removed for consistency.

41. Clarify if cleanouts will be provided on the laterals; cleanouts are indicated on the details but not on the plans.

    Resolved. Cleanouts have been added to the plan views.

42. The existing sanitary sewer lateral should be cut and capped at the sewer main. A detail and/or note should be added to the plans accordingly.

    Resolved. A detail has been added on Sheet 12.

43. Notes should be added that the new sanitary sewers will be privately owned and will not be dedicated to the Borough including the full extent of the sanitary sewer that is proposed to connect to new SMH3. Only SMH3 should be dedicated to the Borough.

    Resolved. A note has been added on Sheet 7 to the Sanitary Sewer Notes.

GENERAL

44. Additional details/information regarding trash collection, a central mailbox and snow removal/storage should be provided.

    Resolved. The applicant has added General Note No. 31 on Sheet 4 that trash collection will utilize individual trash totes for each unit. A callout has been added for a designated snow removal area.

45. We recommend a plan be provided addressing potential sidewalk closures, including advanced warning signs.

Pending. The applicant has stated that a sidewalk closure plan will be included with the Highway Occupancy Permit plan set.

46. Borough *Road Opening Permits* will be required for any work within the rights-of-way of Dean Street or Boxwood Alley, via Public Works.

    Outstanding. The applicant has stated a note was added to the Utility Plan (Sheet 7) stating the same. It appears this note was only added to the "Water General Notes" as Note no. 13 but was not included in the "Sanitary Sewer Notes."

47. A draft Homeowner's Association agreement should be provided with the final plan submission for Borough Solicitor review.

    Pending. The applicant has stated that an HOA agreement will be provided prior to final plan approval.

48. As two parcels appear to be being consolidated, please clarify if the submission should additionally be considered a subdivision/lot consolidation.

    Outstanding. The plan title shall be revised to "Preliminary Subdivision/Land Development" if a lot consolidation is being proposed.

49. The various *General Notes* should be reviewed for consistency (i.e., Sheets 3 & 4).

    Outstanding. The General Notes on Sheets 3 and 4 are still not consistent.

50. We recommend all plan sheets be recorded.

    Resolved. The plans note on the Cover Sheet that all sheets shall be recorded.

51. Lighting will be reviewed under separate cover/with next submission.

    Outstanding. Please see new lighting comments below.

52. Please add a note: *Any damaged or deficient curb, asphalt or sidewalk shall be repaired or replaced at the direction of the Borough Engineer*.

    Resolved. The referenced note has been added to Sheet 4, General Note No. 30.

NEW COMMENTS

53. ***Street lights shall also be designed in accordance with § 97.A.23. of Appendix A, Design Standards. (§97-30.C) Wattage should be specified on the detail as 60 watt LED per the detail in Appendix A.***

54. ***All applicants shall promote a dark sky lighting effect through the installation and maintenance of light fixtures with lights pointing down, and lighting that is shielded to prevent lighting pointing up. (§97-30.D)***

55. ***Photometrics and lighting calculations shall be provided on the lighting plan.***

56. ***The callouts on Sheets 7 and 9 for the slopes from Cleanout 3 to SMH 2 and from SMH 2 to SMH 3 do not match the slopes depicted in the profiles on Sheet 9.***

57. ***The existing water main along Boxwood Alley is missing from the plan view on Sheet 9.***

58. ***The existing water main along Boxwood Alley has less than 18" of vertical separation from the proposed sanitary sewer pipe from SMH 2 to SMH 3.***

59. ***The Sanitary Sewer Service Connection detail on Sheet 12 has been revised since the last submission and has the following errors and missing information:***

60. ***The detail calls out a 6" CIP building sewer. However, the plans indicate that the sewer laterals are all 4" PVC.***

61. ***The "plug" and "wye with clean-out plug" callouts on the building side of the profile are missing from the elevation view.***

62. ***The callouts for the "4 x 8 wye or tee wye branch" should also include a 4 x 6 size to connect the laterals to the proposed 6" sanitary sewer mains.***

63. ***The "bell or socket upstream (typ.)" and "wye" callouts on the elevation view of the detail are not referencing the respective parts and therefore should be removed.***

Note, various Code related comments have been omitted that are otherwise addressed via reviews by other Borough consultants; it may be helpful to coordinate a meeting/call with the project team, Borough staff and Borough consultants to review various items. Further, we anticipate additional comments as the design proceeds.

Should you have any further questions or comments, please contact me.

Sincerely,
PENNONI ASSOCIATES INC.



Nathan M. Cline, PE
Borough Engineer

cc: Borough Team (via e-mail)
Project Team (via e-mail)

THOMAS COMITTA ASSOCIATES, INC.
Town Planners & Landscape Architects

M E M O R A N D U M

TO: West Chester Borough Officials, Staff and Consultants
High Street 410, LLC Team

FROM: Thomas J. Comitta, AICP, CNU-A, RLA
Erin L. Gross, AICP, RLA

DATE: April 28, 2026

SUBJECT: **REVIEW COMMENTS: PRELIMINARY LAND DEVELOPMENT PLANS: 410 SOUTH HIGH STREET III TOWNHOMES, DATED 3-9-2026**

Please note the enclosed Review Comments pertaining to the following documents that we received on April 2, 2026**,** and to a site visit on April 6, 2026, including:

- Preliminary Land Development Plans -410 South High Street III Townhomes (25 Sheets), prepared by Cornerstone Consulting Engineers & Design Services, Inc., and Stuart and Associates, Inc., dated 3-9-2026;
- West Chester Sustainable! Checklist – 410 South High Street III Townhomes (3 pages), dated 3-9-2026; and
- Waiver Request Letter – Preliminary Land Development 410 S. High Street III (2 pages), dated 3-9-2026.

Please call if there are any questions.

THOMAS COMITTA ASSOCIATES, INC.
Town Planners & Landscape Architects

REVIEW COMMENTS: PRELIMINARY LAND DEVELOPMENT PLANS:
410 SOUTH HIGH STREET III TOWNHOMES, DATED 3-9-2026

April 28, 2026

Please note the Review Comments below pertain to the documents listed on the Cover Memorandum**.**

1. Overview and Layout

1.1. The Applicant is proposing to construct 28 Townhomes on the former Burger King property located at the corner of High and Price Streets, which is located in the TC-Town Center District. TCA defers to the Borough and the Borough Engineer on compliance with the Area and Bulk regulations relative to the proposed development.

1.2. While we defer to the Borough and Borough Engineer, we recommend consideration be given to the amount of space provided for vehicular maneuverability and circulation specifically to the rear of Units 5 and 6.

1.3. A Proposed Transformer is located next to the proposed Plaza Public Space in what we believe to be a prime gateway location. We recommend that the transformer be relocated to an area that is not adjacent to a space that should be designed for Public Gathering and enjoyment, in this highly visible corner of High and Price Streets (even though a fence on top of decorative wall is proposed around the transformer). Also, see comment 7.3.

1.4. The existing elevation of Boxwood Alley is significantly lower than the existing elevation of the site. The Plan depicts vehicular driveway access connecting to Boxwood Alley near proposed Units 1 and 18. The Applicant should clarify how the grade change will be achieved. Based on our site visit on April 6th, we estimate the difference in grades between Boxwood Alley and the existing driveway to the former Burger King property to be in the range of 6 to 8 feet.

1.5. We defer to the Borough, the Borough Engineer, and the Fire Marshal relative to compliance with Dimensional Requirements of the driveways, the internal turning radii, and the sufficiency of space for deliveries.

2. Waiver Requests

2.1. TCA defers to the Borough and Borough Engineer relative to the Waiver Requests.

3. Existing Features

3.1. The Existing Conditions Demolition Plan (Sheet 3) depicts existing trees. The plan should clarify if the trees are proposed to remain or to be removed. In addition, other existing features that are proposed to be removed should also be noted since the Plan is both the existing features and demolition plan.

3.2. The Legend on the Existing Condition Demolition Plan (Sheet 3) includes “Existing Treeline”. We recommend this be removed with an Existing Tree symbol since the existing trees are freestanding and not the edge of a treeline mass.

REVIEW COMMENTS: PRELIMINARY LAND DEVELOPMENT PLANS:
410 SOUTH HIGH STREET III TOWNHOMES, DATED 3-9-2026

April 28, 2026

4. Impact Assessment Report

4.1. Per Section 112-905.A. of the West Chester Borough Zoning Ordinance (ZO), an Impact Assessment Report shall be submitted for developments in the TC District with more than five (5) dwelling units. Therefore, please submit the Impact Assessment Report with the revised submission.

5. Landscape Plan and Details

5.1. Underground utilities are located near Dwelling Unit 18. There are five (5) 6-8' tall Hollys and three (3) 6-8' high Eastern Red Cedars proposed for the same location as underground utilities. We understand the space constraints of the site; however, we recommend consideration be given to the types of plants proposed in this location in order to avoid future conflicts as the plants and root systems mature.

5.2. The Plans depict relocation of overhead wires along Price Street that will conflict with the canopy of the proposed four (4) Street Trees. While we recommend that the overhead wires be placed underground, this issue should be discussed with the Borough and the Tree Commission.

5.3. We recommend that the radius sections of the driveway islands/dividers have river rock, as areas such as these often are driven over and not feasibly maintained as areas planted and mulched.

5.4. Please label areas proposed to be lawn and clarify the proposed ground materials for the area around the proposed Porous Pavers of the Courtyard space.

5.5. Sections 97.A.2.8. and 97.1.2.9. of Appendix A Design Standards of the West Chester Borough Subdivision and Land Development Ordinance (SALDO), requires new alleys to be landscaped with shade trees with a minimum caliper of 2 to 2 ½ inches, and spaced 30 to 50 feet on-center. We defer to the Borough and Borough Engineer relative to if the vehicle areas behind the proposed units would be considered to be alleys, and whether street trees would be required. (Also, see comment 8.6.)

6. Architecture: Materials, Form & Composition; and Streetscape Appearance

6.1. We recommend that Architectural Elevations including proposed materials and colors be submitted in order to demonstrate compliance with the Design Standards of Appendix A of the SALDO.

6.2. Further, we recommend that a character sketch be submitted to depict what the propsoed 4 foot high fence on top of the 4 foot high wall will look like along High Street. (Also, see comment 8.1.)

7. Public Space and Recreation Land

7.1. The Cover Sheet includes a Recreation Land Requirements calculation, which references Section 97-38.1.D(2) (SALDO) requiring 5% of the tract area be provided recreation. This

subsection pertains to Multifamily residential developments, while subsection D.(1) requires 1,000 square feet per single-family dwelling. Article II of the Zoning Ordinance defines Single-family Attached Dwellings separately from Multifamily dwellings. Therefore, we defer to the Borough relative to the Recreation Land Requirement applicable to the proposed development.

7.2. Detailed enlargements of the Proposed Plaza Public Space and of the Proposed Courtyard space should be provided.

7.3. We recommend that the a "Gateway Feature" be included as part of the Proposed Plaza Public Space on the corner of High Street and Price Street, in accordance with the Design Standards of §97.A.18. of Appendix A (SALDO). We believe that this corner is an excellent location for entrance/gateway feature to the Town Center District.

8. Details and Other

8.1. Please provide a Construction Detail for the proposed "4' high fence on top of 4' high decorative wall" and "5' wide gate" so the Borough can better visualize what is being proposed.

8.2. Please provide a Construction Detail for the proposed wall with fence near Dwelling Units 19-21.

8.3. Bench Details have been provided on Borough Landscape Details (L9.10) and General Site Details (Sheet 13). While the Borough of West Chester Landscaping Requirements Article IV Design Standards table on the Borough Landscape Schedule + Details indicates a black color for the street furniture, we recommend that the details be updated to indicate a black finish per Section 97.A.22.3. of the SALDO Appendix A Design Standards.

8.4. The Typical Section – steps detail on General Site Details (Sheet 13) indicates "Railing (see specifications)". A railing detail should be provided and specify a black color.

8.5. Please add Construction Details for the proposed Brick Sidewalk/Plaza, Concrete Sidewalk, and Courtyard Porous Pavers.

8.6. Section 97.A.2 of Appendix A Design Standards of the SALDO pertains to Alleys, and when Alleys serve as the principal street address for a building/dwelling. While we defer to the Borough and Borough Engineer relative to if the vehicle areas behind the proposed units are considered alleys, we recommend the Applicant provide clarification pertaining to the intended addresses for Units 16 through 21. Further, if the Borough determines that these areas are considered to be Alleys, then the Design Standards of Section 97.A.2. (SALDO) should be addressed.

8.7. Section 97.A.18.4. of Appendix A Design Standards of the SALDO requires 5% of a lot be devoted to Public Space in the TC District. The Applicant is proposing 2,962 square feet of recreation area, of which 710 square feet proposed to be public (Plaza) and 2,252 square feet proposed to be passive (Courtyard). The Applicant should clarify if the proposed 2,252 square feet of passive recreation area (Courtyard) is proposed to be private or public. In order to meet the requirements of Section

REVIEW COMMENTS: PRELIMINARY LAND DEVELOPMENT PLANS:
410 SOUTH HIGH STREET III TOWNHOMES, DATED 3-9-2026

April 28, 2026

97.A.18.4. (SALDO), at least 5% of the lot is required to be devoted to Public Space, which would not be achieved if the 710 square foot Plaza is the only proposed Public Space.

Please call if there are any questions.

THOMAS COMITTA ASSOCIATES, INC.
Town Planners & Landscape Architects

M E M O R A N D U M

TO: West Chester Borough Officials, Staff and Consultants
High Street 410, LLC Team

FROM: Thomas J. Comitta, AICP, CNU-A, RLA
Erin L. Gross, AICP, RLA

DATE: April 28, 2026**; Updated: May 4, 2026**

SUBJECT: **REVIEW COMMENTS: PRELIMINARY LAND DEVELOPMENT PLANS: 410 SOUTH HIGH STREET III TOWNHOMES, DATED 3-9-2026**

Please note the enclosed Review Comments pertaining to the following documents that we received on April 2, 2026**,** and to a site visit on April 6, 2026, including:

- Preliminary Land Development Plans -410 South High Street III Townhomes (25 Sheets), prepared by Cornerstone Consulting Engineers & Design Services, Inc., and Stuart and Associates, Inc., dated 3-9-2026;
- West Chester Sustainable! Checklist – 410 South High Street III Townhomes (3 pages), dated 3-9-2026; and
- Waiver Request Letter – Preliminary Land Development 410 S. High Street III (2 pages), dated 3-9-2026.

These Updated Review Comments address Ordinance 12-2025. New text is in bold type.

Please call if there are any questions.

THOMAS COMITTA ASSOCIATES, INC.
Town Planners & Landscape Architects

REVIEW COMMENTS: PRELIMINARY LAND DEVELOPMENT PLANS:
410 SOUTH HIGH STREET III TOWNHOMES, DATED 3-9-2026

April 28, 2026**; Updated: May 4, 2026**

Please note the Review Comments below pertaining to the documents listed on the Cover Memorandum**.**

1. Overview and Layout

1.1. The Applicant is proposing to construct 28 Townhomes on the former Burger King property located at the corner of High and Price Streets, which is located in the TC-Town Center District. **The proposed development is a permitted use according to the provisions of Ordinance 12-2025, as a Unified Residential Development.** TCA defers to the Borough and the Borough Engineer on compliance with the Area and Bulk regulations relative to the proposed development**, according to Section 112-916.B. of the Zoning Ordinance (ZO)**.

1.2. While we defer to the Borough and Borough Engineer, we recommend consideration be given to the amount of space provided for vehicular maneuverability and circulation specifically to the rear of Units 5 and 6.

1.3. A Proposed Transformer is located next to the proposed Plaza Public Space in what we believe to be a prime gateway location. We recommend that the transformer be relocated to an area that is not adjacent to a space that should be designed for Public Gathering and enjoyment, in this highly visible corner of High and Price Streets (even though a fence on top of decorative wall is proposed around the transformer). Also, see comment 7.3.

1.4. The existing elevation of Boxwood Alley is significantly lower than the existing elevation of the site. The Plan depicts vehicular driveway access connecting to Boxwood Alley near proposed Units 1 and 18. The Applicant should clarify how the grade change will be achieved. Based on our site visit on April 6th, we estimate the difference in grades between Boxwood Alley and the existing driveway to the former Burger King property to be in the range of 6 to 8 feet.

1.5. We defer to the Borough, the Borough Engineer, and the Fire Marshal relative to compliance with Dimensional Requirements of the driveways, the internal turning radii, and the sufficiency of space for deliveries.

2. Waiver Requests

2.1. TCA defers to the Borough and Borough Engineer relative to the Waiver Requests.

3. Existing Features

3.1. The Existing Conditions Demolition Plan (Sheet 3) depicts existing trees. The plan should clarify if the trees are proposed to remain or to be removed. In addition, other existing features that are proposed to be removed should also be noted since the Plan is both the existing features and demolition plan.

3.2. The Legend on the Existing Condition Demolition Plan (Sheet 3) includes “Existing Treeline”. We recommend this be removed with an Existing Tree symbol since the existing trees are freestanding and not the edge of a treeline mass.

4. Impact Assessment Report

4.1. Per Section 112-905.A. of the West Chester Borough Zoning Ordinance (ZO), an Impact Assessment Report shall be submitted for developments in the TC District with more than five (5) dwelling units. Therefore, please submit the Impact Assessment Report with the revised submission.

5. Landscape Plan and Details

5.1. Underground utilities are located near Dwelling Unit 18. There are five (5) 6-8' tall Hollys and three (3) 6-8' high Eastern Red Cedars proposed for the same location as underground utilities. We understand the space constraints of the site; however, we recommend consideration be given to the types of plants proposed in this location in order to avoid future conflicts as the plants and root systems mature.

5.2. The Plans depict relocation of overhead wires along Price Street that will conflict with the canopy of the proposed four (4) Street Trees. While we recommend that the overhead wires be placed underground, this issue should be discussed with the Borough and the Tree Commission.

5.3. We recommend that the radius sections of the driveway islands/dividers have river rock, as areas such as these often are driven over and not feasibly maintained as areas planted and mulched.

5.4. Please label areas proposed to be lawn and clarify the proposed ground materials for the area around the proposed Porous Pavers of the Courtyard space.

5.5. Sections 97.A.2.8. and 97.1.2.9. of Appendix A Design Standards of the West Chester Borough Subdivision and Land Development Ordinance (SALDO), requires new alleys to be landscaped with shade trees with a minimum caliper of 2 to 2 ½ inches, and spaced 30 to 50 feet on-center. We defer to the Borough and Borough Engineer relative to if the vehicle areas behind the proposed units would be considered to be alleys, and whether street trees would be required. (Also, see comment 8.6.)

6. Architecture: Materials, Form & Composition; and Streetscape Appearance

6.1. We recommend that Architectural Elevations including proposed materials and colors be submitted in order to demonstrate compliance with the Design Standards of Appendix A of the SALDO. **In addition, per Section 112-916. (ZO) Standards for Unified Development, and subsection 112-916.C. Design Standards for a Unified Residential Development, "Applicants shall provide conceptual architectural plans…with the preliminary land development application".**

Also, according to Section 112-916.C.(1)(e) (ZO), the Design Guidelines for the West Chester Historic District shall be used for the design elements of the buildings and structures, including massing, scale, proportion, rhythm, building materials, roofs, windows, and streetscapes. As such, the preliminary land development application shall include plans,

conceptual building elevations, diagrams, photographs, and other documentation to demonstrate compliance with the Design Guidelines.

6.2. Further, we recommend that a character sketch be submitted to depict what the propsoed 4 foot high fence on top of the 4 foot high wall will look like along High Street. (Also, see comment 8.1.)

7. Public Space and Recreation Land

7.1. The Cover Sheet includes a Recreation Land Requirements calculation, which references Section 97-38.1.D(2) (SALDO) requiring 5% of the tract area be provided recreation. This subsection pertains to Multifamily residential developments, while subsection D.(1) requires 1,000 square feet per single-family dwelling. Article II of the Zoning Ordinance defines Single-family Attached Dwellings separately from Multifamily dwellings. Therefore, we defer to the Borough relative to the Recreation Land Requirement applicable to the proposed development.

7.2. Detailed enlargements of the Proposed Plaza Public Space and of the Proposed Courtyard space should be provided.

7.3. We recommend that the a “Gateway Feature” be included as part of the Proposed Plaza Public Space on the corner of High Street and Price Street, in accordance with the Design Standards of §97.A.18. of Appendix A (SALDO). We believe that this corner is an excellent location for entrance/gateway feature to the Town Center District.

8. Details and Other

8.1. Please provide a Construction Detail for the proposed “4’ high fence on top of 4’ high decorative wall” and “5’ wide gate” so the Borough can better visualize what is being proposed.

8.2. Please provide a Construction Detail for the proposed wall with fence near Dwelling Units 19-21.

8.3. Bench Details have been provided on Borough Landscape Details (L9.10) and General Site Details (Sheet 13). While the Borough of West Chester Landscaping Requirements Article IV Design Standards table on the Borough Landscape Schedule + Details indicates a black color for the street furniture, we recommend that the details be updated to indicate a black finish per Section 97.A.22.3. of the SALDO Appendix A Design Standards.

8.4. The Typical Section – steps detail on General Site Details (Sheet 13) indicates “Railing (see specifications)”. A railing detail should be provided and specify a black color.

8.5. Please add Construction Details for the proposed Brick Sidewalk/Plaza, Concrete Sidewalk, and Courtyard Porous Pavers.

8.6. Section 97.A.2 of Appendix A Design Standards of the SALDO pertains to Alleys, and when Alleys serve as the principal street address for a building/dwelling. While we defer to the Borough and Borough Engineer relative to if the vehicle areas behind the proposed units are considered alleys, we recommend the Applicant provide clarification pertaining to the intended addresses for Units 16 through 21. Further, if the Borough determines that these areas are considered to be Alleys, then the Design Standards of Section 97.A.2. (SALDO) should be addressed.

8.7. Section 97.A.18.4. of Appendix A Design Standards of the SALDO requires 5% of a lot be devoted to Public Space in the TC District. The Applicant is proposing 2,962 square feet of recreation area, of which 710 square feet proposed to be public (Plaza) and 2,252 square feet proposed to be passive (Courtyard). The Applicant should clarify if the proposed 2,252 square feet of passive recreation area (Courtyard) is proposed to be private or public. In order to meet the requirements of Section 97.A.18.4. (SALDO), at least 5% of the lot is required to be devoted to Public Space, which would not be achieved if the 710 square foot Plaza is the only proposed Public Space.

Please call if there are any questions.

REMINGTON & VERNICK ENGINEERS

Croton Road Corporate Center
555 Croton Road, Suite 401
King of Prussia, PA 19406
O: (610) 940-1050
F: (610) 940-1161

April 21, 2026

Sean Metrick (email only)
Borough Manager
Borough of West Chester
401 E. Gay Street
West Chester, PA 19382

RE: Subdivision & Land Development Preliminary Application #3 –Traffic & Parking 1st Review
410 High Street
Traffic & Parking Study
West Chester Borough
RVE File# PA151833P001

Mr. Metrick:

Remington & Vernick Engineers (RVE), on behalf of the Borough of West Chester, has reviewed the following submission materials in connection with the application referenced above:

- Preliminary Land Development Plans (20 sheets) for 410 South High Street III, dated March 9, 2026, as prepared by Cornerstone Consulting Engineers & Design Services, Inc., Lansdale, PA.
- Landscape and Lighting Plans (5 sheets) for 410 South High Street II, dated March 9 , 2026, as prepared by Stuart and Associates, LLC., King of Prussia, PA.
- Borough of West Chester, Subdivision & Land Development Application, dated March 9, 2026.
- Trip Generation Comparison (3 pages plus Appendix), dated January 26, 2026, prepared by Bowman Consulting, Fort Washington, PA.
- Waiver Request (2 pages), dated March 9, 2026, prepared by Cornerstone Consulting Engineers & Design Services, Inc., Lansdale, PA.

I. GENERAL INFORMATION

Owner: Gary D. Saluti and Suzanne M Dunphy (Owners)
21388 Ferry Landing Road
Tilghman, MD 21671
610-608-0964
garysaluti@gmail.com

Applicant: High Street 410, LLC
c/o Peter Staz
283 2nd Street Pike, Suite 100
Southampton, PA 18966
888-609-1171 x-20
pstaz@core2dev.com

Plan Preparer: Cornerstone Consulting Engineers and Design Services, Inc.
213 W. Main Street
Lansdale, PA 19446
215-362-2600
Attn: John B. Anderson, P.E.
janderson@cornerstonenet.com

Proposal: To construct a proposed residential development consisting of 42 residential units; 14 single family townhomes and 14 multi-family townhomes. The development will provide 84 parking spaces; 56 off-street garage spaces and 28 off-street surface spaces. This is the third application submitted by this developer for this project site. Application #1 included 128 dwelling units, while Application #2 included 139 dwelling units.

II. COMMENTS

Upon review of this submission, RVE has the following comments. Please note that this letter only reflects traffic and parking study related engineering concerns. Therefore, this review will specifically address the response to traffic comments and parking study evaluation. Any underlined comments must be addressed by the applicant prior to approval.

1. Borough representatives shall be copied on all future correspondence and invited to attend all meetings with PennDOT.

2. Sheet 4 of the Land Development plans indicates there will be two (2) parking spaces per unit, with at least one inside a garage and one adjacent to the dwelling unit. Please verify if the single-family attached units are proposed to provide a two-car garage. Please verify the two-family attached units are proposed to provide one garage space per unit, with stacked parking adjacent to the garage.

3. As noted in the Highway Occupancy Permit comments from PennDOT, there is an HSIP project (ECMS #115425) that includes pedestrian improvements along High Street within the study area. Coordinate with PennDOT to confirm any proposed conditions including signal timings and ADA requirements.

   Additionally, per the HOP comments, any modifications to the proposed land use, trip generation, design horizon year, and proposed mitigation will require a revision of the TIS and additional review by the Department. Please provide any correspondence with PennDOT regarding additional comments and/or approvals with the changes to the site plan.

4. Boxwood Alley is being modified as part of this development, as with the previous submissions. As requested as part of the previous submission, please provide turning templates for a trash truck along Boxwood Alley and Adele Alley and well as approval from the fire marshal. Demonstrate that the vehicles are not compromising existing features including but not limited to signs, trees and buildings. Demonstrate that trash trucks can access the alley.

5. The Applicant shall provide the clear sight triangle and sight distance calculations for the site access driveways along Boxwood Alley and Dean Street. If the measurements are not met per

Section §97-27.F of the West Chester Borough Code, the Applicant will need to apply for a waiver from this requirement.

6. The Applicant shall provide turning templates for the site access driveways along Boxwood Alley and Dean Street to include the largest design vehicle anticipated to access the site.

7. With the new site access point located along Dean Street, please provide justification as to whether the previously proposed site trip distribution needs to be revised.

8. With the modified site access driveway locations, please coordinate to address any comments from the fire marshal for approval.

9. The applicant will need to be aware of §112-603.C of the West Chester Borough Code regarding the planning for future EV parking for all new single-family attached and two-family attached dwellings.

10. A stop sign will be required for the Boxwood Alley eastbound approach with Price Street (SR 0052).

11. All ramps will need to be designed and constructed to comply with current ADA standards for compliance.

12. The applicant should note the recommended crosswalk patterns as shown in current MUTCD and/or PennDOT Publication 111.

13. Provide justification as to why new traffic count data is not included as part of this submission. Typically, traffic count data should not be greater than three (3) years old.

14. As noted in §97-27.J of the West Chester Borough Code, all private streets less than 500-feet in length may be reduced to 18-feet in width. Please verify all accessways meet the minimum requirements.

III. TRIP GENERATION COMPARISON COMMENTS

1. As previously noted, this is the third application submitted by the applicant for this site. The previous submissions had proposed a higher amount of dwelling units than this current submission. The proposed trip generation was estimated for 28 single-family attached townhomes. However, Sheet 4 of the Land Development plans indicate that there are 14 single-family attached townhomes and 14 two-family attached townhomes for a total of 42 dwelling units. Please verify the total number of dwelling units proposed with this application.

IV. TRANSPORTATION IMPACT STUDY COMMENTS

1. The Applicant is proposing signal timing changes at South High Street and Price Street to minimize the Price Street eastbound queues. Verify that any changes to the signal timings will

operate within the current parameters of the signal settings and will not negatively impact the adjacent coordinated traffic signals.

V. WAIVERS, VARIANCES & SPECIAL EXCEPTIONS

The Applicant has not requested any waivers, variances and/or special exceptions related to traffic and/or parking.

RVE's recommendation for approval is contingent upon the applicant satisfactorily addressing each underlined comment and submitting revised plans and other materials. In conjunction with any resubmission, the applicant must provide a response letter using the same numbering system and explaining how each underlined comment has been satisfactorily addressed.

Should you have any questions, please feel free to contact our office at (610) 940-1050.

Sincerely,
REMINGTON & VERNICK ENGINEERS
By

Kelly Goff, P.E., CFM, Associate

KAG/dk

cc: Peter Staz, High Street, LLC (Applicant) (email only, pstaz@core2dev.com)
John B. Anderson, P.E, Cornerstone Consulting Engineers & Design Services, Inc., (Plan Preparer) (email only, janderson@cornerstonenet.com)
Nathan M. Cline, P.E., Pennoni, Borough Engineer (email only, NCline@Pennoni.com)
Don Anderson, Public Works Director (email only, DAnderson@west-chester.com)
Reiner Ramsey, Assistant Borough Manager (email only, rreiner@west-chester.com)
Aaron Flook, Code Enforcement (email only, aflook@west-chester.com)
Christopher J. Fazio, P.E., C.M.E., Executive Vice President (email only)
Derrick Kennedy, P.E. (email only)

BOROUGH OF WEST CHESTER
PLANNING COMMISSION

August 11, 2026

Borough Council
Borough of West Chester
401 E Gay St, West Chester, PA 19380

RE: 410 South High Street III Townhomes, Preliminary Land Development

Members of Council,

At the August 10, 2026, Planning Commission Voting Session, the Borough of West Chester Planning Commission reviewed and discussed the proposed development of 410 South High Street III Townhomes.

J. Cherry moved to recommend approval of the following:

1. Preliminary Land Development Plan titled "410 South High Street III Townhomes", prepared by Cornerstone Consulting Engineers and Design Services, Inc, dated March 9, 2026, last revised June 22, 2026, 14 plan sheets;

2. Landscape and Lighting Plans for 410 South High Street II, prepared by Stuart & Associates, LLC, originally dated March 9, 2026, approved by Rockwell Associates (Borough Arborist) in letter dated July 15, 2025, 2026, 5 plan sheets;

3. Gnome Architectural Plans, dated June 29, 2026, last revised August 10, 2026; and

4. Supporting documentation submitted with the application (collectively the "Preliminary Plan Application").

The recommendation of approval is subject to compliance with the following conditions:

1. Applicant shall comply with all outstanding comments in the Pennoni review letter dated July 13, 2026 to the satisfaction of the Borough.

2. Applicant shall comply with any outstanding comments in the TCA review memorandum Updated July 6, 2026 to the satisfaction of the Borough.

3. Applicant shall comply with any outstanding comments in the Remington & Vernick Engineers review letter dated April 21, 2026 to the satisfaction of the Borough.

4. Applicant shall consider the comments in the Chester County Planning Commission letter dated May 8, 2026 and revise the plan as required by and to the satisfaction of the Borough.

5. The building architecture, materials and color palette of the proposed buildings, accessory structures, street furniture, and all design elements of the development shall be in substantial compliance with the plans and materials submitted by Gnome on August 10, 2026.

6. The overhead wires along the development's frontage on Price Street that serve the traffic signals located at S. High and Price Streets shall be placed underground, subject to utility permit approval.

7. In accordance with SALDO Section 97-38.1.E, Applicant shall pay a fee in lieu of open space, which will be negotiated with Borough Council.

8. Applicant shall draft a Declaration of Covenants, Conditions, Easements, Liens, and Restrictions for the development satisfactory to the Borough Solicitor and as approved by Borough Council. The homeowners' association shall own and maintain all common elements including but not limited to driveways, stormwater management facilities, sidewalks, landscaping, streetlights, front stoops/steps, planters, plant material in the planters, and other common elements. The homeowners' association shall indemnify and hold harmless the Borough and maintain liability insurance for potential liability for encroachment of any stoops, steps, and planters in the street right-of-way. The policy shall be in an amount approved by the Borough and include an endorsement naming the Borough as additional insured. The approved Declaration shall be recorded contemporaneously with the final plan.

The recommendation of approval supports the following waiver requests:

1. From Section 94-306.J(3) to set back the infiltration facilities by two feet from all buildings and features with subgrade elements instead of the required 10 feet.

2. From Section 97-27.F(7) requiring 75-foot clear sight triangles at all street intersections.

3. From Section 97-27.F(8) requiring sight distance requirement based on stop conditions at intersecting streets

A Burke seconded the motion

Public Comments from citizens.

Cee Jay Frederick - 22 Dean St. - Made the following comments:
1. Asked to confirm which elements/features of the development are in the street right-of-way.
2. Expressed concern regarding the language "shall comply with" and "to the Borough's satisfaction" in the proposed motion.
3. Expressed concern regarding snow removal to the surrounding streets and if that would be addressed explicitly in the HOA documents and enforced by the Borough.
4. Expressed concern regarding truck movements within the development, particularly when cars are parked outside of rear garages.
5. Noted the mansard roof represents mid-19th century Victorian design and should therefore be a darker color.

Daryl Cook - 506 S. Walnut St. - Asked to confirm if site is prohibited from on-street, permitted parking.

Dawn L'Heureux - 323 S. Church St. - Noted Borough parking map indicates Area B, which would include the new development, is not permitted parking.

The motion passed with a vote of 6-0.

The vote was as follows: Q. Birl-Yes, A. Burke-Yes, J. Cherry-Yes, M. Clapp-Yes, T. Dougherty-Yes, S. Mitten-Yes, S. Vacarro-Absent

Please refer to PC meeting minutes for a more complete record of the PC's discussions. Please feel free to contact me if you have any questions.

Respectfully Submitted,

Jim Cherry
Chair, Borough of West Chester Planning Commission

BOROUGH OF WEST CHESTER

CHESTER COUNTY, PENNSYLVANIA

RESOLUTION NO. _____

A RESOLUTION OF BOROUGH COUNCIL OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, APPROVING THE APPLICATION OF HIGH STREET 410, LLC FOR PRELIMINARY LAND DEVELOPMENT APPROVAL FOR A TOTAL OF 42 DWELLING UNITS CONSISTING OF 14 SINGLE-FAMILY ATTACHED DWELLING UNITS AND 28 TWO-FAMILY ATTACHED DWELLING UNITS LOCATED AT 410 SOUTH HIGH STREET IDENTIFIED AS CHESTER COUNTY TAX PARCEL NO. 1-9-1030 SUBJECT TO CERTAIN CONDITIONS OF APPROVAL STATED HEREIN.

WHEREAS, High Street 410, LLC (the "Applicant") is the equitable owner of a property located at 410 S. High Street in the Borough of West Chester (the "Borough") identified as Chester County Tax Parcel No. 1-9-1030 (the "Property");

WHEREAS, the Property is bordered on the north by Dean Street, on the east by South High Street, on the south by Price Street, and on the west by Boxwood Alley and private residential properties;

WHEREAS, the Property is situated within the Town Center TC Zoning District (the "TC Zoning District");

WHEREAS, the Property is currently improved with a building, parking lot, and accessory facilities that were most recently used as a fast food restaurant;

WHEREAS, on or about April 1, 2026, Applicant submitted an Application for Preliminary Land Development Approval (the "Application") pursuant to the Borough Subdivision and Land Development Ordinance (the "SLDO") and the Pennsylvania Municipalities Planning Code, 53 P.S. § 10101 *et seq*. (the "MPC");

WHEREAS, Applicant proposes to demolish the existing building and parking lots and construct a Unified Residential Development as defined by Section 112-202 of the Borough Zoning Ordinance (the "Zoning Ordinance") and in accordance with the standards in Section 112-916 of the Zoning Ordinance;

WHEREAS, the Unified Residential Development will be comprised of 42 dwelling units consisting of 14 single-family attached dwelling units and 28 two-family attached dwelling units along with common areas for shared driveways, sidewalks, open space, landscaping and stormwater management facilities (the "Proposed Development");

WHEREAS, pursuant to Section 112-304.A of the Zoning Ordinance, a Unified Residential Development is permitted by right in the TC Zoning District;

WHEREAS, Applicant submitted preliminary land development plans prepared by Cornerstone Consulting Engineers & Design Services, Inc. titled "Preliminary Land Development Plans 410 S. High Street III Townhomes dated March 9, 2026, last revised June 22, 2026, 14 plan sheets; and Landscape and Lighting Plans for 410 South High Street II, prepared by Stuart & Associates, LLC, dated March 9, 2026; 5 plan sheets (collectively the "Preliminary Land Development Plans");

WHEREAS, with the Application and Preliminary Land Development Plans, Applicant also submitted the following plans and reports which, along with the Application and the Preliminary Land Development Plans, shall collectively be referred to as the "Application Materials":

(i) Architectural Presentation for High Street 410, LLC prepared by Gnome Associates, dated June 6, 2026, 22 pages;

(ii) Trip Generation Comparison prepared by Bowman dated January 26, 2026; and

(iii) Post Construction Stormwater Management Report and calculations prepared by Cornerstone Consulting Engineers & Design Services, Inc. dated March 9, 2026 ("Stormwater Report").

WHEREAS, the Borough Traffic Engineer, Remington & Vernick Engineers, reviewed the Application Materials and issued a review letter dated April 21, 2026 (the "Borough Traffic Engineer Review Letter");

WHEREAS, the Borough Engineer, Pennoni Associates, Inc., reviewed the Application Materials and issued a review letter dated July 13, 2026 (the "Borough Engineer Review Letter");

WHEREAS, the Borough Planner, Thomas Comitta Associates, Inc., reviewed the Application Materials and issued a Review Memorandum dated April 28, 2026, last updated July 6, 2026 (the "Borough Planner Review Memorandum");

WHEREAS, the Borough Urban Forester Rockwell Associates reviewed the Application Materials and issued a memorandum to the Borough Tree Commission dated April 18, 2026 (the "Urban Forester Review Memorandum");

WHEREAS, the Borough Architect Carol Jean Quigley reviewed the Architectural Presentation for High Street 410, LLC prepared by Gnome Associates, dated June 6, 2026 and issued a review letter to the Borough Planning Commission dated July 31, 2026 (the "Borough Architect Review Letter");

WHEREAS, the Chester County Planning Commission reviewed the Preliminary Land Development Plans and issued a review letter dated May 8, 2026 (the "CCPC Review Letter");

WHEREAS, the Borough Planning Commission reviewed the Application Materials at several meetings and at its public meeting on August 10, 2026 recommended to Borough Council that the Preliminary Land Development Plans be approved subject to conditions set forth in a motion unanimously adopted by the Planning Commission (the "Planning Commission Recommendation Motion").

NOW, THEREFORE, BE IT RESOLVED that, pursuant to Section 508 of the MPC, 53 P.S. § 10508, the Borough Stormwater Management Ordinance (the "SWMO"), and the SLDO, Borough Council hereby grants Preliminary Subdivision and Land Development Approval of the Preliminary Land Development Plans and the Application, subject to the Applicant's compliance with the following conditions. Council also grants approval of the following waivers:

1. From Section 94-306.J(3) of the SWMO to set back the infiltration facilities by two feet from all buildings and features with subgrade elements instead of the required 10 feet.

~~1.~~2. From Section 94-306.J(4) of the SMMO to construct the bottom elevation of infiltration facilities at an elevation above habitable basement space in certain locations, subject to the design and installation of measures to prevent groundwater infiltration into the basements and protection of the building footers.

~~2.~~3. From Section 97-27.F(7) of the SLDO requiring 75-foot clear sight triangles at all street intersections.

~~3.~~4. From Section 97-27.F(8) of the SLDO requiring sight distance requirement based on stop conditions at intersecting streets.

Conditions of Approval

1. Except as expressly set forth in this Resolution to the contrary, the Proposed Development shall be in strict compliance with the Application Materials.

2. Applicant shall obtain all outside agency permits in order to develop the Property in accordance with the Application Materials including, without limitation planning module approval from the Pennsylvania Department of Environmental Protection and a Highway Occupancy Permit from the Pennsylvania Department of Transportation.

3. Applicant shall comply with all outstanding comments in the Borough Traffic Engineer Review Letter to the satisfaction of the Borough.

4. Applicant shall comply with all outstanding comments in the Borough Engineer Review Letter to the satisfaction of the Borough.

5. Applicant shall comply with all outstanding comments in the Borough Planner Review Memorandum to the satisfaction of the Borough.

6. Applicant shall comply with all outstanding comments in the Urban Forester Review Memorandum to the satisfaction of the Borough.

7. The Unified Residential Development shall be built substantially in compliance with the Architectural Presentation for High Street 410, LLC prepared by Gnome Associates, dated June 6, 2026, 22 pages, but substituting standing seam metal for the fiber cement board & batten siding on the fourth floor of the dwelling units. The final architectural plans for the Proposed Development shall be approved by Borough Council pursuant to Section 112-916.C of the Zoning Ordinance prior to final plan approval.

8. Applicant shall consider the comments in the CCPC Review Letter and revise the Preliminary Plans to comply with those comments if and as required by the Borough during the final plan review process and to the satisfaction of the Borough.

9. To the extent consistent with the conditions of approval set forth in this Resolution, Applicant shall comply with the conditions of approval of the Planning Commission Recommendation Motion to the satisfaction of the Borough.

10. Subject to the Applicant applying for and obtaining all required permits, the overhead electric and guy wires along the Proposed Development's frontage on Price Street that serve two street lights on South High Street and the traffic signals located at the intersection of South High Street and Price Street shall be placed underground, and the utility pole located on the Price Street frontage shall be removed.

11. Applicant shall secure from the Borough Wastewater Department all necessary sanitary sewer capacity for the Proposed Development including, without limitation, payment of the necessary tapping fees for such capacity pursuant to Chapter 89 of the Borough Code. No building or other permit shall be issued for any portion of the Proposed Development unless and until Applicant secures all necessary approvals for sanitary sewage collection, conveyance, treatment and disposal for the Proposed Development.

12. The Proposed Development shall be served by public water supply from Aqua Pennsylvania or its successor.

13. In accordance with Section 97-38.1.E of the SLDO, Applicant shall pay a fee in lieu of open space in an amount determined by Borough Council prior to final plan approval.

14. Prior to the issuance of final plan approval for the Proposed Development, Applicant shall submit to the Borough a declaration of covenants and restrictions to create a homeowners' association which will own and

maintain all common elements including but not limited to driveways, stormwater management facilities, sidewalks, landscaping, street trees, street and driveway lights, front stoops/steps, planters and plant material, and other common elements. The homeowners' association shall indemnify and hold harmless the Borough and maintain liability insurance for potential liability for personal injuries and property damage due to the location of any stoops, steps, and planters in the street right-of-way. The policy shall be in an amount approved by the Borough and include an endorsement naming the Borough as additional insured. The form and substance of the declaration shall be approved by the Borough Solicitor and Borough Council and shall be recorded contemporaneously with the final plan.

15. Within thirty (30) days of the date of this Resolution, Applicant shall pay all required review fees and shall reimburse the Borough for the costs of its professional consultants, including, without limitation, solicitor, engineering, planning consultant, forestry consultant and traffic consultant incurred during the review and approval processes related to the Application.

16. Applicant shall comply with all applicable federal, state, and local statutes, codes, ordinances, rules and regulations and shall obtain all approvals, certificates, licenses and permits required with regard to the Proposed Development.

This space is intentionally left blank.

17. Prior to the release of final land development plans for recording, Applicant shall execute and deliver to the Borough the following documents in form customarily accepted by the Borough:

A. Land Development Agreement;

B. Financial Security Agreement (with financial security as determined pursuant to Section 509 of the MPC, 53 P.S. § 10509); and

C. Stormwater Management Best Management Practices Operations and Maintenance Agreement.

RESOLVED, this _____ day of August, 2026.

ATTEST:

BOROUGH COUNCIL FOR THE BOROUGH OF WEST CHESTER

_____
Sean Metrick, Manager/Secretary

_____
Nicole Scimone, President

_____
Bernie Flynn, Vice-President

_____
Jerome Szczepaniak, Member

_____
Bryan Travis, Member

_____
Brian McGinnis, Member

_____
Stephen Marvin, Member

_____
Lisa Kearns, Member

BOROUGH OF WEST CHESTER

CHESTER COUNTY, PENNSYLVANIA

RESOLUTION NO. _____

A RESOLUTION OF BOROUGH COUNCIL OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, APPROVING THE APPLICATION OF HIGH STREET 410, LLC FOR PRELIMINARY LAND DEVELOPMENT APPROVAL FOR A TOTAL OF 42 DWELLING UNITS CONSISTING OF 14 SINGLE-FAMILY ATTACHED DWELLING UNITS AND 28 TWO-FAMILY ATTACHED DWELLING UNITS LOCATED AT 410 SOUTH HIGH STREET IDENTIFIED AS CHESTER COUNTY TAX PARCEL NO. 1-9-1030 SUBJECT TO CERTAIN CONDITIONS OF APPROVAL STATED HEREIN.

WHEREAS, High Street 410, LLC (the "Applicant") is the equitable owner of a property located at 410 S. High Street in the Borough of West Chester (the "Borough") identified as Chester County Tax Parcel No. 1-9-1030 (the "Property");

WHEREAS, the Property is bordered on the north by Dean Street, on the east by South High Street, on the south by Price Street, and on the west by Boxwood Alley and private residential properties;

WHEREAS, the Property is situated within the Town Center TC Zoning District (the "TC Zoning District");

WHEREAS, the Property is currently improved with a building, parking lot, and accessory facilities that were most recently used as a fast food restaurant;

WHEREAS, on or about April 1, 2026, Applicant submitted an Application for Preliminary Land Development Approval (the "Application") pursuant to the Borough Subdivision and Land Development Ordinance (the "SLDO") and the Pennsylvania Municipalities Planning Code, 53 P.S. § 10101 *et seq*. (the "MPC");

WHEREAS, Applicant proposes to demolish the existing building and parking lots and construct a Unified Residential Development as defined by Section 112-202 of the Borough Zoning Ordinance (the "Zoning Ordinance") and in accordance with the standards in Section 112-916 of the Zoning Ordinance;

WHEREAS, the Unified Residential Development will be comprised of 42 dwelling units consisting of 14 single-family attached dwelling units and 28 two-family attached dwelling units along with common areas for shared driveways, sidewalks, open space, landscaping and stormwater management facilities (the "Proposed Development");

WHEREAS, pursuant to Section 112-304.A of the Zoning Ordinance, a Unified Residential Development is permitted by right in the TC Zoning District;

WHEREAS, Applicant submitted preliminary land development plans prepared by Cornerstone Consulting Engineers & Design Services, Inc. titled "Preliminary Land Development Plans 410 S. High Street III Townhomes dated March 9, 2026, last revised June 22, 2026, 14 plan sheets; and Landscape and Lighting Plans for 410 South High Street II, prepared by Stuart & Associates, LLC, dated March 9, 2026; 5 plan sheets (collectively the "Preliminary Land Development Plans");

WHEREAS, with the Application and Preliminary Land Development Plans, Applicant also submitted the following plans and reports which, along with the Application and the Preliminary Land Development Plans, shall collectively be referred to as the "Application Materials":

(i) Architectural Presentation for High Street 410, LLC prepared by Gnome Associates, dated June 6, 2026, 22 pages;

(ii) Trip Generation Comparison prepared by Bowman dated January 26, 2026; and

(iii) Post Construction Stormwater Management Report and calculations prepared by Cornerstone Consulting Engineers & Design Services, Inc. dated March 9, 2026 ("Stormwater Report").

WHEREAS, the Borough Traffic Engineer, Remington & Vernick Engineers, reviewed the Application Materials and issued a review letter dated April 21, 2026 (the "Borough Traffic Engineer Review Letter");

WHEREAS, the Borough Engineer, Pennoni Associates, Inc., reviewed the Application Materials and issued a review letter dated July 13, 2026 (the "Borough Engineer Review Letter");

WHEREAS, the Borough Planner, Thomas Comitta Associates, Inc., reviewed the Application Materials and issued a Review Memorandum dated April 28, 2026, last updated July 6, 2026 (the "Borough Planner Review Memorandum");

WHEREAS, the Borough Urban Forester Rockwell Associates reviewed the Application Materials and issued a memorandum to the Borough Tree Commission dated April 18, 2026 (the "Urban Forester Review Memorandum");

WHEREAS, the Borough Architect Carol Jean Quigley reviewed the Architectural Presentation for High Street 410, LLC prepared by Gnome Associates, dated June 6, 2026 and issued a review letter to the Borough Planning Commission dated July 31, 2026 (the "Borough Architect Review Letter");

WHEREAS, the Chester County Planning Commission reviewed the Preliminary Land Development Plans and issued a review letter dated May 8, 2026 (the "CCPC Review Letter");

WHEREAS, the Borough Planning Commission reviewed the Application Materials at several meetings and at its public meeting on August 10, 2026 recommended to Borough Council that the Preliminary Land Development Plans be approved subject to conditions set forth in a motion unanimously adopted by the Planning Commission (the "Planning Commission Recommendation Motion").

NOW, THEREFORE, BE IT RESOLVED that, pursuant to Section 508 of the MPC, 53 P.S. § 10508, the Borough Stormwater Management Ordinance (the "SWMO"), and the SLDO, Borough Council hereby grants Preliminary Subdivision and Land Development Approval of the Preliminary Land Development Plans and the Application, subject to the Applicant's compliance with the following conditions. Council also grants approval of the following waivers:

1. From Section 94-306.J(3) of the SWMO to set back the infiltration facilities by two feet from all buildings and features with subgrade elements instead of the required 10 feet.

2. From Section 94-306.J(4) of the SMMO to construct the bottom elevation of infiltration facilities at an elevation above habitable basement space in certain locations, subject to the design and installation of measures to prevent groundwater infiltration into the basements and protection of the building footers.

3. From Section 97-27.F(7) of the SLDO requiring 75-foot clear sight triangles at all street intersections.

4. From Section 97-27.F(8) of the SLDO requiring sight distance requirement based on stop conditions at intersecting streets.

Conditions of Approval

1. Except as expressly set forth in this Resolution to the contrary, the Proposed Development shall be in strict compliance with the Application Materials.

2. Applicant shall obtain all outside agency permits in order to develop the Property in accordance with the Application Materials including, without limitation planning module approval from the Pennsylvania Department of Environmental Protection and a Highway Occupancy Permit from the Pennsylvania Department of Transportation.

3. Applicant shall comply with all outstanding comments in the Borough Traffic Engineer Review Letter to the satisfaction of the Borough.

4. Applicant shall comply with all outstanding comments in the Borough Engineer Review Letter to the satisfaction of the Borough.

5. Applicant shall comply with all outstanding comments in the Borough Planner Review Memorandum to the satisfaction of the Borough.

6. Applicant shall comply with all outstanding comments in the Urban Forester Review Memorandum to the satisfaction of the Borough.

7. The Unified Residential Development shall be built substantially in compliance with the Architectural Presentation for High Street 410, LLC prepared by Gnome Associates, dated June 6, 2026, 22 pages, but substituting standing seam metal for the fiber cement board & batten siding on the fourth floor of the dwelling units. The final architectural plans for the Proposed Development shall be approved by Borough Council pursuant to Section 112-916.C of the Zoning Ordinance prior to final plan approval.

8. Applicant shall consider the comments in the CCPC Review Letter and revise the Preliminary Plans to comply with those comments if and as required by the Borough during the final plan review process and to the satisfaction of the Borough.

9. To the extent consistent with the conditions of approval set forth in this Resolution, Applicant shall comply with the conditions of approval of the Planning Commission Recommendation Motion to the satisfaction of the Borough.

10. Subject to the Applicant applying for and obtaining all required permits, the overhead electric and guy wires along the Proposed Development's frontage on Price Street that serve two street lights on South High Street and the traffic signals located at the intersection of South High Street and Price Street shall be placed underground, and the utility pole located on the Price Street frontage shall be removed.

11. Applicant shall secure from the Borough Wastewater Department all necessary sanitary sewer capacity for the Proposed Development including, without limitation, payment of the necessary tapping fees for such capacity pursuant to Chapter 89 of the Borough Code. No building or other permit shall be issued for any portion of the Proposed Development unless and until Applicant secures all necessary approvals for sanitary sewage collection, conveyance, treatment and disposal for the Proposed Development.

12. The Proposed Development shall be served by public water supply from Aqua Pennsylvania or its successor.

13. In accordance with Section 97-38.1.E of the SLDO, Applicant shall pay a fee in lieu of open space in an amount determined by Borough Council prior to final plan approval.

14. Prior to the issuance of final plan approval for the Proposed Development, Applicant shall submit to the Borough a declaration of covenants and restrictions to create a homeowners' association which will own and

maintain all common elements including but not limited to driveways, stormwater management facilities, sidewalks, landscaping, street trees, street and driveway lights, front stoops/steps, planters and plant material, and other common elements. The homeowners' association shall indemnify and hold harmless the Borough and maintain liability insurance for potential liability for personal injuries and property damage due to the location of any stoops, steps, and planters in the street right-of-way. The policy shall be in an amount approved by the Borough and include an endorsement naming the Borough as additional insured. The form and substance of the declaration shall be approved by the Borough Solicitor and Borough Council and shall be recorded contemporaneously with the final plan.

15. Within thirty (30) days of the date of this Resolution, Applicant shall pay all required review fees and shall reimburse the Borough for the costs of its professional consultants, including, without limitation, solicitor, engineering, planning consultant, forestry consultant and traffic consultant incurred during the review and approval processes related to the Application.

16. Applicant shall comply with all applicable federal, state, and local statutes, codes, ordinances, rules and regulations and shall obtain all approvals, certificates, licenses and permits required with regard to the Proposed Development.

This space is intentionally left blank.

17. Prior to the release of final land development plans for recording, Applicant shall execute and deliver to the Borough the following documents in form customarily accepted by the Borough:

A. Land Development Agreement;

B. Financial Security Agreement (with financial security as determined pursuant to Section 509 of the MPC, 53 P.S. § 10509); and

C. Stormwater Management Best Management Practices Operations and Maintenance Agreement.

RESOLVED, this _____ day of August, 2026.

ATTEST:

BOROUGH COUNCIL FOR THE BOROUGH OF WEST CHESTER

_____
Sean Metrick, Manager/Secretary

_____
Nicole Scimone, President

_____
Bernie Flynn, Vice-President

_____
Jerome Szczepaniak, Member

_____
Bryan Travis, Member

_____
Brian McGinnis, Member

_____
Stephen Marvin, Member

_____
Lisa Kearns, Member

ADDENDUM TO ZONING APPLICATION TO THE ZONING HEARING BOARD OF WEST CHESTER BOROUGH, CHESTER COUNTY, PA

Applicant: TRBL Walnut LLC

[redacted]

Owner: Same as above

Properties:

615 South Walnut Street		**617 South Walnut Street**	
Parcel No:	1-10-93	Parcel No:	1-10-92
Lot size:	0.2523 +/- Acres / 10,990 sf	Lot size:	0.0872 +/- Acres / 3,798 sf
Present Use:	Single Family Residential	Present Use:	Single Family Residential
Zoned:	NC-2	Zoned:	NC-2

I. Background Information:

TRBL Walnut LLC ("Applicant" or "TRBL") respectfully submits this zoning application to the Zoning Hearing Board ("ZHB") of West Chester Borough (the "Borough") for variance relief from the requirements of Section 112-602.K of the Borough's Zoning Ordinance.

Applicant is the owner of two (2) parcels of real property located at 615 and 617 South Walnut Street in the Borough, Parcel Nos. 1-10-92 and 1-10-93 (the "Property"). The Property is located in the NC-2 Neighborhood Conservation Zoning District. The Property is currently improved with a set of "twin" or semidetached single-family homes facing onto South Walnut Street. The Property is located on the east side of South Walnut Street and bounded by Willow Alley to the north and Mechanics Alley to the East. See **Exhibit A-1**, ChescoViews of Property. Applicant submitted land development plans for the Property (as revised June 26, 2026) to the Borough to build five (5) attached townhomes to the rear of the existing homes. See **Exhibit A-2**, Land Development Plans (the "Plans").

The Property currently contains approximately four (4) parking spaces along the Mechanics Alley side of the Property. The Plans have been reviewed by the Borough Planning Commission (the "PC") six (6) times. As part of the PC's review, the PC requested that the Applicant move two (2) of the parking spaces along the Mechanics Alley side of the Property to the Willow Street side of the Property, to provide parking closer to the existing homes. Due to the size and configuration of the Property, all of the proposed townhomes have small driveways/parking areas along Willow Alley. *See* Exhibit A-2.

Due to the configuration of the current and proposed homes on the Plans, South Walnut Street and Willow Alley both become "primary streets" under the Borough's Zoning Ordinance: "A street which serves as the principal means of vehicular travel to provide access to the front yard of abutting properties." Because South Walnut and Willow Alley serve as primary streets for the current and proposed homes on the Property, the sides of the Property along those streets become "front yards" under the Borough Zoning Ordinance. Section 112-602.K of the Zoning Ordinance prohibits parking spaces from being located in the front yard area of any lot in the NC-2 District.

Due to the size and shape of the Property, the only location for the proposed homes and the access/parking spaces for those homes is along Willow Alley, thus the Applicant cannot locate any parking spaces on the Property along Willow Alley without said parking spaces being located in a "front yard." Therefore, the Applicant is seeking a variance from Section 112-602.K to allow for the parking to be located in the "front yard" along Willow Alley on the Property as set forth in the Plans.

At the PC meeting to review the Plans on July 6, 2026, the PC members expressed their support for the Plans and stated that the Applicant was free to communicate the PC's support of the Plans to the Zoning Hearing Board. Two parking spaces were relocated from the rear of the Property along Mechanics Alley around onto Willow Alley near the existing homes on the Property. This was done at the request of the PC members to provide parking closer to the existing homes, and to create more green space and better sight lines at the intersection of Willow and Mechanics Alleys.

II. Provisions of Zoning Ordinance at Issue:

§ 112-602 **General regulations and design standards.**

...

K. Parking in front of building.

(1) Parking spaces shall not be located within any front yard areas, except in the Industrial District, where parking in the front yard may be permitted as a special exception by the Zoning Hearing Board, provided that it does not comprise more than 50% of the front yard areas.

§ 112-202 **Definitions.**

LOT, CORNER
A lot abutting upon two or more intersecting streets or upon two parts of the same street at the point of an abrupt change in direction, forming an interior angle at the corner point of less than 135°.

YARD, FRONT
A yard abutting a street line of a primary street extending the full width of the lot along the front lot line of such yard and extending in depth from the front lot line to the building setback line. **In the case of a corner lot, the yards extending along all streets are front yards, and the remaining yards shall include a rear yard, opposite the street on which the principal building is generally faced, and a side yard opposite the other street. For lots fronting three streets, all yards abutting a street shall be considered a front yard. The remaining yard shall be either a rear yard or a side yard, determined by the position of the principle building facade.**

STREET
A right-of-way intended for the general public use to provide means of circulation for vehicles and pedestrians, furnishing access to abutting lots. The word "street" includes the words "road," "highway," "avenue," "boulevard,' "lane" and "alley."

STREET, PRIMARY
A street which serves as the principal means of vehicular travel to provide access to the front yard of abutting properties.

STREET, SECONDARY
A street which serves as a subordinate means of vehicular travel to provide access to the side yard or rear yard of abutting properties, such as an alley.

Wherefore, based upon the foregoing, the Applicant respectfully requests that the West Chester Borough Zoning Hearing Board grant its application for zoning relief and such other zoning relief or variances as may be needed and allow the Applicant the ability to proceed with the reasonable development of the Property.

Respectfully submitted,

BELLWOAR KELLY, LLP

Jonathan Long

[redacted]

Attorneys for Applicant
TRBL Walnut LLC

EXHIBIT LIST FOR
ZONING APPLICATION
TO THE ZONING HEARING BOARD OF
WEST CHESTER BOROUGH, PENNSYLVANIA

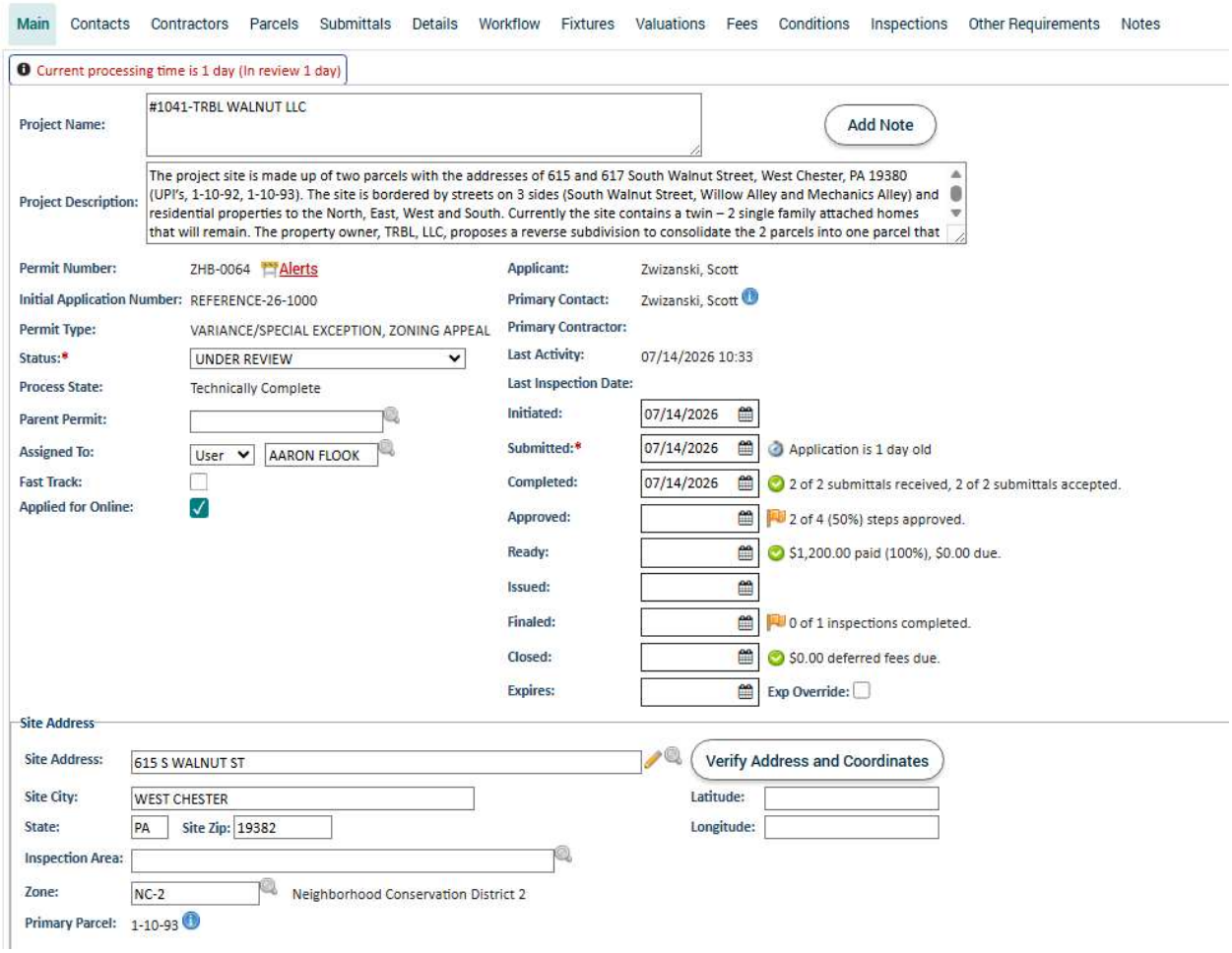
Applicant: TRBL Walnut LLC

Property: 615-617 S. Walnut Street

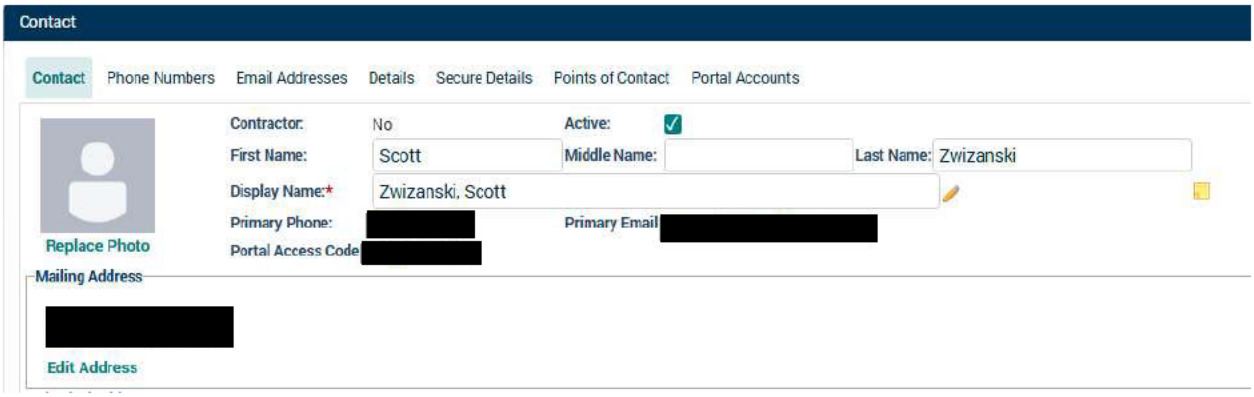
Exhibit:	Description:
A – 1	ChescoViews of Property
A – 2	Land Development Plans

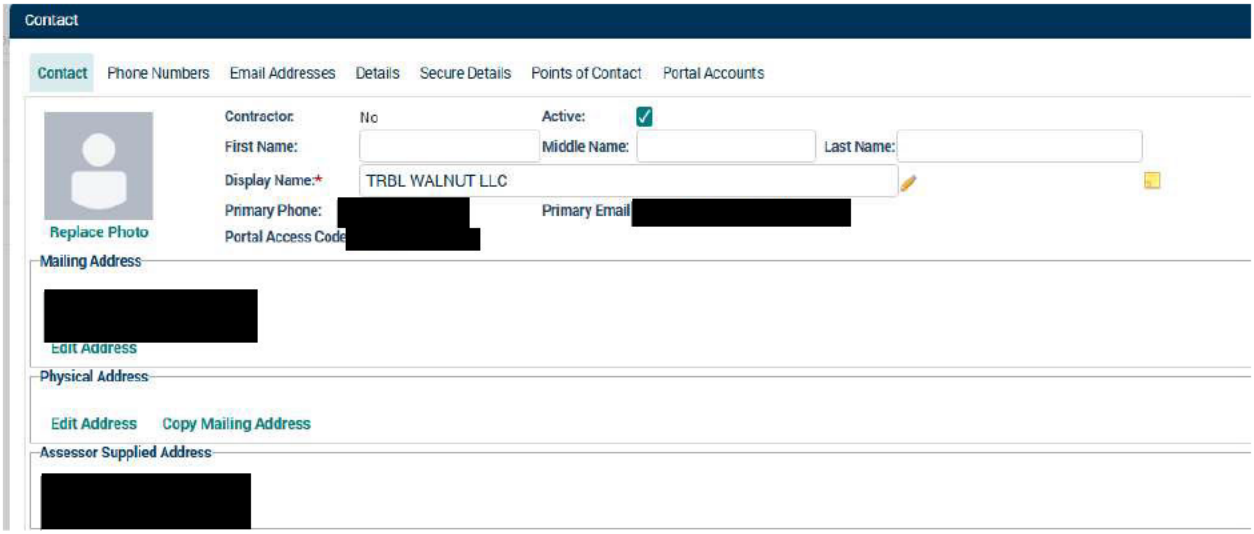
EXHIBIT A-2

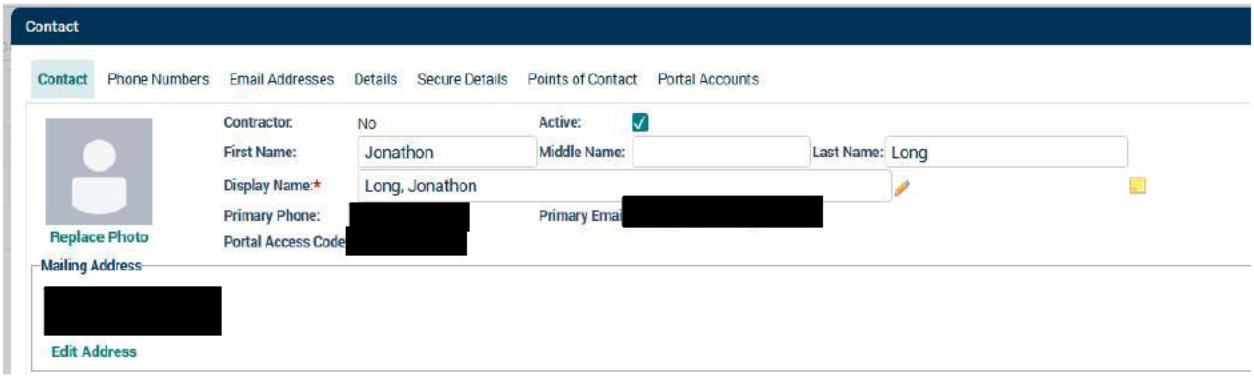
LAND DEVELOPMENT PLANS



The project site is made up of two parcels with the addresses of 615 and 617 South Walnut Street, West Chester, PA 19380 (UPI's, 1-10-92, 1-10-93). The site is bordered by streets on 3 sides (South Walnut Street, Willow Alley and Mechanics Alley) and residential properties to the North, East, West and South. Currently the site contains a twin – 2 single family attached homes that will remain. The property owner, TRBL, LLC, proposes a reverse subdivision to consolidate the 2 parcels into one parcel that will have a total area of 14,360 square feet (0.33-acres). The owner proposes constructing 5 new single-family attached townhomes. The homes will be individually owned, and the common areas of the property, including the stormwater management system will be maintained by a homeowner's association which will be established. The proposed townhomes will each have a one-car garage and a driveway parking space with access to Willow Alley. Two additional parking areas are proposed, each with two off-street parking spaces. The total amount of off-street parking offered will be 14 spaces (2 vehicle spaces per dwelling).


Contact
Contact
Phone Numbers
Email Addresses
Details
Secure Details
Points of Contact
Portal Accounts
Contractor:
No
Active:
First Name:
Scott
Middle Name:
Last Name:
Zwizanski
Display Name:*
Zwizanski, Scott
Primary Phone:
Primary Email
Portal Access Code
Replace Photo
Mailing Address
Edit Address


Contact
Contact
Phone Numbers
Email Addresses
Details
Secure Details
Points of Contact
Portal Accounts
Contractor:
No
Active:
First Name:
Middle Name:
Last Name:
Display Name:*
TRBL WALNUT LLC
Primary Phone:
Primary Email
Portal Access Code
Replace Photo
Mailing Address
Edit Address
Physical Address
Edit Address
Copy Mailing Address
Assessor Supplied Address


Contact
Contact
Phone Numbers
Email Addresses
Details
Secure Details
Points of Contact
Portal Accounts
Contractor:
No
Active:
First Name:
Jonathon
Middle Name:
Last Name:
Long
Display Name:*
Long, Jonathon
Primary Phone:
Primary Email
Portal Access Code
Replace Photo
Mailing Address
Edit Address


Permit #: ZHB-0064
Alerts
Status: UNDER REVIEW
Contact: Zwizanski, Scott
Site Address: 615 S WALNUT ST
WEST CHESTER, PA 19382
Type: VARIANCE/SPECIAL EXCEPTION, ZONING APPEAL
Project Name: #1041-TRBL WALNUT LLC
Contractor:
Primary
Parcel
Address
Neighborhood Code
Owner
1-10-93
615 S WALNUT ST
SE
TRBL WALNUT LLC
Add

Permit #: ZHB-0064 Alerts | Status: UNDER REVIEW | Contact: Zwizanski, Scott | Site Address: 615 S WALNUT ST WEST CHESTER, PA 19382

Type: VARIANCE/SPECIAL EXCEPTION, ZONING APPEAL | Project Name: #1041-TRBL WALNUT LLC | Contractor:

Name	Value
REASON FOR APPEAL/ SPECIAL EXCEPTION:*	See attached Addendum
APPLICABLE CODE SECTION:*	112-602.K(1)
VARIANCE, SPECIAL EXCEPTION TYPE:*	Single Family Dwelling, Commercial Signs
REQUEST TYPE:*	Variance

Permit #: ZHB-0064 Alerts | Status: UNDER REVIEW | Contact: Zwizanski, Scott | Site Address: 615 S WALNUT ST WEST CHESTER, PA 19382

Type: VARIANCE/SPECIAL EXCEPTION, ZONING APPEAL | Project Name: #1041-TRBL WALNUT LLC | Contractor:

Fee Code	Portal Pay State	Based On	Current Value	Calc Value	Def	Ex	Cmp	Fst	Ovr	Amount Paid	Fee Amount
ZONING VARIANCE, SPECIAL EXEMPTION FEE	Complete	VARIANCE, SPECIAL EXCEPTION TYPE	Single Family Dwelling, Commercial Signs	Single Family Dwelling, Commercial Signs					☑	$1,200.00	$1,200.00

PRELIMINARY

LAND DEVELOPMENT PLAN

FOR

TRBL WALNUT, LLC

615 & 617 S. WALNUT STREET, WEST CHESTER, PA 19382

WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA



LOCATION MAP
SCALE: 1" = 2000'

GENERAL NOTES:

1 TOTAL TRACT AREA = 0 322 ACRES (14,016 S F)
2 TAX PARCEL NUMBERS UPIs 1-10-92 AND 1-10-93
3 BOUNDARY SHOWN BY PHYSICAL FIELD SURVEY PERFORMED IN NOVEMBER, 2025 BY INLAND DESIGN, LLC, WEST CHESTER, PA BEARINGS HAVE BEEN ROTATED TO STATE PLANE COORDINATES
4 THIS PLAN WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT
5 TOPOGRAPHIC INFORMATION AND IMPROVEMENTS SHOWN BY PHYSICAL FIELD SURVEY PERFORMED IN NOVEMBER, 2025 BY INLAND DESIGN, LLC, WEST CHESTER, PA CONTOUR INTERVAL = 1 FOOT
6 ELEVATIONS BASED ON NAVD88 DATUM VERTICAL DATUM OBTAINED BY GPS OBSERVATIONS ON NOVEMBER 13, 2025
7 THERE IS NO 100 YEAR FLOODPLAIN SHOWN ON THE PLAN, WHICH WAS DETERMINED FROM THE REFERENCE FIRM PANELS, MAP NUMBER 42029C0210G, EFFECTIVE SEPTEMBER 29, 2017
8 SOILS INFORMATION TAKEN FROM UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE THE SOIL CLASSIFICATION FOR THIS ENTIRE SITE IS URBAN LAND-GLADSTONE COMPLEX (UrtB)
9 SITE GEOLOGY IS CHARACTERIZED AS Ybfg: FELSIC GNEISS, GRANULITE FACIES
10 COMPLETENESS OR ACCURACY OF LOCATION AND DEPTH OF UNDERGROUND UTILITIES AND FACILITIES CANNOT BE GUARANTEED THE CONTRACTOR MUST VERIFY THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES AND/OR FACILITIES PRIOR TO BEGINNING ANY EARTH-MOVING ACTIVITIES
11 THE PROPERTY IS LOCATED WITHIN THE 'NC-2' - NEIGHBORHOOD CONSERVATION ZONING DISTRICT FOR SINGLE-FAMILY ATTACHED DWELLINGS
12 THE PROPERTY IS SERVICED BY PUBLIC SEWER AND PUBLIC WATER
13 THE SITE IS LOCATED IN THE GOOSE CREEK WATERSHED WHICH IS TRIBUTARY TO THE BRANDYWINE CREEK WATERSHED THE CHAPTER 93 DESIGNATION FOR GOOSE CREEK TROUT STOCKING (TSF), MIGRATORY FISHES (MF)
14 A HOMEOWNER'S ASSOCIATION WILL BE CREATED FOR THE PURPOSES OF MAINTAINING ALL COMMON ELEMENTS INCLUDING, BUT NOT LIMITED TO DRIVEWAYS, STORMWATER MANAGEMENT FACILITIES, SIDEWALKS, LANDSCAPING AND ANY OTHER RELATED ELEMENTS
15 THE OWNER AND CONTRACTOR ARE RESPONSIBLE TO ENSURE THAT NO DAMAGE OCCURS TO EXISTING CURBING OR ROADWAYS ANY DAMAGE WILL REQUIRE IMMEDIATE REPAIR TO THE BOROUGH'S SATISFACTION ADDITIONALLY, WEST CHESTER BOROUGH DOES NOT ACCEPT MUD, DIRT OR DEBRIS TRACKED ONTO EXISTING ROADS ANY MUD, DIRT OR DEBRIS OFFSITE / ON THE ROADS SHALL BE IMMEDIATELY CLEANED/REMOVED
16 THERE ARE NO STREETS, RIGHTS-OF-WAY, OR ANY PUBLIC USE INTENDED FOR DEDICATION BY THIS PLAN
17 ALL UTILITY LINES INCLUDING BUT NOT LIMITED TO ELECTRIC, GAS, STREETLIGHT SUPPLY, AND TELEPHONE SHALL BE PLACED UNDERGROUND INSTALLATION OF ALL UTILITIES SHALL BE IN STRICT ACCORDANCE WITH THE ENGINEERING STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY, MUNICIPAL AUTHORITY OR OTHER PUBLIC UTILITY CONCERNED
18 STORMWATER MANAGEMENT SHOWN PER PROJECT NARRATIVE AND POST CONSTRUCTION MANAGEMENT CALCULATIONS FOR TRBL WALNUT, LLC, 615 & 617 S WALNUT STREET, DATED APRIL 27, 2026, LAST REVISED JUNE 26, 2026
19 IN ACCORDANCE WITH SECTION 97-38 1 E THE APPLICANT IS PROPOSING TO PROVIDE A FEE IN LIEU OF ACREAGE TO BE SET ASIDE FOR RECREATION AND OPEN SPACE
20 AFTER ALL PROPOSED CONSTRUCTION ACTIVITY HAS BEEN COMPLETED THE FULL WIDTH OF WILLOW ALLEY SHALL BE MILLED AND OVERLAID FOR THE EXTENT OF THE FRONTAGE OF THE PROPERTY
21 ACCESS TO THE ALLEYS AND ADJACENT RESIDENTIAL DRIVEWAYS SHALL BE AVAILABLE AT ALL TIMES AND NOT UTILIZED FOR CONSTRUCTION PURPOSES IF CONSTRUCTION REQUIRES TEMPORARY CLOSURE OF AN ALLEY, SIGNAGE AND DETOURS SHALL BE POSTED PER WEST CHESTER BOROUGH REQUIREMENTS
22 EACH NEW DWELLING SHALL BE CONSTRUCTED TO PROVIDE A DEDICATED BRANCH CIRCUIT AND OVER CURRENT PROTECTION TO ACCOMMODATE A FUTURE LEVEL 2 EVCS INSTALLATION, WITH A WIRED RECEPTACLE AND RACEWAY TERMINATION WITHIN CLOSE PROXIMITY TO VEHICLE PARKING
23 THE ONE-CAR GARAGE IN EACH DWELLING SHALL MAINTAIN A 9-FOOT BY 18-FOOT OPEN PARKING SPACE AREA
24 THE CONTRACTOR SHALL REPAIR ANY DAMAGED SECTIONS OF EXISTING SEWER MAIN THAT IS ENCOUNTERED/CAUSED DURING LATERAL CONNECTIONS
25 THE NEW DWELLING UNITS FRONTING ON WILLOW ALLEY WILL HAVE A BASEMENT BATHROOM THAT UTILIZES A SEWER PUMP THAT WILL PUMP INTO THE BUILDING'S INTERNAL GRAVITY PLUMBING BEFORE THE GRAVITY SEWER LEAVES THE BUILDING
26 THE TWO (2) PROPOSED OFF-STREET PARKING SPACES LOCATED ALONG WILLOW ALLEY SHALL BE RESTRICTED TO USE BY THE EXISTING TWIN DWELLING LOCATED AT 615 S WALNUT STREET; AND THE TWO (2) PROPOSED OFF-STREET PARKING SPACES LOCATED ALONG MECHANICS ALLEY SHALL BE RESTRICTED TO USE BY THE EXISTING TWIN DWELLING LOCATED AT 617 S WALNUT STREET

WAIVER REQUESTS:

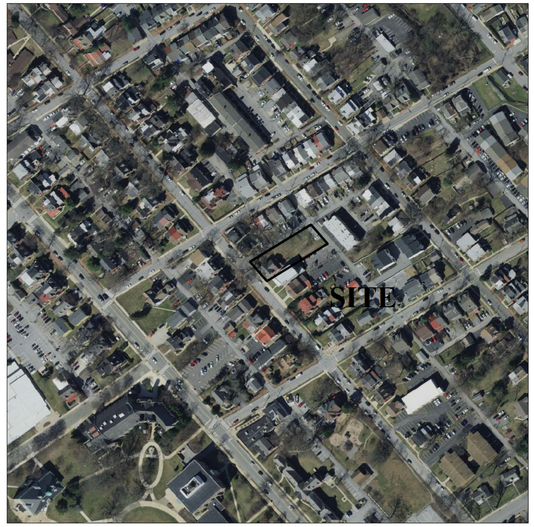
THE FOLLOWING WAIVERS ARE REQUESTED FROM THE WEST CHESTER BOROUGH SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

1 §97-27 F(7) - THE APPLICANT REQUESTS A WAIVER FROM THE REFERENCED SECTION OF THE ORDINANCE THAT REQUIRES 75-FEET CLEAR-SIGHT TRIANGLES BE PROVIDED AT THE ALL STREET INTERSECTIONS THE 75-FOOT CLEAR-SIGHT TRIANGLE AT THE WILLOW ALLEY INTERSECTION WITH MECHANICS ALLEY IS BLOCKED BY EXISTING BUILDINGS ON ADJOINING PROPERTIES AND THE PROPOSED NEW DWELLINGS ON OUR SITE
2 §97-38 2 - THE APPLICANT REQUESTS A WAIVER FROM THE REFERENCED SECTION OF THE ORDINANCE THAT REQUIRES A TRANSPORTATION IMPACT STUDY THE PROJECT PROPOSES FIVE ATTACHED SINGLE FAMILY HOMES IN AN URBAN AREA, THE ADDITIONAL DAILY TRIPS GENERATED FROM THIS DEVELOPMENT ARE RELATIVELY MINOR, AND WILL NOT HAVE AN ADVERSE EFFECT ON THE TRANSPORTATION NETWORK



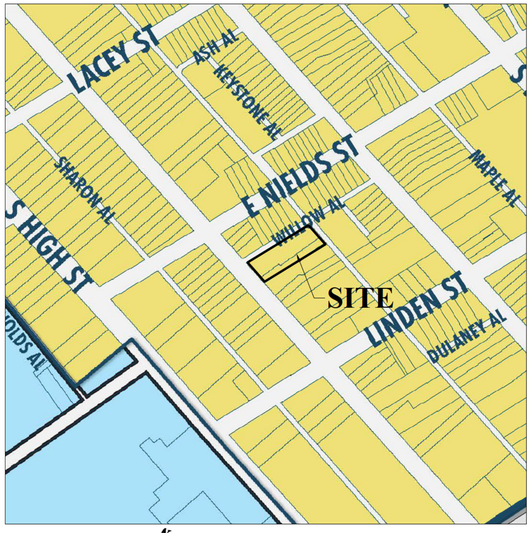
N

USGS MAP
SCALE 1:200



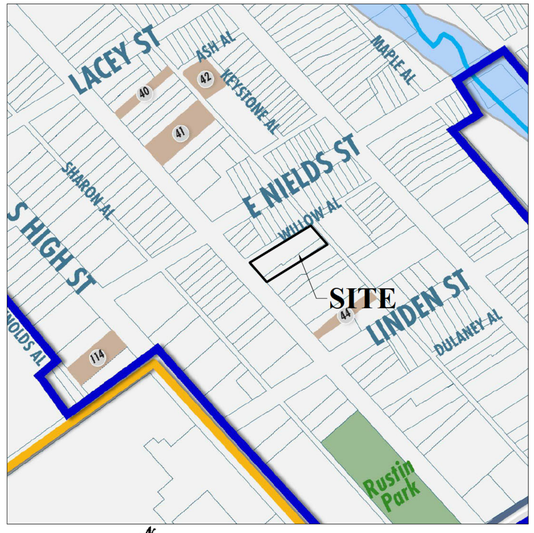
N

AERIAL MAP
SCALE 1:200



N

ZONING MAP
SCALE 1:200



N

HISTORIC RESOURCE PROTECTION MAP
SCALE 1:200

SHEET INDEX

Sheet Number	Sheet Title
1	COVER SHEET
2	TITLE PLAN
3	EXISTING CONDITIONS & DEMOLITION PLAN
4	LAYOUT PLAN
5	IMPROVEMENTS CONSTRUCTION PLAN
6	PCSM PLAN
7	PCSM DETAILS 'A'
8	PCSM DETAILS 'B'
9	CONSERVATION & EROSION & SEDIMENT CONTROL PLAN
10	EROSION & SEDIMENT CONTROL DETAILS
11	LANDSCAPE PLAN
12	LIGHTING PLAN
13	CONSTRUCTION DETAILS 'A'
14	CONSTRUCTION DETAILS 'B'
15	TRUCK TURNING PLAN

ZONING DATA
NC-2 NEIGHBORHOOD CONSERVATION DISTRICT
SINGLE-FAMILY ATTACHED

DESCRIPTION	REQUIRED		EXISTING		PROPOSED
			UPI: 1-10-92	UPI: 1-10-93	
MINIMUM LOT AREA	MEDIAN AREA OF LOTS ON THE BLOCK FACE	1,936 S F (0 04 AC)	4,128 S F (0 095 ACRES)	9,888 S F (0 227 ACRES)	14,016 S F (0 322 ACRES)
LOT WIDTH, MINIMUM (ATTACHED)	20 FEET		16 8 FEET*	55 23 FEET	72 03 FEET
BUILD-TO LINE/FRONT YARD	MATCH EXISTING ADJACENT SETBACKS		17 FEET	16 9 FEET	16 9 FEET (WALNUT ST)
SIDE YARD, MINIMUM	EXISTING ADJACENT, 10 FEET MINIMUM		3 2 FEET/0 FEET	31 2 FEET /0 FEET	3 2 FEET
REAR YARD, MINIMUM	20 FEET		132 5 FEET	133 5 FEET	20 5 FEET
MAX IMPERVIOUS COVERAGE	50% (LOTS OVER 5,000 S F) 80% (LOTS UNDER 4,000 S F)		30 4% (1,253 S F)	16 9% (1,670 S F)	49 6% (6,950 S F)
MAX BUILDING COVERAGE	35% (LOTS OVER 5,000 S F) 45% (LOTS UNDER 4,000 S F)		18 5% (764 S F)	76 5% (638 S F)	34 9% (4,896 S F)
MAXIMUM BUILDING HEIGHT	35 FEET		< 35 FEET	< 35 FEET	< 35 FEET
* EXISTING NON-CONFORMITY					

CERTIFICATION OF OWNERSHIP AND ACKNOWLEDGMENT OF SUBDIVISION AND LAND DEVELOPMENT PLANS

ON THIS, THE _____ DAY OF _____, 20 ____, BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED _____, WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSES AND SAYS THAT HE IS THE OWNER AND/OR EQUITABLE OWNER OF THE PROPERTY SHOWN ON THIS PLAN, AND THAT HE ACKNOWLEDGES THAT THE SAME TO BE HIS ACT AND PLAN AND DESIRES THE SAME TO BE RECORDED AS SUCH ACCORDING TO LAW

WITNESS MY HAND AND SEAL THE DAY AND DATE ABOVE WRITTEN MY COMMISSION EXPIRES:

_____ _____
(NOTARY PUBLIC OR OTHER OFFICER)

REVIEWED BY THE PLANNING COMMISSION OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, THIS _____ DAY OF ____, 20___

REVIEWED BY THE CHESTER COUNTY PLANNING COMMISSION THIS _____ DAY OF _____, 20___

CCPC FILE # _____

SECRETARY

REVIEWED BY THE BOROUGH ENGINEER OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA THIS _____ DAY OF _____, 20___

BOROUGH ENGINEER

APPROVED BY THE BOROUGH COUNCIL OF THE BOROUGH OF WEST CHESTER, CHESTER COUNTY, PENNSYLVANIA, THIS _____ DAY OF _____, 20___

RECORDER OF DEEDS

RECORDED IN THE OFFICE FOR THE RECORDING OF DEEDS IN AND FOR THE COUNTY OF CHESTER, AT WEST CHESTER, PA, IN PLAN BOOK _____, PAGE NO _____ ON THE _____ DAY OF _____, 20___

RECORDER OF DEEDS

ENGINEER'S CERTIFICATION:

I, SCOTT J. ZWIZANSKI, ON THIS DATE 06/26/2026, HEREBY CERTIFY THAT THE PLANS ARE IN CONFORMITY WITH ZONING, BUILDING, SUBDIVISION AND OTHER APPLICABLE BOROUGH CHAPTERS AND REGULATIONS IN ANY INSTANCE WHERE SUCH PLANS DO NOT CONFORM, EVIDENCE SHALL BE PRESENTED THAT AN EXCEPTION OR MODIFICATION HAS BEEN GRANTED OR AUTHORIZED

SCOTT J. ZWIZANSKI, P.E.

APPLICANT'S CERTIFICATION:

I, _____, ON THIS DATE _____, HEREBY CERTIFY THAT THE PLANS ARE IN CONFORMITY WITH ENGINEERING, ZONING, SUBDIVISION, BUILDING, SANITATION, AND OTHER APPLICABLE BOROUGH CHAPTERS AND REGULATIONS IF PROPOSED ZONING CHANGES ARE SHOWN, THEN THE SUGGESTED LOCATIONS OF BUILDINGS IN CONNECTION THEREWITH ARE IDENTIFIED HEREON

APPLICANT

OWNER OF RECORD:

TRBL WALNUT, LLC
842 TOPAZ DRIVE
WEST CHESTER, PA 19382

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM, INC. 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA act 172 of 1986 requires
three working days notice
Serial Numbers:
20253170513, 20253170655, 20253170702

PENNSYLVANIA ACT 187 REQUIREMENTS
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

INLAND DESIGN
Engineering, Surveying & Land Planning
[redacted]
www.InLandDesign.net
[redacted]

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SCOTT J. ZWIZANSKI — ENGINEER — PE091752

No.	Date:	Description:
1	06/26/2026	REVISED PER TWP REVIEWS

PRELIMINARY LAND DEVELOPMENT PLAN

Date: 4/27/2026
Scale: AS NOTED
Drawn by: MMH
Checked by: SJZ
Project No. 12706

COVER SHEET FOR
TRBL WALNUT, LLC
615 & 617 S. WALNUT STREET
WEST CHESTER, PA 19382
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 1 OF 15

UPI: 1-10-92 | DEED BOOK 9953 | PAGE 1611 & UPI: 1-10-93 | DEED BOOK 9953 | PAGE 1603

N:\12700\12706\dwg\Sheets\Preliminary Submission\1 COVER SHEET.dwg

N/L
QUYNH D. NGUYEN & JULIE A. NGUYEN
UPI: 1-9-1242
D.B. 9817, PG. 984

N/L
DAVID B. & GRETCHEN C. YARNALL
UPI: 1-9-1246
D.B. 5132, PG. 1747

N/L
GREGORY A. & VALERIE H. THOMAS
UPI: 1-9-1247
D.B. 749, PG. 187

N/L
PATRICK HEGARTY & BRIDGET MCKEEVER
UPI: 1-9-1248
D.B. 11336, PG. 1631

N/L
JUDITH GOLDBERG
UPI: 1-9-1249
D.B. 10977, PG. 591

N/L
RICHARD W. & MARTHA B. COYLE
UPI: 1-9-1250
D.B. 501, PG. 33

N/L
TIMOTHY C. GRAHAM
UPI: 1-9-1251
D.B. 8974, PG. 1279

N/L
REINALDO & CHARROL NIEVES
UPI: 1-10-94
D.B. 4192, PG. 328

WILLOW ALLEY

16' R/W

N/L
THOMAS H. & EILEEN S. KUKODA
UPI: 1-9-1235
D.B. 362, PG. 558

N/L
STEPHEN T. & CHRISTINA M. SMITH
UPI: 1-9-1236
D.B. 5956, PG. 1829

SOUTH WALNUT STREET

N/L
BRIAN M. MCFADDEN & ELLEN M. MCFADDEN
UPI: 1-9-1237
D.B. 10328, PG. 621

50' R/W

N/L
PENNSYLVANIA TAU ALUMI BOARD OF SIGMA
UPI: 1-9-1238
D.B. M58, PG. 476

N/L
BRIAN M. MCFADDEN & ELLEN M. MCFADDEN
UPI: 1-9-1239
D.B. 10328, PG. 625

N58°42'17"E 199.55'

72.03'

S41°17'43"E

UPI: 1-10-93

64.80'

N48°42'17"E

S41°17'43"E 6.90'

N58°42'17"E

LOT LINE TO BE EXTINGUISHED

133.75'

MECHANICS ALLEY

16' R/W

70.61'

N41°17'43"W 199.30'

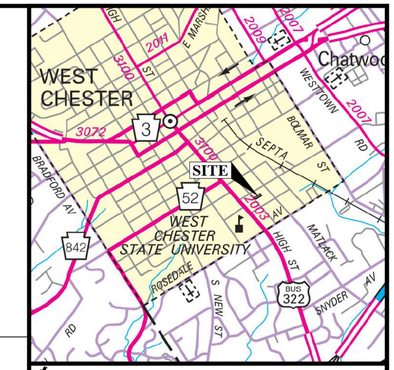
S58°18'55"W 60.81'

UPI: 1-10-92

LARGE PIN (FND & HELD FOR LINE)

N/L
RICHARD HERRING, JR.
UPI: 1-10-91
D.B. 5030, PG. 1603

N/L
J. O'CONNELL PROPERTIES L.P.
UPI: 1-10-102.1
D.B. 8867, PG. 138



LOCATION MAP
SCALE: 1" = 2000'

TITLE NOTES:

1. THE PURPOSE OF THIS PLAN IS TO CONSOLIDATE TAX PARCELS 1-10-92 AND 1-10-93 INTO ONE LOT BY EXTINGUISHING THE SHARED LOT LINE BETWEEN THEM RESULTING IN A PROPOSED TRACT AREA OF 14,016 S F (0 322 ACRES)
2. THERE ARE NO STREETS, RIGHTS-OF-WAY, OR ANY PUBLIC USE INTENDED FOR DEDICATION BY THIS PLAN
3. PERMANENT PINS/MARKERS SHALL BE SET AT ALL CORNERS AND/OR ANGLE POINTS OF THE CONSOLIDATED PARCELS NO OCCUPANCY PERMITS WILL BE ISSUED AND NO PUBLIC IMPROVEMENTS WILL BE ACCEPTED BY THE BOROUGH UNTIL ALL MONUMENTS ARE IN PLACE

AREA OF TRACT

UPI: 1-10-92 GROSS LOT AREA	4,128 S F (0 095 ACRES)
UPI: 1-10-93 GROSS LOT AREA	9,888 S F (0 227 ACRES)
TOTAL TRACT GROSS LOT AREA	14,016 S F (0 322 ACRES)

OWNER OF RECORD:

TRBL WALNUT, LLC
842 TOPAZ DRIVE
WEST CHESTER, PA 19382

LEGEND

- PROPERTY BOUNDARY
- PROPERTY BOUNDARY TO BE EXTINGUISHED
- ADJOINING PROPERTY LINE
- EXISTING RIGHT OF WAY LINE

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA act 172 of 1986 requires
three working days notice
Serial Numbers:
20253170513, 20253170655, 20253170702

PENNSYLVANIA ACT 187 REQUIREMENTS:
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-10-92 | DEED BOOK 9953 | PAGE 1611 & UPI: 1-10-93 | DEED BOOK 9953 | PAGE 1603

INLAND DESIGN
Engineering, Surveying & Land Planning
[redacted]
www.InLandDesign.net
[redacted]

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL JASON E. HARMON LAND SURVEYOR SU075782

No.	Date:	Description:
1	06/26/2026	REVISED PER TWP REVIEWS

PRELIMINARY LAND DEVELOPMENT PLAN

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

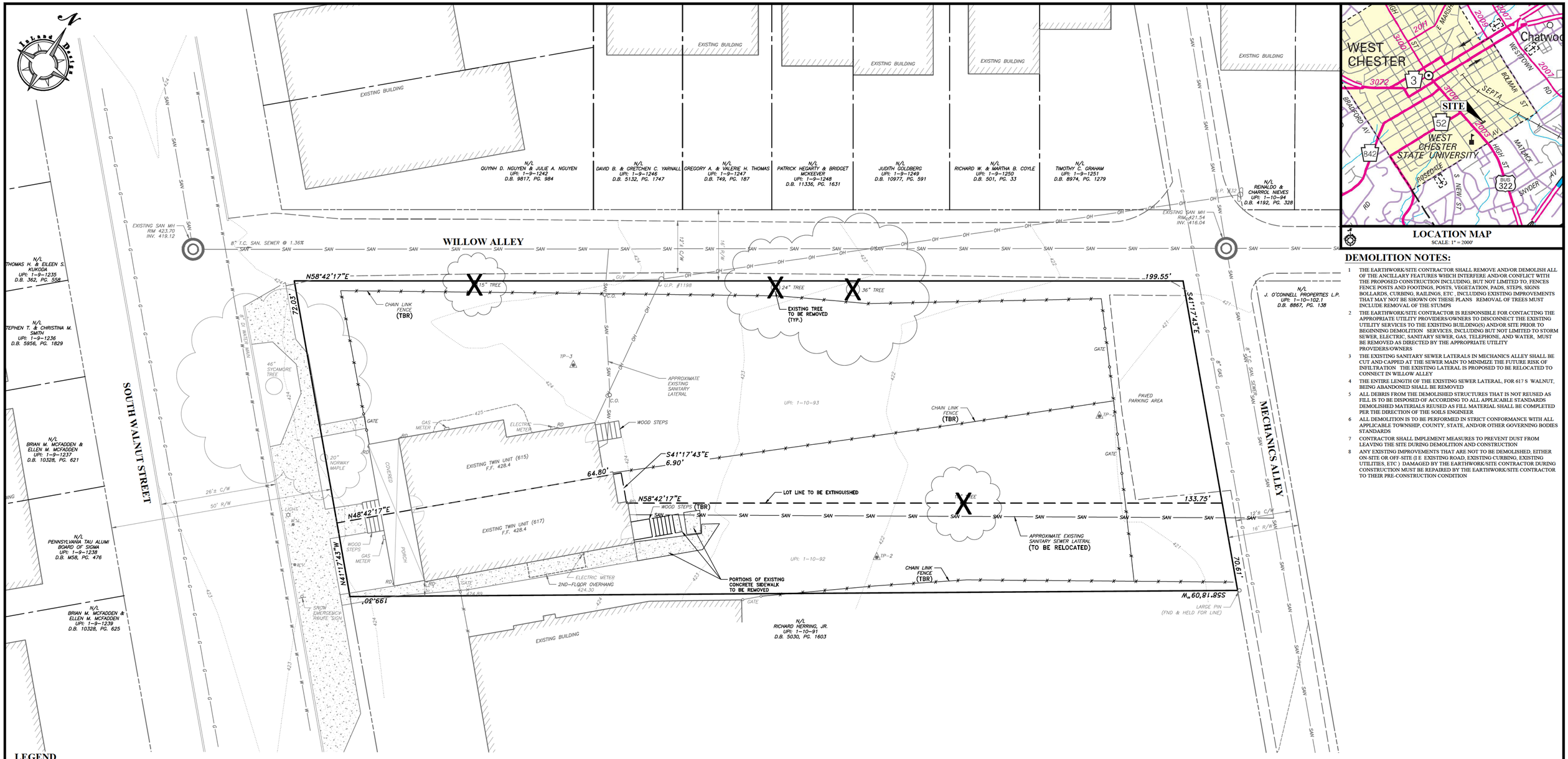
Date: 4/27/2026
Scale: 1" = 10'
Drawn by: MMH
Checked by: JEH
Project No. 12706

TITLE PLAN FOR

TRBL WALNUT, LLC
615 & 617 S. WALNUT STREET
WEST CHESTER, PA 19382
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 2 OF 15

N:\12700\12706\dwg\Sheets\Preliminary Submission\2 TITLE PLAN.dwg



LOCATION MAP
SCALE: 1" = 2000'

DEMOLITION NOTES:

1. THE EARTHWORK/SITE CONTRACTOR SHALL REMOVE AND/OR DEMOLISH ALL OF THE ANCILLARY FEATURES WHICH INTERFERE AND/OR CONFLICT WITH THE PROPOSED CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, FENCES FENCE POSTS AND FOOTINGS, POSTS, VEGETATION, PADS, STEPS, SIGNS BOLLARDS, CURBING, RAILINGS, ETC INCLUDING EXISTING IMPROVEMENTS THAT MAY NOT BE SHOWN ON THESE PLANS REMOVAL OF TREES MUST INCLUDE REMOVAL OF THE STUMPS
2. THE EARTHWORK/SITE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE APPROPRIATE UTILITY PROVIDERS/OWNERS TO DISCONNECT THE EXISTING UTILITY SERVICES TO THE EXISTING BUILDING(S) AND/OR SITE PRIOR TO BEGINNING DEMOLITION SERVICES, INCLUDING BUT NOT LIMITED TO STORM SEWER, ELECTRIC, SANITARY SEWER, GAS, TELEPHONE, AND WATER, MUST BE REMOVED AS DIRECTED BY THE APPROPRIATE UTILITY PROVIDERS/OWNERS
3. THE EXISTING SANITARY SEWER LATERALS IN MECHANICS ALLEY SHALL BE CUT AND CAPPED AT THE SEWER MAIN TO MINIMIZE THE FUTURE RISK OF INFILTRATION THE EXISTING LATERAL IS PROPOSED TO BE RELOCATED TO CONNECT IN WILLOW ALLEY
4. THE ENTIRE LENGTH OF THE EXISTING SEWER LATERAL, FOR 617 S WALNUT, BEING ABANDONED SHALL BE REMOVED
5. ALL DEBRIS FROM THE DEMOLISHED STRUCTURES THAT IS NOT REUSED AS FILL IS TO BE DISPOSED OF ACCORDING TO ALL APPLICABLE STANDARDS DEMOLISHED MATERIALS REUSED AS FILL MATERIAL SHALL BE COMPLETED PER THE DIRECTION OF THE SOILS ENGINEER
6. ALL DEMOLITION IS TO BE PERFORMED IN STRICT CONFORMANCE WITH ALL APPLICABLE TOWNSHIP, COUNTY, STATE, AND/OR OTHER GOVERNING BODIES STANDARDS
7. CONTRACTOR SHALL IMPLEMENT MEASURES TO PREVENT DUST FROM LEAVING THE SITE DURING DEMOLITION AND CONSTRUCTION
8. ANY EXISTING IMPROVEMENTS THAT ARE NOT TO BE DEMOLISHED, EITHER ON-SITE OR OFF-SITE (I E EXISTING ROAD, EXISTING CURBING, EXISTING UTILITIES, ETC) DAMAGED BY THE EARTHWORK/SITE CONTRACTOR DURING CONSTRUCTION MUST BE REPAIRED BY THE EARTHWORK/SITE CONTRACTOR TO THEIR PRE-CONSTRUCTION CONDITION

LEGEND

- PROPERTY BOUNDARY
- EXISTING RIGHT OF WAY LINE
- EXISTING 1' CONTOUR W/ ELEVATION
- EXISTING 5' CONTOUR W/ ELEVATION
- EXISTING CONCRETE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING FENCE LINE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRES
- TO BE REMOVED

MEDIAN LOT AREA CALCULATION

UPI:	PROPERTY LOCATION:	PROPERTY TYPE:	Lot Area (AC)	Lot Area(SF)	Area/unit(SF)
1-10-84	633 S WALNUT ST	3 Apts. & STORE	0.1351	5,883	1,961
1-10-86	631 S WALNUT ST	Dwelling	0.1024	4,460	4,460
1-10-87	629 S WALNUT ST	Dwelling	0.1286	5,600	5,600
1-10-88	627 S WALNUT ST	Dwelling	0.3107	13,532	13,532
1-10-89	625 S WALNUT ST	2 Apts.	0.1000	4,356	2,178
1-10-90	623 S WALNUT ST	2 Apts.	0.1000	4,356	2,178
1-10-91	621 S WALNUT ST	8 Apts.	0.1955	8,514	1,064
1-10-92	617 S. WALNUT ST	Dwelling	0.0872	3,800	3,800
1-10-93	615 S. WALNUT ST	Dwelling	0.2523	10,990	10,990
1-9-1242	607 S WALNUT ST	Dwelling	0.0366	1,596	1,596
1-9-1243	605 S WALNUT ST	Dwelling	0.0386	1,680	1,680
1-9-1244	603 S WALNUT ST	Dwelling	0.0405	1,764	1,764
1-9-1245	601 S WALNUT ST	Dwelling	0.0444	1,936	1,936
			Median Value Of Lots On The Block Face:		1,936

EXISTING IMPERVIOUS COVERAGE

	UPI: 1-10-92	UPI: 1-10-93	TOTAL TRACT
DWELLING	764 S F	638 S F	1,402 S F
COVERED PORCH	112 S F	112 S F	224 S F
CONCRETE	326 S F	53 S F	379 S F
PAVING	0 S F	834 S F	834 S F
WOOD STEPS	51 S F	33 S F	84 S F
TOTAL EXISTING IMPERVIOUS	1,253 S F	1,670 S F	2,923 S F

AREA OF TRACT

UPI: 1-10-92 GROSS LOT AREA	4,128 S F (0 095 ACRES)
UPI: 1-10-93 GROSS LOT AREA	9,888 S F (0 227 ACRES)
TOTAL TRACT GROSS LOT AREA	14,016 S F (0 322 ACRES)

SOILS DESCRIPTION

SYMBOL	DESCRIPTION	SLOPE	AVAILABLE WATER CAPACITY	DRAINAGE CLASS	DEPTH TO S H W T	DEPTH TO BEDROCK	CAPABILITY UNIT	HYDROLIC SOIL GROUP
UrlB	URBAN LAND-GLADSTONE COMPLEX	0% - 8%	MODERATE ABOUT 6 9 INCHES	WELL DRAINED	MORE THAN 80 INCHES	60 TO 100 INCHES	2e	A

OWNER OF RECORD:

TRBL WALNUT, LLC
842 TOPAZ DRIVE
WEST CHESTER, PA 19382

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA act 172 of 1986 requires
three working days notice
Serial Numbers:
20253170513, 20253170655, 20253170702

PENNSYLVANIA ACT 187 REQUIREMENTS:
InLand Design, LLC does not guarantee the accuracy of the locations For existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-10-92 | DEED BOOK 9953 | PAGE 1611 & UPI: 1-10-93 | DEED BOOK 9953 | PAGE 1603

INLAND DESIGN
Engineering, Surveying & Land Planning
[redacted]

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL ENGINEER SCOTT T. ZWIZANSKI PE091752

No.	Date:	Description:
1	06/26/2026	REVISED PER TWP REVIEWS

PRELIMINARY LAND DEVELOPMENT PLAN

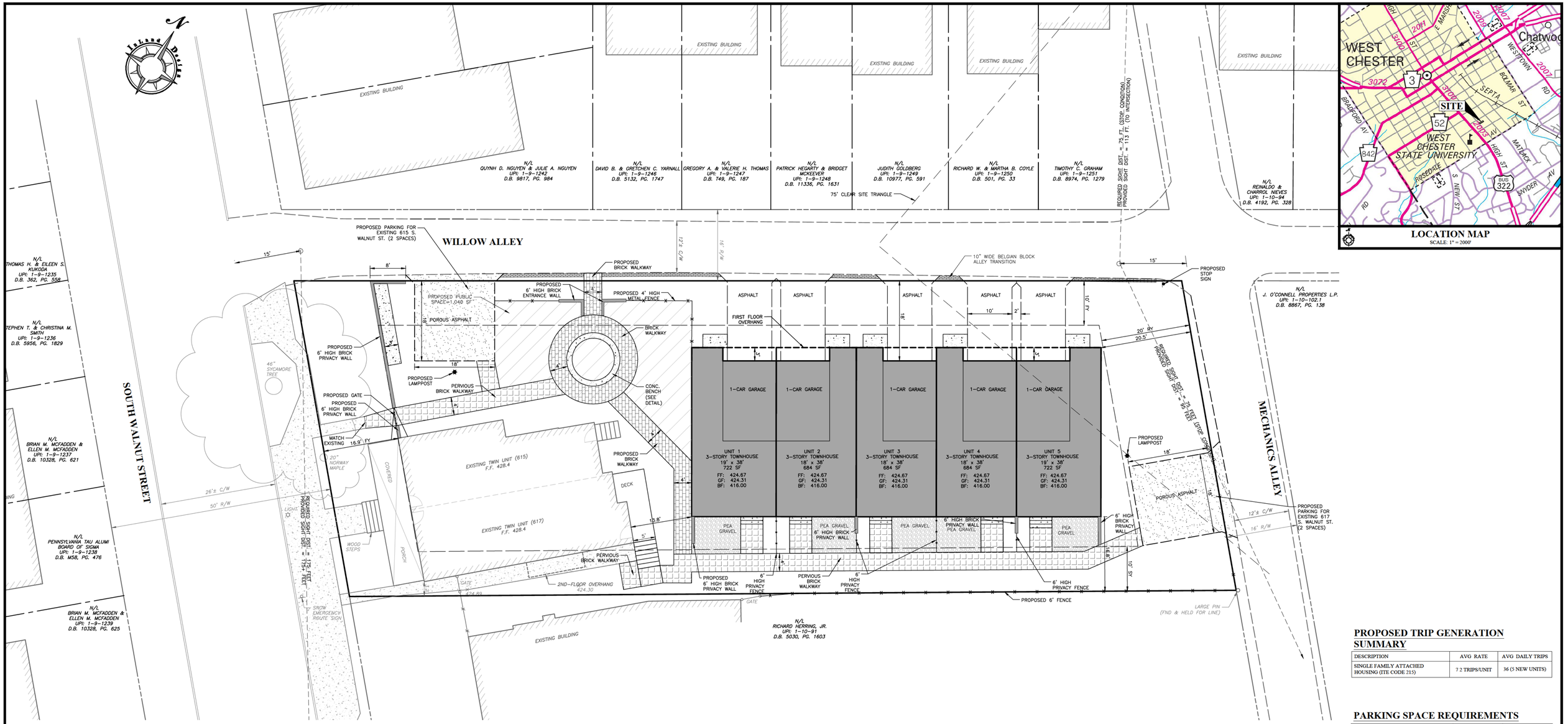
GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

Date: 4/27/2026
Scale: 1" = 10'
Drawn by: MMH
Checked by: SJZ
Project No. 12706

EXISTING CONDITIONS & DEMOLITION PLAN FOR
TRBL WALNUT, LLC
615 & 617 S. WALNUT STREET
WEST CHESTER, PA 19382
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 3 OF 15

N:\12700\12706\dwg\Sheets\Preliminary Submission\3 EXISTING CONDITIONS & DEMOLITION PLAN.dwg



LEGEND

- PROPERTY BOUNDARY
- EXISTING RIGHT OF WAY LINE
- EXISTING 1' CONTOUR W/ ELEVATION
- EXISTING 5' CONTOUR W/ ELEVATION
- EXISTING CONCRETE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING FENCE LINE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRES
- PROPOSED SETBACK LINE
- PROPOSED ROAD / PAVING
- PROPOSED POROUS ASPHALT
- PROPOSED CONCRETE SIDEWALK
- PROPOSED BELGIAN BLOCK ALLEY TRANSITION
- PROPOSED IMPERVIOUS BRICK
- PROPOSED PERVIOUS BRICK
- PROPOSED COMMON AREA PUBLIC SPACE

ZONING DATA
NC-2 NEIGHBORHOOD CONSERVATION DISTRICT
SINGLE-FAMILY ATTACHED

DESCRIPTION	REQUIRED		EXISTING UPI 1-10-92	EXISTING UPI 1-10-93	PROPOSED
MINIMUM LOT AREA	MEDIAN AREA OF LOTS ON THE BLOCK FACE	1,936 S F (0 04 AC)	4,128 S F (0 095 ACRES)	9,888 S F (0 227 ACRES)	14,016 S F (0 322 ACRES)
LOT WIDTH, MINIMUM (ATTACHED)	20 FEET		16 8 FEET*	55 23 FEET	72 03 FEET
BUILD-TO LINE/FRONT YARD	MATCH EXISTING ADJACENT SETBACKS		17 FEET	16 9 FEET	16 9 FEET (WALNUT ST)
SIDE YARD, MINIMUM	EXISTING ADJACENT, 10 FEET MINIMUM		3 2 FEET/0 FEET	31 2 FEET /0 FEET	3 2 FEET
REAR YARD, MINIMUM	20 FEET		132 5 FEET	133 5 FEET	20 5 FEET
MAX IMPERVIOUS COVERAGE	50% (LOTS OVER 5,000 S F) 80% (LOTS UNDER 4,000 S F)		30 4% (1,253 S F)	16 9% (1,670 S F)	49 6% (6,950 S F)
MAX BUILDING COVERAGE	35% (LOTS OVER 5,000 S F) 45% (LOTS UNDER 4,000 S F)		18 5% (764 S F)	76 5% (638 S F)	34 9% (4,896 S F)
MAXIMUM BUILDING HEIGHT	35 FEET		< 35 FEET	< 35 FEET	< 35 FEET

* EXISTING NON-CONFORMITY

PROPOSED BUILDING COVERAGE:

DESCRIPTION	PROPOSED
EXISTING DWELLINGS	1,401 S F
PROPOSED DWELLINGS	3,495 S F
TOTAL BUILDING COVERAGE	4,896 S F
BUILDING COVERAGE PERCENTAGE = (TOTAL BUILDING COVERAGE / LOT AREA) X 100	

PROPOSED POROUS/PERVIOUS PAVING/WALKWAY COVERAGE:

DESCRIPTION	PROPOSED
PROPOSED PERVIOUS BRICK WALKWAY	1,249 S F
PROPOSED POROUS ASPHALT	664 S F
PROPOSED PERVIOUS PEA GRAVEL	408 S F
TOTAL	2,321 S F

PROPOSED TRIP GENERATION SUMMARY

DESCRIPTION	AVG RATE	AVG DAILY TRIPS
SINGLE FAMILY ATTACHED HOUSING (ITE CODE 215)	7 2 TRIPS/UNIT	36 (5 NEW UNITS)

PARKING SPACE REQUIREMENTS

DESCRIPTION	REQUIRED PER DWELLING	PROPOSED PER DWELLING
SINGLE FAMILY DWELLING	2	2
TOTAL SPACES PROVIDED (7 DWELLINGS)		14

PROPOSED IMPERVIOUS COVERAGE:

DESCRIPTION	PROPOSED
EXISTING BUILDING	1,401 S F
EXISTING FRONT PORCH	224 S F
EXISTING CONCRETE	283 S F
EXISTING DECK/STAIRS	47 S F
PROPOSED BUILDING	3,495 S F
PROPOSED DECK/STAIRS	124 S F
PROPOSED WALLS	50 S F
PROPOSED ASPHALT DRIVEWAYS	754 S F
PROPOSED IMPERVIOUS WALKWAYS/STEPS	619 S F
TOTAL IMPERVIOUS	6,950 S F

OWNER OF RECORD:

TRBL WALNUT, LLC
842 TOPAZ DRIVE
WEST CHESTER, PA 19382

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

Pennsylvania One Call System
PA act 172 of 1986 requires three working days notice
Serial Numbers:
20253170513, 20253170655, 20253170702

PENNSYLVANIA ACT 187 REQUIREMENTS:
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-10-92 | DEED BOOK 9953 | PAGE 1611 & UPI: 1-10-93 | DEED BOOK 9953 | PAGE 1603

InLand Design
Engineering, Surveying & Land Planning

COMMONWEALTH OF PENNSYLVANIA
Registered
PROFESSIONAL
SCOTT D. ZWIZANSKI
ENGINEER
PE091752

No.	Date:	Description:
1	06/26/2026	REVISED PER TWP REVIEWS

PRELIMINARY LAND DEVELOPMENT PLAN

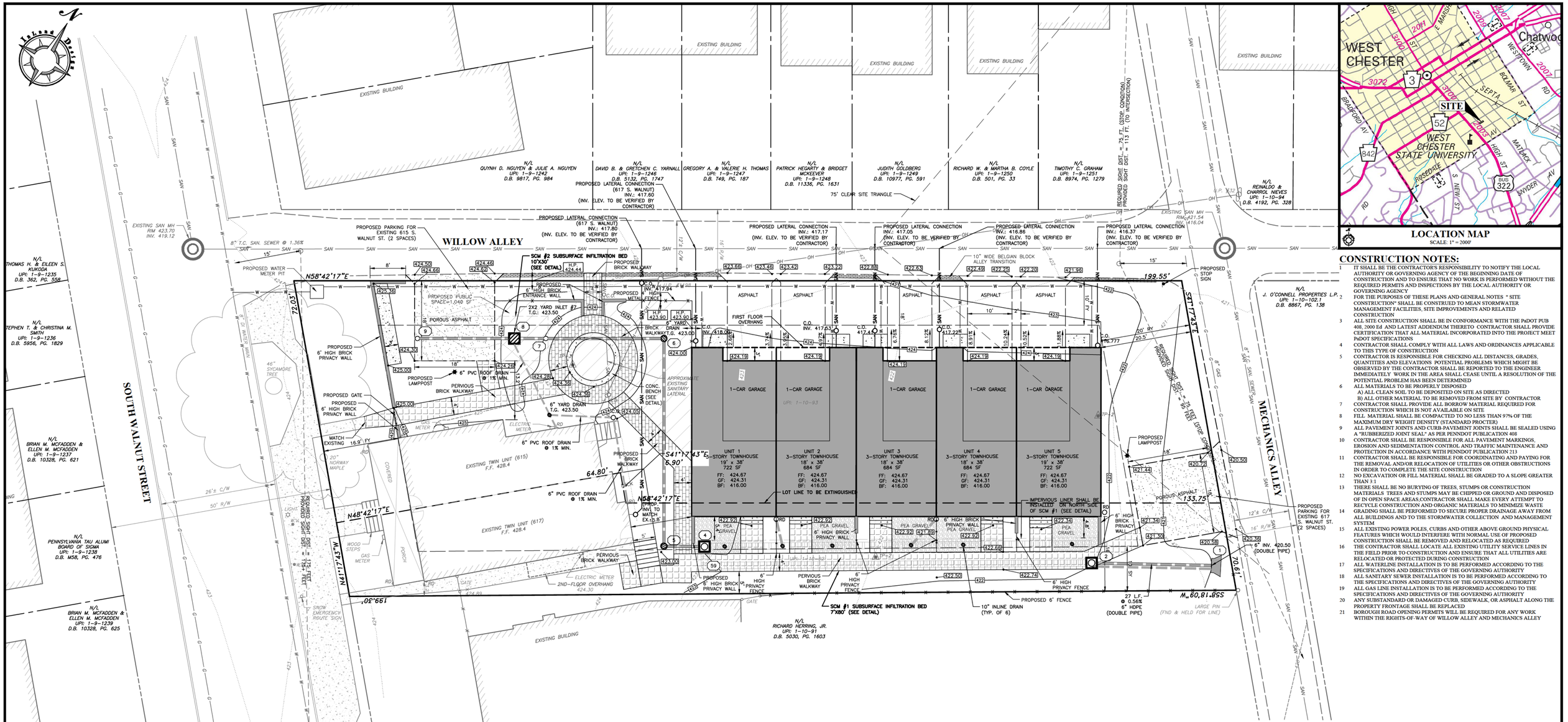
GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

Date: 4/27/2026
Scale: 1" = 10'
Drawn by: MMH
Checked by: SJZ
Project No. 12706

LAYOUT PLAN FOR
TRBL WALNUT, LLC
615 & 617 S. WALNUT STREET
WEST CHESTER, PA 19382
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 4 OF 15

N:\12700\12706\dwg\Sheets\Preliminary Submission\4 LAYOUT PLAN.dwg



LOCATION MAP
SCALE: 1" = 2000'

CONSTRUCTION NOTES:

1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE LOCAL AUTHORITY OR GOVERNING AGENCY OF THE BEGINNING DATE OF CONSTRUCTION AND TO ENSURE THAT NO WORK IS PERFORMED WITHOUT THE REQUIRED PERMITS AND INSPECTIONS BY THE LOCAL AUTHORITY OR GOVERNING AGENCY
2. FOR THE PURPOSES OF THESE PLANS AND GENERAL NOTES " SITE CONSTRUCTION" SHALL BE CONSTRUED TO MEAN STORMWATER MANAGEMENT FACILITIES, SITE IMPROVEMENTS AND RELATED CONSTRUCTION
3. ALL SITE CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE PaDOT PUB 408, 2000 Ed AND LATEST ADDENDUM THERETO CONTRACTOR SHALL PROVIDE CERTIFICATION THAT ALL MATERIAL INCORPORATED INTO THE PROJECT MEET PaDOT SPECIFICATIONS
4. CONTRACTOR SHALL COMPLY WITH ALL LAWS AND ORDINANCES APPLICABLE TO THIS TYPE OF CONSTRUCTION
5. CONTRACTOR IS RESPONSIBLE FOR CHECKING ALL DISTANCES, GRADES, QUANTITIES AND ELEVATIONS POTENTIAL PROBLEMS WHICH MIGHT BE OBSERVED BY THE CONTRACTOR SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY WORK IN THE AREA SHALL CEASE UNTIL A RESOLUTION OF THE POTENTIAL PROBLEM HAS BEEN DETERMINED
6. ALL MATERIALS TO BE PROPERLY DISPOSED
   A) ALL CLEAN SOIL TO BE DEPOSITED ON SITE AS DIRECTED
   B) ALL OTHER MATERIAL TO BE REMOVED FROM SITE BY CONTRACTOR
7. CONTRACTOR SHALL PROVIDE ALL BORROW MATERIAL REQUIRED FOR CONSTRUCTION WHICH IS NOT AVAILABLE ON SITE
8. FILL MATERIAL SHALL BE COMPACTED TO NO LESS THAN 97% OF THE MAXIMUM DRY WEIGHT DENSITY (STANDARD PROCTER)
9. ALL PAVEMENT JOINTS AND CURB-PAVEMENT JOINTS SHALL BE SEALED USING A "RUBBERIZED JOINT SEAL" AS PER PENNDOT PUBLICATION 408
10. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PAVEMENT MARKINGS, EROSION AND SEDIMENTATION CONTROL AND TRAFFIC MAINTENANCE AND PROTECTION IN ACCORDANCE WITH PENNDOT PUBLICATION 213
11. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND PAYING FOR THE REMOVAL AND/OR RELOCATION OF UTILITIES OR OTHER OBSTRUCTIONS IN ORDER TO COMPLETE THE SITE CONSTRUCTION
12. NO EXCAVATION OR FILL MATERIAL SHALL BE GRADED TO A SLOPE GREATER THAN 3:1
13. THERE SHALL BE NO BURYING OF TREES, STUMPS OR CONSTRUCTION MATERIALS TREES AND STUMPS MAY BE CHIPPED OR GROUND AND DISPOSED OF IN OPEN SPACE AREAS,CONTRACTOR SHALL MAKE EVERY ATTEMPT TO RECYCLE CONSTRUCTION AND ORGANIC MATERIALS TO MINIMIZE WASTE
14. GRADING SHALL BE PERFORMED TO SECURE PROPER DRAINAGE AWAY FROM ALL BUILDINGS AND TO THE STORMWATER COLLECTION AND MANAGEMENT SYSTEM
15. ALL EXISTING POWER POLES, CURBS AND OTHER ABOVE GROUND PHYSICAL FEATURES WHICH WOULD INTERFERE WITH NORMAL USE OF PROPOSED CONSTRUCTION SHALL BE REMOVED AND RELOCATED AS REQUIRED
16. THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITY SERVICE LINES IN THE FIELD PRIOR TO CONSTRUCTION AND ENSURE THAT ALL UTILITIES ARE RELOCATED OR PROTECTED DURING CONSTRUCTION
17. ALL WATERLINE INSTALLATION IS TO BE PERFORMED ACCORDING TO THE SPECIFICATIONS AND DIRECTIVES OF THE GOVERNING AUTHORITY
18. ALL SANITARY SEWER INSTALLATION IS TO BE PERFORMED ACCORDING TO THE SPECIFICATIONS AND DIRECTIVES OF THE GOVERNING AUTHORITY
19. ALL GAS LINE INSTALLATION IS TO BE PERFORMED ACCORDING TO THE SPECIFICATIONS AND DIRECTIVES OF THE GOVERNING AUTHORITY
20. ANY SUBSTANDARD OR DAMAGED CURB, SIDEWALK, OR ASPHALT ALONG THE PROPERTY FRONTAGE SHALL BE REPLACED
21. BOROUGH ROAD OPENING PERMITS WILL BE REQUIRED FOR ANY WORK WITHIN THE RIGHTS-OF-WAY OF WILLOW ALLEY AND MECHANICS ALLEY

LEGEND

- PROPERTY BOUNDARY
- EXISTING RIGHT OF WAY LINE
- EXISTING 1' CONTOUR W/ ELEVATION
- EXISTING 5' CONTOUR W/ ELEVATION
- EXISTING CONCRETE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING FENCE LINE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRES
- PROPOSED SETBACK LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED ROAD / PAVING
- PROPOSED CONCRETE SIDEWALK
- PROPOSED STORM STRUCTURES & PIPE
- PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED SANITARY CLEAN-OUT
- PROPOSED SANITARY LATERAL
- PROPOSED WATER VALVE
- PROPOSED FIRE HYDRANT
- PROPOSED WATER LINE

OWNER OF RECORD:
TRBL WALNUT, LLC
842 TOPAZ DRIVE
WEST CHESTER, PA 19382

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

Pennsylvania One Call System
PA act 172 of 1986 requires three working days notice
Serial Numbers:
20253170513, 20253170655, 20253170702

PENNSYLVANIA ACT 187 REQUIREMENTS
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-10-92 | DEED BOOK 9953 | PAGE 1611 & UPI: 1-10-93 | DEED BOOK 9953 | PAGE 1603

INLAND DESIGN
Engineering, Surveying & Land Planning
[redacted]
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SCOTT G. ZWIZANSKI ENGINEER PE091752

No.	Date:	Description:
1	06/26/2026	REVISED PER TWP REVIEWS

PRELIMINARY LAND DEVELOPMENT PLAN

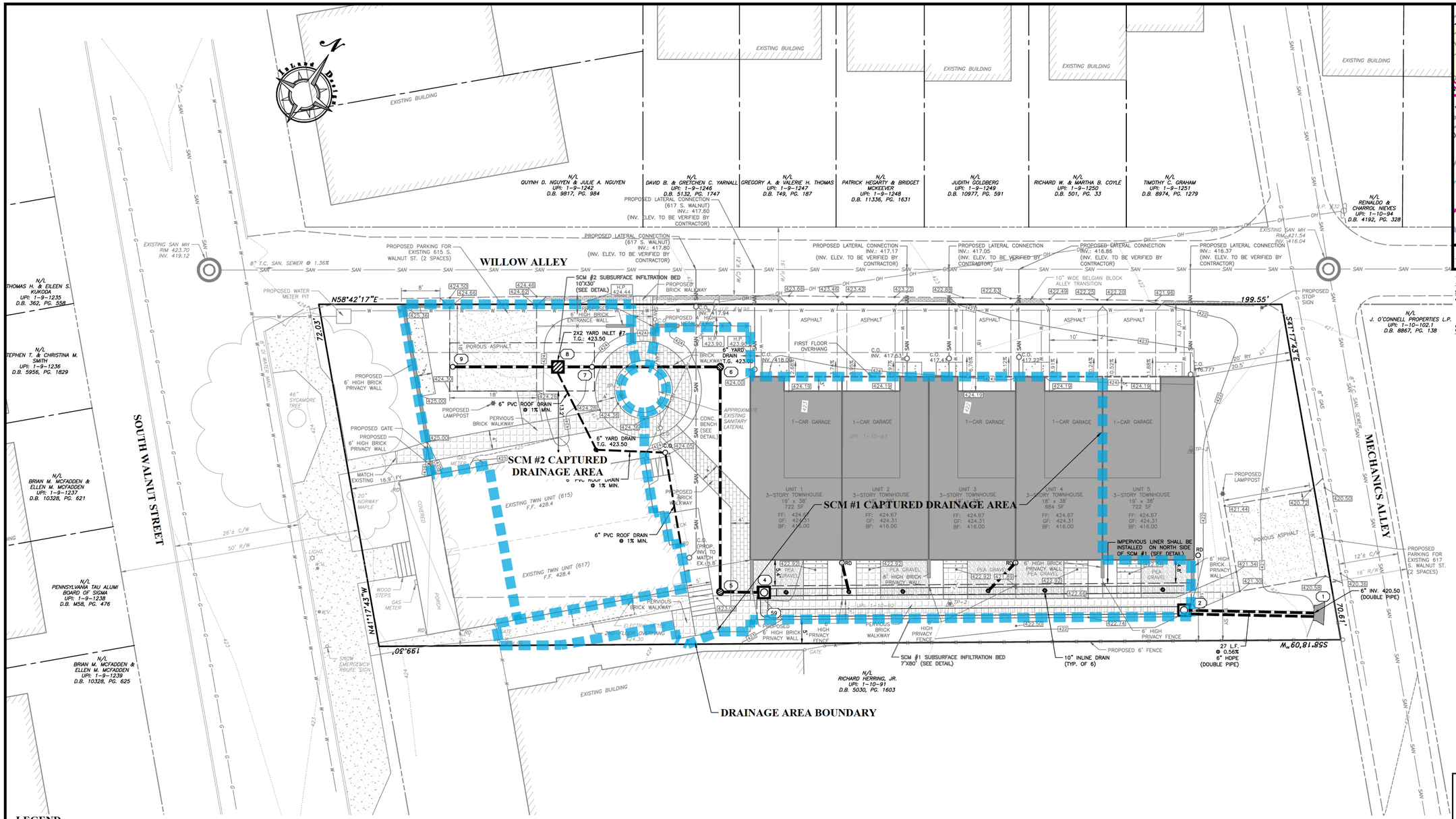
GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

Date: 4/27/2026
Scale: 1" = 10'
Drawn by: MMH
Checked by: SJZ
Project No. 12706

IMPROVEMENTS CONSTRUCTION PLAN FOR
TRBL WALNUT, LLC
615 & 617 S. WALNUT STREET
WEST CHESTER, PA 19382
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 5 OF 15

N:\12700\12706\dwg\Sheets\Preliminary Submission\5 IMPROVEMENTS CONSTRUCTION PLAN.dwg





LOCATION MAP
SCALE: 1" = 2000'

BMP SUMMARY:

STRUCTURAL BMPS

- SUBSURFACE INFILTRATION BEDS - THE INFILTRATION BEDS ARE USED TO CONTROL THE RATE AND VOLUME OF RUNOFF FROM THE SITE AND ALSO ALLEVIATE THERMAL POLLUTION BY STORING STORMWATER UNDERGROUND

SWM SITE PLAN NOTES:

1. A BLANKET EASEMENT IS HEREBY GRANTED GIVING THE BOROUGH OF WEST CHESTER THE RIGHT, BUT NOT THE OBLIGATION, TO ENTER THE PROPERTY TO PERFORM ANY REQUIRED PCSW BMP MAINTENANCE WHICH HAS NOT BEEN PROPERLY PERFORMED IN A TIMELY MANNER THE HOMEOWNER SHALL BE RESPONSIBLE FOR THE COST OF ANY MAINTENANCE WHICH IS PERFORMED BY THE TOWNSHIP
2. THE STORMWATER MANAGEMENT BMPS SHOWN ON THIS PLAN ARE PERMANENT FIXTURES AND CANNOT BE ALTERED OR REMOVED WITHOUT THE APPROVAL OF THE MUNICIPALITY
3. NO BMP OR MAN-MADE CONVEYANCE MAY BE USED BY THE OWNER OR OTHERS FOR ANY PURPOSE OTHER THAN ITS INTENDED STORMWATER CONTROL FUNCTION
4. THIS PLAN ALSO SERVES AS THE OPERATION & MAINTENANCE PLAN FOR THIS PROPERTY AND WILL BE RECORDED
5. THE APPLICANT, HIS SUCCESSOR, OR ASSIGNS SHALL MAKE RECORDS OF THE INSTALLATION, AND OF ALL MAINTENANCE AND REPAIRS OF ALL BMPS, AND SHALL RETAIN THE RECORDS FOR AT LEAST FIFTEEN YEARS THESE RECORDS SHALL BE SUBMITTED TO THE MUNICIPALITY, IF REQUESTED
6. AN AS-BUILT PLAN OF THE PROPOSED BMPS SHALL BE SUBMITTED TO THE MUNICIPALITY IN ACCORDANCE WITH THE STORMWATER ORDINANCE
7. THE APPLICANT ACKNOWLEDGES THAT, PER MUNICIPAL ORDINANCE, IT IS UNLAWFUL TO MODIFY, REMOVE, FILL, LANDSCAPE, ALTER OR IMPAIR THE EFFECTIVENESS OF, OR PLACE ANY STRUCTURE, OTHER VEGETATION, YARD WASTE, BRUSH CUTTINGS, OR OTHER WASTE OR DEBRIS INTO ANY PERMANENT STORMWATER MANAGEMENT BMP OR CONVEYANCE DESCRIBED IN THIS O&M PLAN OR TO ALLOW THE BMP OR CONVEYANCE TO EXIST IN A CONDITION WHICH DOES NOT CONFORM TO THIS O&M PLAN, WITHOUT WRITTEN APPROVAL FROM THE MUNICIPALITY
8. INFILTRATION AREAS SHALL ALSO BE PROTECTED FROM SEDIMENTATION AREAS THAT ARE ACCIDENTALLY COMPACTED OR GRADED SHALL BE REMEDIATED TO RESTORE SOIL COMPOSITION AND POROSITY ADEQUATE DOCUMENTATION TO THIS EFFECT SHALL BE SUBMITTED TO THE MUNICIPAL ENGINEER FOR REVIEW ALL AREAS DESIGNATED FOR INFILTRATION SHALL NOT RECEIVE RUNOFF UNTIL THE CONTRIBUTORY DRAINAGE AREA HAS ACHIEVED FINAL STABILIZATION
9. ALL ROOF RUNOFF WITHIN THE CAPTURED DRAINAGE AREA BOUNDARY SHALL BE CONVEYED TO THE INFILTRATION BED
10. ALL ROOF DRAINS ARE TO BE 6" SDR35 PVC AT A MINIMUM 1% SLOPE UNLESS OTHERWISE NOTED
11. GUTTERS AND ROOF DRAINS ARE TO BE FITTED WITH GUTTER GUARDS (AND/OR DEBRIS FILTERS) TO KEEP LEAVES/DEBRIS OUT OF THE INFILTRATION BED
12. FOUNDATION PERIMETER DRAINS AND SUMP PUMP OUTLETS ARE NOT TO BE DIRECTED TO STORMWATER BMPS OUTLET LOCATIONS ARE TO BE LOCATED IN THE FIELD DURING CONSTRUCTION

LEGEND

- PROPERTY BOUNDARY
- EXISTING RIGHT OF WAY LINE
- EXISTING 1' CONTOUR W/ ELEVATION
- EXISTING 5' CONTOUR W/ ELEVATION
- EXISTING CONCRETE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING FENCE LINE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRES
- PROPOSED SETBACK LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED SPOT ELEVATION
- PROPOSED ROAD / PAVING
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PERVIOUS BRICK
- PROPOSED GRAVEL COURTYARD
- PROPOSED STORM STRUCTURES & PIPE
- PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED SANITARY CLEAN-OUT
- PROPOSED SANITARY LATERAL
- PROPOSED WATER VALVE
- PROPOSED WATER LINE
- POST DRAINAGE AREA

BMP OPERATIONS AND MAINTENANCE PROCEDURES:

THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR THE PROPER CONSTRUCTION, OPERATION AND MAINTENANCE OF POST CONSTRUCTION STORMWATER MANAGEMENT BMP THE OPERATION AND MAINTENANCE REQUIREMENTS FOR THE PCSWM BMP FOR THIS PROJECT INCLUDE THE FOLLOWING:

SUBSURFACE INFILTRATION BEDS - INFILTRATION BEDS SHALL BE INSPECTED QUARTERLY AND AFTER RAINFALL EVENTS TO ENSURE THAT THEY ARE WORKING PROPERLY AND THAT DEBRIS AND/OR SEDIMENT HAS NOT ENTERED THE SYSTEM INFLOW AND OUTFLOW POINTS INTO THE INDIVIDUAL SUBSURFACE INFILTRATION BED SHOULD BE KEPT CLEAR OF LEAVES AND OTHER DEBRIS ACCUMULATED SILT AND DEBRIS THAT HAS DEPOSITED IN THE SUMPED BOTTOM OF ALL INLETS TRIBUTARY TO THE SYSTEM SHALL BE CLEANED OUT TWICE PER YEAR

FAILURE: IF A SYSTEM IS NOT DRAINING WITHIN 72 HOURS OF THE STORM EVENT, THE SYSTEM SHALL BE REPAIRED OR REPLACED AS REQUIRED

ALL INSPECTIONS OF THE POST CONSTRUCTION STORMWATER MANAGEMENT BMPS SHALL BE PERFORMED BY THE APPOINTED REPRESENTATIVE OF THE OWNER

IF ANY DEFICIENT CONDITIONS ARE FOUND DURING THE INSPECTION A PLAN FOR ADDRESSING THEM SHALL BE PREPARED WITHIN TWO MONTHS AND THE PLAN SHALL BE CARRIED OUT WITHIN SIX MONTHS

THE PROPERTY OWNER, HIS SUCCESSOR, OR ASSIGNS SHALL MAKE RECORDS OF THE INSTALLATION, AND OF ALL MAINTENANCE AND REPAIRS OF ALL BMPS, AND SHALL RETAIN THE RECORDS FOR AT LEAST FIFTEEN YEARS THESE RECORDS SHALL BE SUBMITTED TO THE MUNICIPALITY, IF REQUESTED

UNTIL THE SITE IS STABILIZED AND DURING CONSTRUCTION ACTIVITIES, ALL BMPS MUST BE MAINTAINED PROPERLY BY THE CONTRACTOR ALL PERMANENT MAINTENANCE PROCEDURES SHALL BE PERFORMED BY THE OWNER, HIS SUCCESSOR, OR ASSIGNS THE OWNER IDENTITY & CONTACT INFORMATION CAN BE FOUND AT THE BOTTOM OF THIS SHEET

OWNER OF RECORD:

TRBL WALNUT, LLC
842 TOPAZ DRIVE
WEST CHESTER, PA 19382

APPLICANT'S SWM SITE PLAN ACKNOWLEDGEMENT:

I, _____, HEREBY ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED SWM SITE PLAN SHALL BE SUBMITTED TO AND APPROVED BY THE BOROUGH, AND THAT A REVISED EROSION AND SEDIMENT CONTROL PLAN SHALL BE SUBMITTED TO, AND APPROVED BY, THE CONSERVATION DISTRICT OR BOROUGH (AS APPLICABLE) FOR A DETERMINATION OF ADEQUACY PRIOR TO CONSTRUCTION OF THE REVISED FEATURES

_____
APPLICANT

ENGINEER'S SWM SITE PLAN CERTIFICATION:

I, SCOTT J ZWIZANSKI, ON THIS DATE 6/26/2026, HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE SWM SITE PLAN MEETS ALL DESIGN STANDARDS AND CRITERIA OF THE BOROUGH OF WEST CHESTER ORDINANCE NO 94, BOROUGH OF WEST CHESTER'S STORMWATER MANAGEMENT ORDINANCE

SCOTT J ZWIZANSKI, P.E.

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SCOTT G. ZWIZANSKI — ENGINEER — PE091752

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third-party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System PA act 172 of 1986 requires three working days notice Serial Numbers: **20253170513, 20253170655, 20253170702**

PENNSYLVANIA ACT 187 REQUIREMENTS: InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-10-92 | DEED BOOK 9953 | PAGE 1611 & UPI: 1-10-93 | DEED BOOK 9953 | PAGE 1603

InLand Design
Engineering, Surveying & Land Planning
[redacted]

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL — SCOTT G. ZWIZANSKI — ENGINEER / PE091752

No.	Date:	Description:
1	06/26/2026	REVISED PER TWP REVIEWS

PRELIMINARY LAND DEVELOPMENT PLAN

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

Date:	4/27/2026
Scale:	1" = 10'
Drawn by:	MMH
Checked by:	SJZ
Project No.	12706

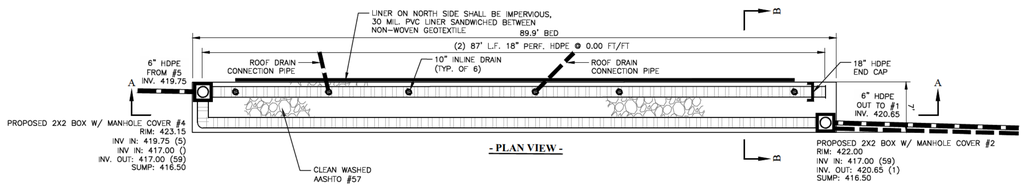
PCSM PLAN FOR

TRBL WALNUT, LLC
615 & 617 S. WALNUT STREET
WEST CHESTER, PA 19382

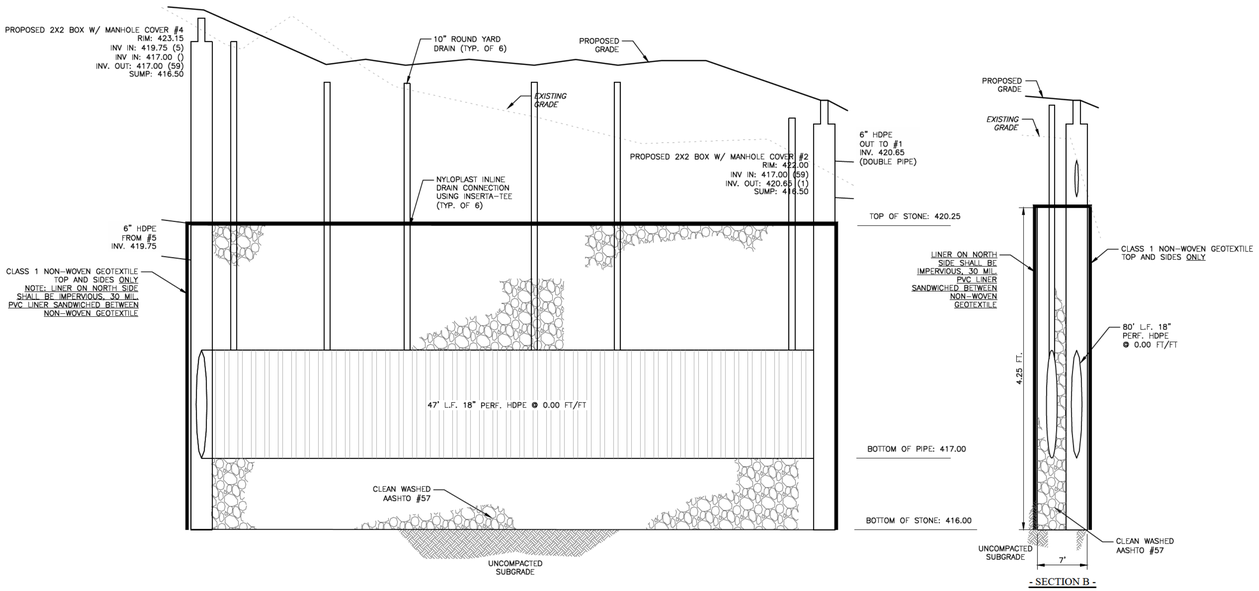
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 6 OF 15

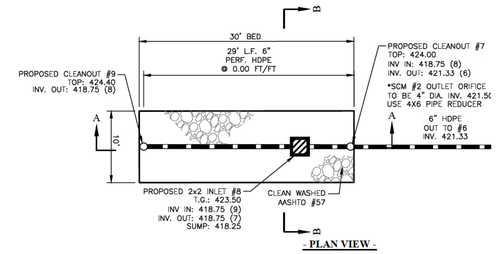
N:\12700\12706\dwg\Sheets\Preliminary Submission\6 PCSM PLAN.dwg



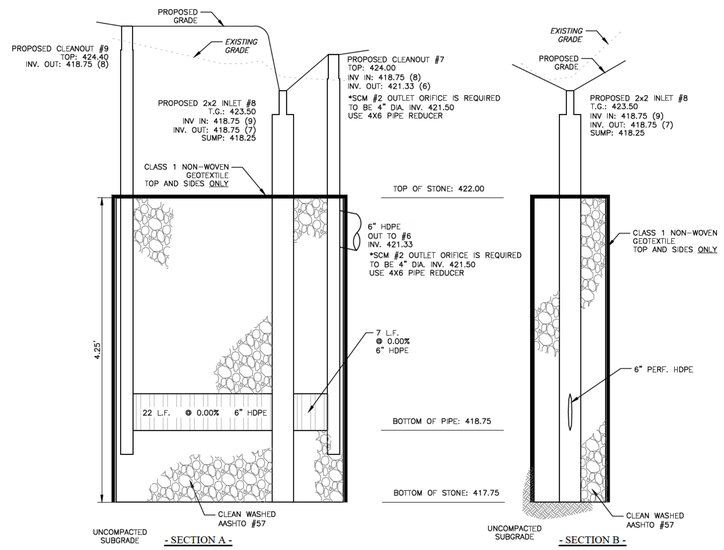
- PLAN VIEW -



SCM-1 SUBSURFACE INFILTRATION BED
(NOT TO SCALE)



- PLAN VIEW -



SCM-2 SUBSURFACE INFILTRATION BED
(NOT TO SCALE)

SUBSURFACE INFILTRATION BED CONSTRUCTION SEQUENCE :

1 THE INSTALLATION OF THE SUBSURFACE INFILTRATION BEDS SHALL BE DONE DURING NON-RAINY PERIODS TO PREVENT SEDIMENT DEPOSITION AND CLOGGING OF THE SOIL STRUCTURE

2 EXCAVATE THE SUBSURFACE INFILTRATION BED TO THE PROPOSED BOTTOM EXCAVATION SHALL BE DONE IN A MANNER THAT DOES NOT DISTURB THE SOIL STRUCTURE OF THE INFILTRATION ZONE INSTALL 12" FILTER SOCK ALONG THE UPSLOPE PERIMETER OF THE EXCAVATED AREA TO PREVENT RUNOFF FROM UNSTABILIZED AREAS FROM ENTERING THE INFILTRATION AREA IF UNFAVORABLE CONDITIONS, SUCH AS GROUNDWATER AND/OR FACILITY ROCK, ARE ENCOUNTERED DURING INSTALLATION OF THE SUBSURFACE INFILTRATION BED, CONSTRUCTION SHALL CEASE AND THE ENGINEER SHALL BE IMMEDIATELY NOTIFIED AN ALTERNATIVE SYSTEM SUITABLE TO THE FIELD CONDITIONS SHALL BE DESIGNED AND APPROVED BY THE MUNICIPALITY AND THE CONSERVATION DISTRICT PRIOR TO FURTHER INSTALLATION BY THE CONTRACTOR

3 ONCE EXCAVATION IS COMPLETE, PERFORM ADDITIONAL INFILTRATION TESTS IN EACH BED AREA AT THE PROPOSED BOTTOM OF BED ELEVATION USING THE DOUBLE RING INFILTROMETER METHOD TO VERIFY THE DESIGN TEST RESULTS IF TESTED RATES DO NOT MEET THE DESIGN RATES, THE DESIGN ENGINEER SHALL BE NOTIFIED IMMEDIATELY

4 SCARIFY THE BOTTOM OF THE EXCAVATION PLACE FILTER FABRIC IN THE EXCAVATION AND TACK IT UP TO THE SIDES ALLOW SUFFICIENT FABRIC TO OVERLAP THE TOP OF THE FACILITY
NOTE: SUBSURFACE INFILTRATION BED FILTER FABRIC AND STONE SHALL BE KEPT CLEAN OF SOIL/SEDIMENT DURING THE INSTALLATION PROCESS IF INSPECTION INDICATES THAT SOIL SEDIMENT HAS ENTERED THE SUBSURFACE INFILTRATION BED, APPROPRIATE MEASURES (I E , CLEANING THE SOIL/SEDIMENT FROM THE FABRIC, STONE, EXCAVATION, ETC AND OR REPLACEMENT OF THE FABRIC AND STONE) PIECES OF FILTER FABRIC SHALL BE INSTALLED WITH A 12" OVERLAP 12" ON ALL SEAMS

5 PLACE AASHTO #57 STONE IN THE BOTTOM OF THE FACILITY AND EVENLY DISTRIBUTE ON THE BOTTOM CARE SHALL BE TAKEN TO ENSURE THAT THE FILTER FABRIC IN THE FACILITY IS NOT TORN DURING INSTALLATION ALL STONE SHALL BE UNIFORMLY GRADED, CLEAN WASHED AGGREGATE THE STONE SHALL BE CHECKED AND APPROVED BY THE DESIGN OR SITE ENGINEER BEFORE INSTALLATION INTO THE FACILITY TO ENSURE THAT IT IS CLEAN WASHED STONE

6 INSTALL THE INLETS AND DISTRIBUTION PIPE AS SHOWN ON THE PLAN & DETAIL INSTALL WATERTIGHT COVERS ON ALL TRIBUTARY INLETS UNTIL THE SUBSURFACE INFILTRATION BED DRAINAGE AREA IS STABILIZED TO PREVENT CONTAMINATION OF STONE WITHIN THE SUBSURFACE INFILTRATION BED COMPLETE BACKFILLING OF STONE IN THE FACILITY TO THE LEVEL SHOWN AS TOP OF STONE IN THE DETAIL PROVIDE OPENING IN THE FILTER FABRIC FOR THE INFLOW PIPES

7 COMPLETE PLACEMENT OF THE STONE IN THE SUBSURFACE INFILTRATION BED OVERLAP FILTER FABRIC ON TOP OF THE SUBSURFACE INFILTRATION BED BACKFILL OVER THE SUBSURFACE INFILTRATION BED WITH SOIL TO FINISHED GRADE STABILIZE AREA OVER UNDERGROUND FACILITY WITH PERMANENT MEASURES AS STATED ON THE EROSION AND SEDIMENT CONTROL PLAN ALL INLETS SHALL BE GIVEN A FINAL INSPECTION AFTER THE SITE HAS BEEN STABILIZED TO ENSURE THEY ARE FREE OF SEDIMENT

SUBSURFACE INFILTRATION BED NOTES:

1 DURING SITE CONSTRUCTION, THE INFILTRATION BED SHALL BE PROTECTED FROM COMPACTION DUE TO HEAVY EQUIPMENT OPERATION OR STORAGE OF FILL OR CONSTRUCTION MATERIAL AND SHALL ALSO BE PROTECTED FROM SEDIMENTATION AREAS THAT ARE ACCIDENTALLY COMPACTED OR GRADED SHALL BE REMEDIATED TO RESTORE SOIL COMPOSITION AND POROSITY ADEQUATE DOCUMENTATION TO THIS EFFECT SHALL BE SUBMITTED TO THE MUNICIPAL ENGINEER FOR REVIEW THE INFILTRATION BED SHALL NOT RECEIVE RUNOFF UNTIL THE CONTRIBUTORY DRAINAGE AREA HAS ACHIEVED FINAL STABILIZATION

2 IT IS RECOMMENDED THAT A SOILS ENGINEER OR REPRESENTATIVE THEREOF IS PRESENT ON-SITE DURING THE CONSTRUCTION OF THE STORMWATER MANAGEMENT SYSTEM IN ORDER TO ENSURE THE SYSTEM WAS CONSTRUCTED AS DESIGNED AND TO OVERSEE THE EXCAVATION OF THE FINE GRAIN SOILS GIVEN THE LOCALIZED INVESTIGATIONS, IT IS PARAMOUNT THAT THE ENTIRE FACILITY BOTTOM BE VERIFIED TO BE SITUATED WITHIN THE CORRECT INFILTRATION STRATUM

3 THE CONTRACTOR IS TO ENSURE THAT THERE IS NO PRECIPITATION IN THE FORECAST FOR THE DURATION OF THE INFILTRATION BED CONSTRUCTION

4 APPROPRIATE, PERMANENT MEASURES, AS SHOWN ON THE PLAN, SHALL BE IMPLEMENTED TO PROTECT THE INFILTRATION BED FROM SEDIMENT LADEN RUNOFF ENTERING IT

5 ROOF DRAINS DISCHARGING TO THE INFILTRATION BED SHALL HAVE APPROPRIATE MEASURES TO PREVENT CLOGGING BY UNWANTED DEBRIS (FOR EXAMPLE, SILT, LEAVES AND VEGETATION) THESE MEASURES MAY INCLUDE, BUT ARE NOT LIMITED TO, LEAF TRAPS, GUTTER GUARDS AND CLEANOUTS

6 THE FOLLOWING PROCEDURES AND MATERIALS SHALL BE REQUIRED DURING THE CONSTRUCTION OF THE INFILTRATION BED:
- a EXCAVATION FOR THE INFILTRATION BED SHALL BE PERFORMED WITH EQUIPMENT THAT WILL NOT COMPACT THE BOTTOM OF THE BED
- b THE BOTTOM OF THE BED SHALL BE SCARIFIED PRIOR TO THE PLACEMENT OF AGGREGATE
- c ONLY CLEAN AGGREGATE WITH DOCUMENTED POROSITY, FREE OF FINES, SHALL BE ALLOWED
- d THE TOP AND SIDES OF THE INFILTRATION BED SHALL BE COVERED WITH DRAINAGE FABRIC FABRIC SHALL BE NON-WOVEN FABRIC ACCEPTABLE TO THE MUNICIPAL ENGINEER
- e STORMWATER SHALL BE DISTRIBUTED THROUGHOUT THE ENTIRE INFILTRATION BED AND PROVISIONS FOR THE COLLECTION OF DEBRIS SHALL BE PROVIDED AS SHOWN ON THE PLAN

OWNER OF RECORD:
TRBL WALNUT, LLC
842 TOPAZ DRIVE
WEST CHESTER, PA 19382

COPYRIGHT
InLand Design, LLC' expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA act 172 of 1986 requires
three working days notice
Serial Numbers:
20253170513, 20253170655, 20253170702

PENNSYLVANIA ACT 187 REQUIREMENTS
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-10-92 | DEED BOOK 9953 | PAGE 1611 & UPI: 1-10-93 | DEED BOOK 9953 | PAGE 1603

INLAND DESIGN
Engineering, Surveying & Land Planning
[redacted]

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SCOTT G. ZWIZANSKI
ENGINEER
PE091752

No.	Date:	Description:
1	06/26/2026	REVISED PER TWP REVIEWS

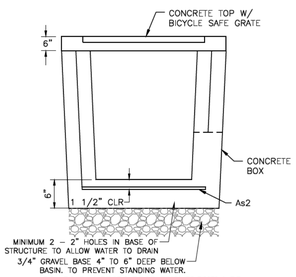
PRELIMINARY LAND DEVELOPMENT PLAN

Date: 4/27/2026
Scale: AS NOTED
Drawn by: MMH
Checked by: SJZ
Project No. 12706

PCSM DETAILS FOR
TRBL WALNUT, LLC
615 & 617 S. WALNUT STREET
WEST CHESTER, PA 19382
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

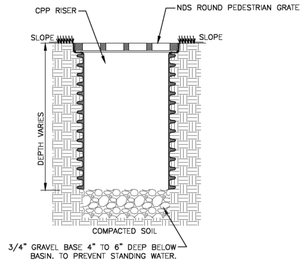
SHEET 7 OF 15

N:\12700\12706\dwg\Sheets\Preliminary Submission\7 PCSM DETAILS 'A'.dwg



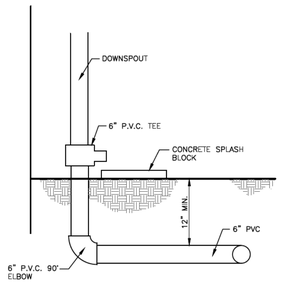
2'x2' LAWN INLET DETAIL
(NOT TO SCALE)

NOTE:
CONTRACTOR MAY SUBSTITUTE EQUIVALENT CATCH BASIN SUBJECT TO REVIEW AND APPROVAL BY THE MUNICIPALITY.

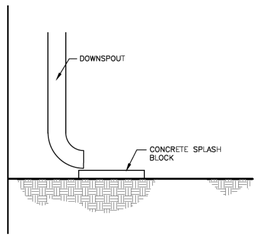


NOTES:
- GRATE TO BE ATTACHED TO CATCH BASIN WITH SCREW PROVIDED AT TIME OF INSTALLATION
- RISER PIPE CAN BE CUT TO ACHIEVE EXACT ELEVATION

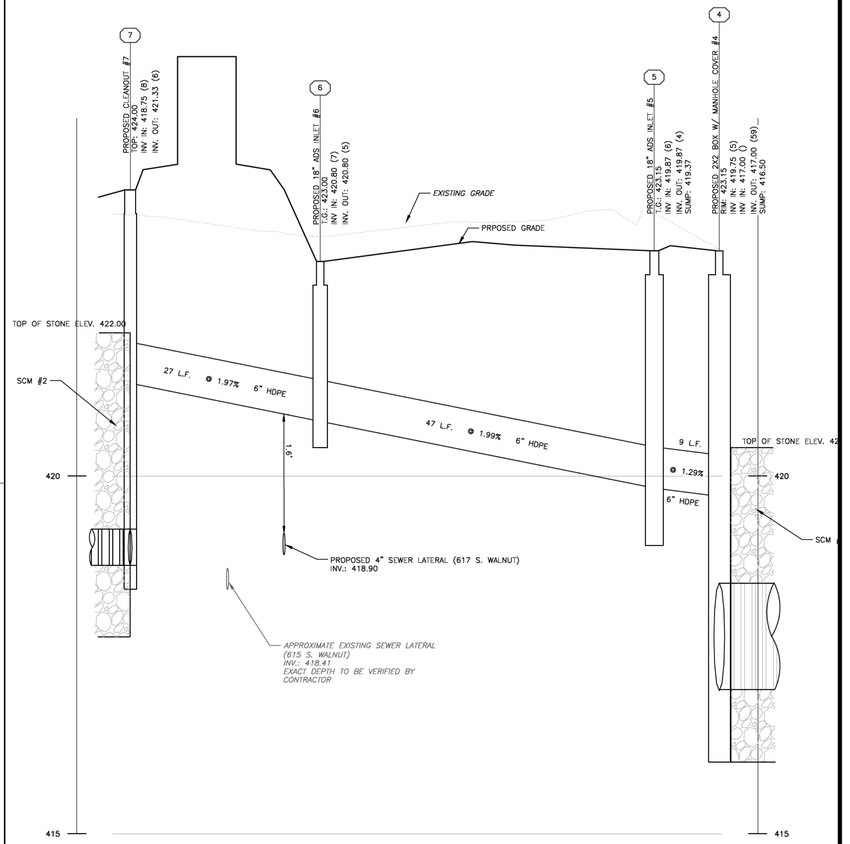
TYPICAL CPP RISER INLET DETAIL
(NOT TO SCALE)



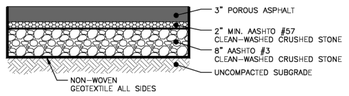
TYPICAL ROOF DRAIN CONNECTION/DOWNSPOUT OVERFLOW
NOT TO SCALE



TYPICAL DOWNSPOUT WITH SPLASH BLOCK
NOT TO SCALE



PROPOSED SWM PROFILE SCM-2 TO SCM-1
SCALE: (H) 1"=10' (V) 1"=1'



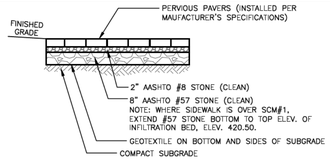
POROUS PAVEMENT DETAIL
(NOT TO SCALE)

CONSTRUCTION INSPECTION NOTES (PERFORMED BIWEEKLY):
1. BIWEEKLY INSPECT EROSION CONTROL DEVICES UNTIL SOIL SETTLEMENT AND VEGETATIVE ESTABLISHMENT OF CONTRIBUTING AREAS HAS OCCURRED. IF ANY SEDIMENT AND DEBRIS ENCROACHES THE POROUS SURFACE, IT SHOULD BE REMOVED IMMEDIATELY AND SEDIMENT CONTROL DEVICE SHALL BE REPAIRED.

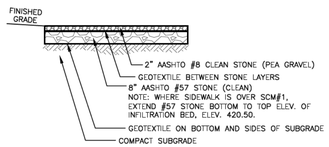
LONG TERM MAINTENANCE NOTES (PERFORMED SEMIANNUALLY):
1. INSPECT INLET STRUCTURES TRIBUTARY TO THE INFILTRATION BED (INLET NO. 8, 13, 14, 15) FOR DEBRIS AND BLOCKAGES. CLEAN OUT DEBRIS/SEDIMENT FROM INLET STRUCTURE SUMPS.
2. VACUUM POROUS ASPHALT SURFACES WITH REGENERATIVE AIR SWEEPER OR COMMERCIAL VACUUM SWEEPER (TRADITIONAL STREET SWEEPERS ARE NOT APPROPRIATE).

POROUS PAVEMENT WINTER MAINTENANCE NOTES:
1. SAND, SALT, AND OTHER PARTICULATE MATTER SUCH AS ABRASIVES OR CINDERS MUST NOT BE APPLIED ON OR ADJACENT TO THE POROUS PAVEMENT.
2. SNOW PLOWING IS ACCEPTABLE, PROVIDED IT IS DONE CAREFULLY (i.e., BY SETTING THE BLADE ABOUT 0.5 INCHES HIGHER THAN USUAL AND USING A RUBBERIZED BLADE OR BLADE TIP).
3. MAGNESIUM CHLORIDE-BASED LIQUID DEICER PRODUCTS MAY BE APPLIED ON OR ADJACENT TO THE POROUS PAVEMENT.
4. ANY DEICING MATERIALS SHOULD BE USED IN MODERATION.

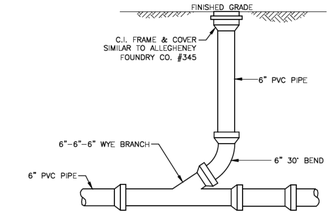
POROUS ASPHALT REPAIRS:
1. POTHOLES ARE NOT COMMON; THOUGH SETTLING MIGHT OCCUR IF A SOFT SPOT IN THE SUBGRADE IS NOT REMOVED DURING CONSTRUCTION.
2. DAMAGED AREAS THAT ARE LESS THAN 10% OF THE TOTAL POROUS AREA CAN BE PATCHED WITH A POROUS OR STANDARD ASPHALT MIX, DEPENDING ON THE LOCATION WITHIN THE POROUS AREA. IN MANY CASES THE LOSS OF POROUS SURFACE WILL BE INSIGNIFICANT. IF AN AREA GREATER 10% OF THE TOTAL IS IN NEED OF REPAIR, APPROVAL OF PATCH TYPE MUST BE SOUGHT FROM THE BOROUGH.
3. POROUS PAVEMENT MUST NEVER BE SEAL COATED UNDER ANY CIRCUMSTANCES.
4. ANY REQUIRED REPAIR OF DRAINAGE STRUCTURES SHOULD BE DONE PROMPTLY TO ENSURE CONTINUED PROPER FUNCTIONING OF THE SYSTEM.



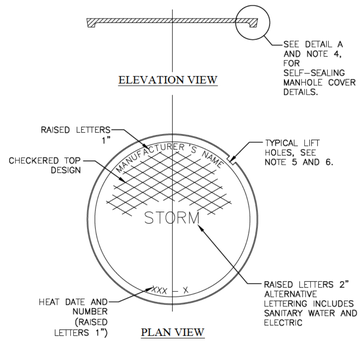
TYPICAL PERVIOUS BRICK SIDEWALK SECTION
(NOT TO SCALE)



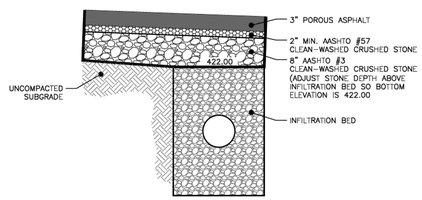
TYPICAL PERVIOUS GRAVEL (PATIO) SECTION
(NOT TO SCALE)



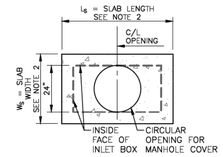
ROOF LEADER CLEANOUT IN UNPAVED AREA DETAIL
NOT TO SCALE
FOR CLEANOUT IN PAVED AREA SEET DETAIL ON SHEET 12



CAST IRON MANHOLE COVER
(PLATEN COVER)



POROUS PAVEMENT / INFILTRATION BED DETAIL
(NOT TO SCALE)



STANDARD INLET BOX

CIRCULAR OPENINGS:
1 FOR A STANDARD BOX, ONLY A 24" OPENING IS PERMITTED

TOP SLAB WITH OPTIONAL ROUND OPENING FOR MANHOLE COVER
(NOT TO SCALE)

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

Pennsylvania One Call System
PA act 172 of 1986 requires three working days notice
Serial Numbers:
20253170513, 20253170655, 20253170702

PENNSYLVANIA ACT 187 REQUIREMENTS
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-10-92 | DEED BOOK 9953 | PAGE 1611 & UPI: 1-10-93 | DEED BOOK 9953 | PAGE 1603

INLAND DESIGN
Engineering, Surveying & Land Planning
[redacted]
COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SCOTT G. ZWIZANSKI
ENGINEER
PE091752

No.	Date:	Description:
1	06/26/2026	REVISED PER TWP REVIEWS

PRELIMINARY LAND DEVELOPMENT PLAN

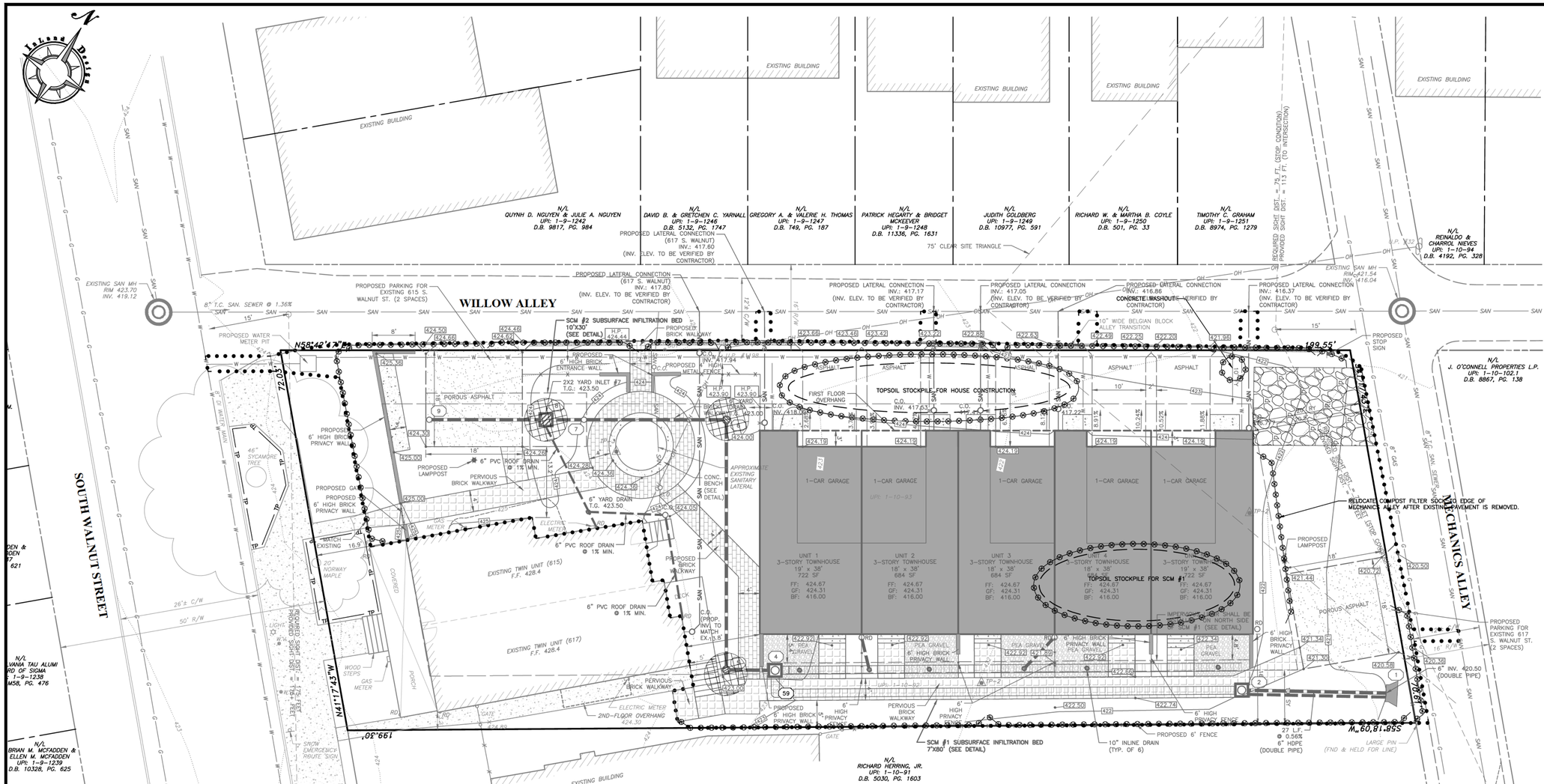
Date:	4/27/2026
Scale:	AS NOTED
Drawn by:	DWN
Checked by:	SJZ
Project No.	12706

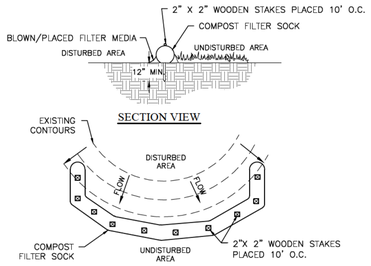
PCSM DETAILS 'B' FOR

TRBL WALNUT, LLC
615 & 617 S. WALNUT STREET
WEST CHESTER, PA 19382
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 8 OF 15

N:\12700\12706\dwg\Sheets\Preliminary Submission\8 PCSM DETAILS 'B'.dwg


WILLOW ALLEY
SOUTH WALNUT STREET
MECHANICS ALLEY
EXISTING BUILDING
QUYNH D. NGUYEN & JULIE A. NGUYEN UPI: 1-9-1242 D.B. 9817, PG. 984
DAVID B. & GRETCHEN C. YARNALL UPI: 1-9-1246 D.B. 5132, PG. 1747
GREGORY A. & VALERIE H. THOMAS UPI: 1-9-1247 D.B. 749, PG. 187
PATRICK HEGARTY & BRIDGET MCKEEVER UPI: 1-9-1248 D.B. 11336, PG. 1631
JUDITH GOLDBERG UPI: 1-9-1249 D.B. 10977, PG. 591
RICHARD W. & MARTHA B. COYLE UPI: 1-9-1250 D.B. 501, PG. 33
TIMOTHY C. GRAHAM UPI: 1-9-1251 D.B. 8974, PG. 1279
REINALDO & CHARROL NIEVES UPI: 1-10-94 D.B. 4192, PG. 328
J. O'CONNELL PROPERTIES L.P. UPI: 1-10-102.1 D.B. 8867, PG. 138
BRIAN M. MCFADDEN & ELLEN M. MCFADDEN UPI: 1-9-1239 D.B. 10328, PG. 625
RICHARD HERRING, JR. UPI: 1-10-91 D.B. 5030, PG. 1603
PROPOSED LATERAL CONNECTION (617 S. WALNUT) INV.: 417.80 (INV. ELEV. TO BE VERIFIED BY CONTRACTOR)
PROPOSED LATERAL CONNECTION (617 S. WALNUT) INV.: 417.60 (INV. ELEV. TO BE VERIFIED BY CONTRACTOR)
PROPOSED LATERAL CONNECTION INV.: 417.17 (INV. ELEV. TO BE VERIFIED BY CONTRACTOR)
PROPOSED LATERAL CONNECTION INV.: 417.05 (INV. ELEV. TO BE VERIFIED BY CONTRACTOR)
PROPOSED LATERAL CONNECTION INV.: 416.86 (INV. ELEV. TO BE VERIFIED BY CONTRACTOR)
PROPOSED LATERAL CONNECTION INV.: 416.37 (INV. ELEV. TO BE VERIFIED BY CONTRACTOR)
CONCRETE WASHOUT
75' CLEAR SITE TRIANGLE
REQUIRED SIGHT DIST. = 75 FT. (STOP CONDITION) PROVIDED SIGHT DIST. = 113 FT. (TO INTERSECTION)
EXISTING SAN MH RIM=423.70 INV. 419.12
EXISTING SAN MH RIM=421.54 INV. 416.04
8" T.C. SAN. SEWER @ 1.36%
PROPOSED PARKING FOR EXISTING 615 S. WALNUT ST. (2 SPACES)
PROPOSED WATER METER PIT
SCM #2 SUBSURFACE INFILTRATION BED 10'X30' (SEE DETAIL)
H.P. 424.44
PROPOSED BRICK WALKWAY
PROPOSED 6' HIGH BRICK ENTRANCE WALL
2X2 YARD INLET #7 T.G.: 423.50
H.P. 423.80
6" YARD DRAIN T.G. 423.50
POROUS ASPHALT
PROPOSED 6' HIGH BRICK PRIVACY WALL
PROPOSED GATE
PROPOSED LAMPPOST
PERVIOUS BRICK WALKWAY
6" PVC ROOF DRAIN @ 1% MIN.
46" SYCAMORE TREE
20" NORWAY MAPLE
ELECTRIC METER
MATCH EXISTING 16.9
EXISTING TWIN UNIT (615) F.F. 428.4
EXISTING TWIN UNIT (617) F.F. 428.4
WOOD STEPS
GAS METER
PORCH
COVERED
SNOW EMERGENCY ROUTE SIGN
2ND FLOOR OVERHANG 424.30
PROPOSED 6' HIGH BRICK PRIVACY WALL
PROPOSED 6' HIGH PRIVACY FENCE
GATE
PERVIOUS BRICK WALKWAY
ELECTRIC METER
CONC. BENCH (SEE DETAIL)
APPROXIMATE EXISTING SANITARY LATERAL
PROPOSED BRICK WALKWAY
C.O. (PROP. INV. TO MATCH EX. 15.8'
FIRST FLOOR OVERHANG
TOPSOIL STOCKPILE FOR HOUSE CONSTRUCTION
C.O. INV. 418.10
C.O. INV. 417.94
C.O. INV. 417.63
C.O. INV. 417.22
PROPOSED METAL FENCE
1-CAR GARAGE
UNIT 1 3-STORY TOWNHOUSE 19' x 38' 722 SF FF: 424.67 GF: 424.31 BF: 416.00
UNIT 2 3-STORY TOWNHOUSE 18' x 38' 684 SF FF: 424.67 GF: 424.31 BF: 416.00
UNIT 3 3-STORY TOWNHOUSE 18' x 38' 684 SF FF: 424.67 GF: 424.31 BF: 416.00
UNIT 4 3-STORY TOWNHOUSE 18' x 38' 684 SF FF: 424.67 GF: 424.31 BF: 416.00
UNIT 5 3-STORY TOWN 19' x 38' 722 SF FF: 424.67 GF: 424.31 BF: 416.00
TOPSOIL STOCKPILE FOR SCM #1
IMPERVIOUS BERM SHALL BE PLACED ON NORTH SIDE OF SCM #1 (SEE DETAIL)
PEA GRAVEL
6" HIGH BRICK PRIVACY WALL
SCM #1 SUBSURFACE INFILTRATION BED 7'X80' (SEE DETAIL)
10" INLINE DRAIN (TYP. OF 6)
PROPOSED 6' FENCE
27 L.F. @ 0.56% 6" HDPE (DOUBLE PIPE)
LARGE PIN (FND & HELD FOR LINE)
10.0" WIDE BELGIAN BLOCK ALLEY TRANSITION
PROPOSED STOP SIGN
RELOCATE COMPOST FILTER SOCK TO EDGE OF MECHANICS ALLEY AFTER EXISTING PAVEMENT IS REMOVED.
PROPOSED LAMPPOST
PROPOSED PARKING FOR EXISTING 617 S. WALNUT ST. (2 SPACES)
6" INV. 420.50 (DOUBLE PIPE)
N58°42'43"W 199.55'
N41°17'43"W 199.20'
N.W.L. 422.50
S.W.L. 422.00
S9
S10
S11
S12
S13
S14
S15
S16
S17
S18
S19
S20
S21
S22
S23
S24
S25
S26
S27
S28
S29
S30
S31
S32
S33
S34
S35
S36
S37
S38
S39
S40
S41
S42
S43
S44
S45
S46
S47
S48



SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4 1 COMPOST SHALL MEET THE STANDARDS OF TABLE 4 2

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE BOTH ENDS OF THE SOCK SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN SOCK ALIGNMENT (FIGURE 4 1)

MAXIMUM SLOPE LENGTH ABOVE ANY SOCK SHALL NOT EXCEED THAT SHOWN ON FIGURE 4 2 STAKES MAY BE INSTALLED IMMEDIATELY DOWNSLOPE OF THE SOCK IF SO SPECIFIED BY THE MANUFACTURER

TRAFFIC SHALL NOT BE PERMITTED TO CROSS FILTER SOCKS

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES HALF THE ABOVEGROUND HEIGHT OF THE SOCK AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN

SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER 'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION

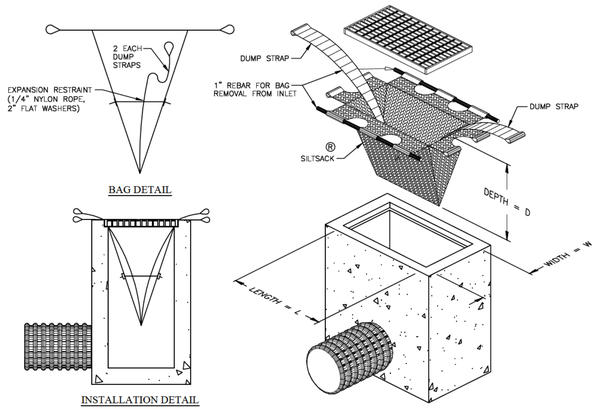
BIODEGRADABLE FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER 'S RECOMMENDATIONS

UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT

STANDARD CONSTRUCTION DETAIL #4-1

COMPOST FILTER SOCK

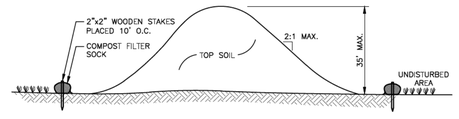
(NOT TO SCALE)



SEDIMENT FILTER BAG INLET PROTECTION DETAIL

(NOT TO SCALE)

1. AT A MINIMUM, THE FABRIC SHALL HAVE A MINIMUM GRAB TENSILE STRENGTH OF 120 LBS., A MINIMUM BURST STRENGTH OF 200 PSI, AND A MINIMUM TRAPEZOIDAL TEAR STRENGTH OF 50 LBS. FILTER BAGS SHALL BE CAPABLE OF TRAPPING ALL PARTICLES NOT PASSING A NO. 40 SIEVE.
2. INLET FILTER BAGS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. BAGS SHALL BE EMPTIED AND RINSED OR REPLACED WHEN HALF FULL OR WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET. DAMAGED OR CLOGGED BAGS SHALL BE REPLACED

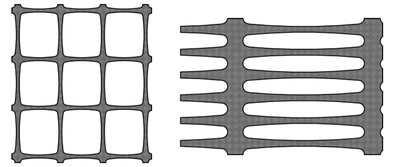


TYPICAL TOPSOIL STOCKPILE DETAIL

(NOT TO SCALE)

NOTES:

1 PLACE STOCKPILES AT LOCATIONS AS SHOWN ON THE SOIL EROSION AND SEDIMENT CONTROL PLAN
2 ALL SIDE SLOPES SHALL BE 2 TO 1 OR FLATTER
3 STOCKPILE SHALL RECEIVE A VEGETATIVE COVER IN ACCORDANCE WITH MINIMUM STABILIZATION REQUIREMENTS
4 SILT FENCE OR HAY BALE FILTER SHALL BE INSTALLED AS DETAILED HEREON
5 SEE STANDARD CONSTRUCTION DETAIL #4-1, COMPOST FILTER SOCK FOR INSTALLATION REQUIREMENTS
6 LOCATION OF PROPOSED STOCKPILE WHICH AFFECT EROSION CONTROLS ARE SHOWN SCHEMATICALLY ONLY ACTUALLY STOCKPILE LOCATION MAY CHANGE DURING CONSTRUCTION
7 STOCKPILE HEIGHTS MUST NOT EXCEED 35 FEET

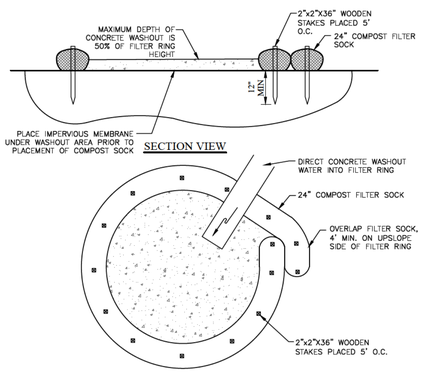


BX2051 UX4250

FOR GENERAL USE:
TENSAR SAFETY FENCE BX 2051, 4' HT ,
ORANGE FOR EXTRA PROTECTION:
TENSAR SAFETY FENCE UX 4250, 4' HT ,
ORANGE INSTALLATION:
ATTACH FENCE TO 2" x 2" PINE STAKES DRIVEN AT LEAST 18" INTO THE GROUND, SPACED 8' ON CENTER, WITH WIRE FASTENERS IN 3 PLACES PER STAKE

ORANGE CONSTRUCTION FENCE DETAIL

NOT TO SCALE

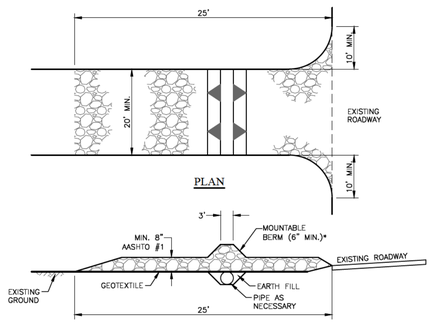


1 INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
2 18" FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADDED HEIGHT
3 A SUITABLE IMPERVIOUS GEOMEMBRANE SHALL BE PLACED AT THE LOCATION OF THE WASHOUT PRIOR TO INSTALLING THE SOCKS

STANDARD CONSTRUCTION FIGURE 3.18

COMPOST SOCK WASHOUT INSTALLATION

(NOT TO SCALE)

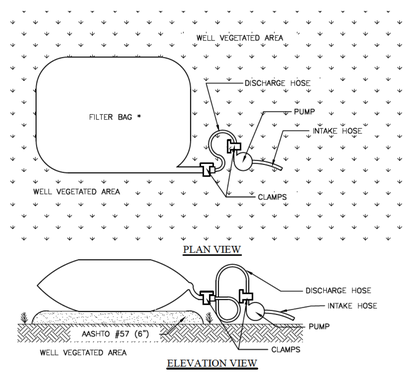


STANDARD CONSTRUCTION DETAIL #3-1

ROCK CONSTRUCTION ENTRANCE DETAIL

(NOT TO SCALE)

1 REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE EXTEND ROCK OVER FULL WIDTH OF ENTRANCE
2 RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE
3 MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED
4 MAINTENANCE: ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FOOT INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL WASH RACK WASHING THE ROADWAY OR SWEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE

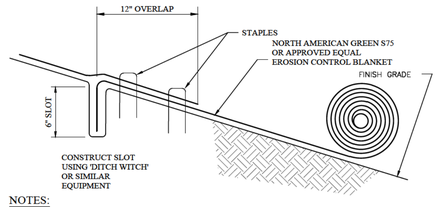


STANDARD CONSTRUCTION DETAIL #3-16

PUMPED WATER FILTER BAG

(NOT TO SCALE)

1 FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS
2 A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED
3 BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE FLOW PATH SHALL BE PROVIDED BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%
4 THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED
5 THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS PUMP INTAKES SHOULD BE FLOATING AND SCREENED



NOTES:

1 COMPLETE GRADING OF SLOPE
2 CULTIVATE THE SOIL TO A DEPTH OF 6 INCHES, INCORPORATING FERTILIZER AND LIME WHERE NECESSARY, PROVIDING AN EVEN SURFACE, FREE FROM EXCESSIVE STONES, CLODS OR TRASH
3 SEED AND MULCH THE AREA AS OUTLINED IN SEEDING SCHEDULE
4 UNREEL THE MATTING UP AND DOWN THE SLOPE THIS IS BEST ACHIEVED BY PLACING A METAL PIPE THROUGH THE CENTER OF THE ROLL THROUGH WHICH IS PASSED A ROPE BY HOLDING EACH END OF THE ROPE, THE ROLL CAN BE UNWOUND SLOWLY DOWN THE SLOPE THE MATTING SHOULD NOT BE STRETCHED NOR ALLOWED TO LIE LOOSELY, BUT TO TAKE UP THE CONTOURS OF THE GROUND THE MANUFACTURER'S RECOMMENDATIONS FOR OVERLAPPING ADJACENT STRIPS SHALL BE FOLLOWED
5 UPHILL ENDS OF THE MATTING SHALL BE BURIED IN A 6-INCH DEEP SLOT AND STAPLED, AS SHOWN, AT 12-INCH CENTERS ACROSS THE WIDTH OF THE MAT AT JOINTS, THE DOWNHILL END SHOULD BE OVERLAPPED (SHINGLE FASHION)
6 MATTING SHOULD BE STAPLED ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS, BUT GENERALLY STAPLES SHOULD BE INSERTED ON 12-INCH CENTERS DOWN EACH EDGE OF THE MAT AND DOWN ITS CENTERLINE
7 FOLLOWING INSTALLATION, MESH MATTINGS SHOULD BE ROLLED WITH A SMOOTH ROLLER TO BRING INTO CLOSE CONTACT WITH THE SOIL AND TO CONSOLIDATE THE SEEDBED

EROSION BLANKET INSTALLATION FOR SLOPES

(NOT TO SCALE)

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

Pennsylvania One Call System
PA act 172 of 1986 requires
three working days notice
Serial Numbers:
20253170513, 20253170655, 20253170702

PENNSYLVANIA ACT 187 REQUIREMENTS:
InLand Design, LLC does not guarantee the accuracy of the locations For existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-10-92 | DEED BOOK 9953 | PAGE 1611 & UPI: 1-10-93 | DEED BOOK 9953 | PAGE 1603

INLAND DESIGN
Engineering, Surveying & Land Planning
[redacted]
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SCOTT T. ZWIZANSKI ENGINEER PE091752

No.	Date:	Description:
1	06/26/2026	REVISED PER TWP REVIEWS

PRELIMINARY LAND DEVELOPMENT PLAN

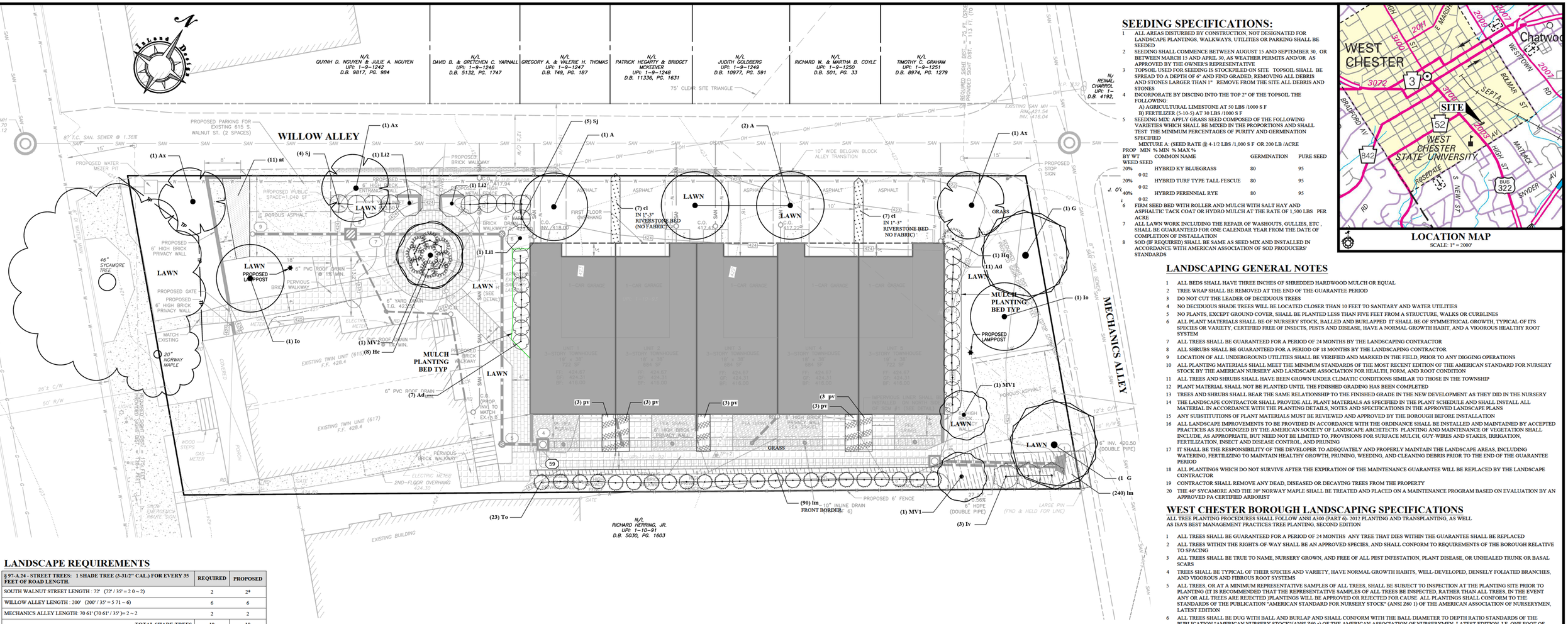
Date: 4/27/2026
Scale: AS NOTED
Drawn by: MMH
Checked by: SJZ
Project No. 12706

EROSION & SEDIMENT CONTROL DETAILS FOR

TRBL WALNUT, LLC
615 & 617 S. WALNUT STREET
WEST CHESTER, PA 19382
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 10 OF 15

N:\12700\12706\dwg\Sheets\Preliminary Submission\10 EROSION & SEDIMENT CONTROL DETAILS.dwg



SEEDING SPECIFICATIONS:

1. ALL AREAS DISTURBED BY CONSTRUCTION, NOT DESIGNATED FOR LANDSCAPE PLANTINGS, WALKWAYS, UTILITIES OR PARKING SHALL BE SEEDED
2. SEEDING SHALL COMMENCE BETWEEN AUGUST 15 AND SEPTEMBER 30, OR BETWEEN MARCH 15 AND APRIL 30, AS WEATHER PERMITS AND/OR AS APPROVED BY THE OWNER'S REPRESENTATIVE
3. TOPSOIL USED FOR SEEDING IS STOCKPILED ON SITE TOPSOIL SHALL BE SPREAD TO A DEPTH OF 6" AND FINE GRADED, REMOVING ALL DEBRIS AND STONES LARGER THAN 1" REMOVE FROM THE SITE ALL DEBRIS AND STONES
4. INCORPORATE BY DISCING INTO THE TOP 2" OF THE TOPSOIL THE FOLLOWING:
   A) AGRICULTURAL LIMESTONE AT 50 LBS /1000 S F
   B) FERTILIZER (5-10-5) AT 10 LBS /1000 S F
5. SEEDING MIX: APPLY GRASS SEED COMPOSED OF THE FOLLOWING VARIETIES WHICH SHALL BE MIXED IN THE PROPORTIONS AND SHALL TEST THE MINIMUM PERCENTAGES OF PURITY AND GERMINATION SPECIFIED
   MIXTURE A: (SEED RATE @ 4-1/2 LBS /1,000 S F OR 200 LB /ACRE

PROP WT	MIN % MIN WEED SEED	% MAX %	COMMON NAME	GERMINATION	PURE SEED
20%	0 02		HYBRID KY BLUEGRASS	80	95
20%	0 02		HYBRID TURF TYPE TALL FESCUE	80	95
40%	0 02		HYBRID PERENNIAL RYE	80	95

6. FIRM SEED BED WITH ROLLER AND MULCH WITH SALT HAY AND ASPHALTIC TACK COAT OR HYDRO MULCH AT THE RATE OF 1,500 LBS PER ACRE
7. ALL LAWN WORK INCLUDING THE REPAIR OF WASHOUTS, GULLIES, ETC , SHALL BE GUARANTEED FOR ONE CALENDAR YEAR FROM THE DATE OF COMPLETION OF INSTALLATION
8. SOD (IF REQUIRED) SHALL BE SAME AS SEED MIX AND INSTALLED IN ACCORDANCE WITH AMERICAN ASSOCIATION OF SOD PRODUCERS' STANDARDS

LOCATION MAP
SCALE: 1" = 2000'

LANDSCAPING GENERAL NOTES

1. ALL BEDS SHALL HAVE THREE INCHES OF SHREDDED HARDWOOD MULCH OR EQUAL
2. TREE WRAP SHALL BE REMOVED AT THE END OF THE GUARANTEE PERIOD
3. DO NOT CUT THE LEADER OF DECIDUOUS TREES
4. NO DECIDUOUS SHADE TREES WILL BE LOCATED CLOSER THAN 10 FEET TO SANITARY AND WATER UTILITIES
5. NO PLANTS, EXCEPT GROUND COVER, SHALL BE PLANTED LESS THAN FIVE FEET FROM A STRUCTURE, WALKS OR CURBLINES
6. ALL PLANT MATERIALS SHALL BE OF NURSERY STOCK, BALLED AND BURLAPPED IT SHALL BE OF SYMMETRICAL GROWTH, TYPICAL OF ITS SPECIES OR VARIETY, CERTIFIED FREE OF INSECTS, PESTS AND DISEASE, HAVE A NORMAL GROWTH HABIT, AND A VIGOROUS HEALTHY ROOT SYSTEM
7. ALL TREES SHALL BE GUARANTEED FOR A PERIOD OF 24 MONTHS BY THE LANDSCAPING CONTRACTOR
8. ALL SHRUBS SHALL BE GUARANTEED FOR A PERIOD OF 18 MONTHS BY THE LANDSCAPING CONTRACTOR
9. LOCATION OF ALL UNDERGROUND UTILITIES SHALL BE VERIFIED AND MARKED IN THE FIELD, PRIOR TO ANY DIGGING OPERATIONS
10. ALL PLANTING MATERIALS SHALL MEET THE MINIMUM STANDARDS OF THE MOST RECENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK BY THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION FOR HEALTH, FORM, AND ROOT CONDITION
11. ALL TREES AND SHRUBS SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE TOWNSHIP
12. PLANT MATERIAL SHALL NOT BE PLANTED UNTIL THE FINISHED GRADING HAS BEEN COMPLETED
13. TREES AND SHRUBS SHALL BEAR THE SAME RELATIONSHIP TO THE FINISHED GRADE IN THE NEW DEVELOPMENT AS THEY DID IN THE NURSERY
14. THE LANDSCAPE CONTRACTOR SHALL PROVIDE ALL PLANT MATERIALS AS SPECIFIED IN THE PLANT SCHEDULE AND SHALL INSTALL ALL MATERIAL IN ACCORDANCE WITH THE PLANTING DETAILS, NOTES AND SPECIFICATIONS IN THE APPROVED LANDSCAPE PLANS
15. ANY SUBSTITUTIONS OF PLANT MATERIALS MUST BE REVIEWED AND APPROVED BY THE BOROUGH BEFORE INSTALLATION
16. ALL LANDSCAPE IMPROVEMENTS TO BE PROVIDED IN ACCORDANCE WITH THE ORDINANCE SHALL BE INSTALLED AND MAINTAINED BY ACCEPTED PRACTICES AS RECOGNIZED BY THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS PLANTING AND MAINTENANCE OF VEGETATION SHALL INCLUDE, AS APPROPRIATE, BUT NEED NOT BE LIMITED TO, PROVISIONS FOR SURFACE MULCH, GUY-WIRES AND STAKES, IRRIGATION, FERTILIZATION, INSECT AND DISEASE CONTROL, AND PRUNING
17. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER TO ADEQUATELY AND PROPERLY MAINTAIN THE LANDSCAPE AREAS, INCLUDING WATERING, FERTILIZING TO MAINTAIN HEALTHY GROWTH, PRUNING, WEEDING, AND CLEANING DEBRIS PRIOR TO THE END OF THE GUARANTEE PERIOD
18. ALL PLANTINGS WHICH DO NOT SURVIVE AFTER THE EXPIRATION OF THE MAINTENANCE GUARANTEE WILL BE REPLACED BY THE LANDSCAPE CONTRACTOR
19. CONTRACTOR SHALL REMOVE ANY DEAD, DISEASED OR DECAYING TREES FROM THE PROPERTY
20. THE 46" SYCAMORE AND THE 20" NORWAY MAPLE SHALL BE TREATED AND PLACED ON A MAINTENANCE PROGRAM BASED ON EVALUATION BY AN APPROVED PA CERTIFIED ARBORIST

WEST CHESTER BOROUGH LANDSCAPING SPECIFICATIONS

ALL TREE PLANTING PROCEDURES SHALL FOLLOW ANSI A300 (PART 6)- 2012 PLANTING AND TRANSPLANTING, AS WELL AS ISA'S BEST MANAGEMENT PRACTICES TREE PLANTING, SECOND EDITION

1. ALL TREES SHALL BE GUARANTEED FOR A PERIOD OF 24 MONTHS ANY TREE THAT DIES WITHIN THE GUARANTEE SHALL BE REPLACED
2. ALL TREES WITHIN THE RIGHTS-OF-WAY SHALL BE AN APPROVED SPECIES, AND SHALL CONFORM TO REQUIREMENTS OF THE BOROUGH RELATIVE TO SPACING
3. ALL TREES SHALL BE TRUE TO NAME, NURSERY GROWN, AND FREE OF ALL PEST INFESTATION, PLANT DISEASE, OR UNHEALED TRUNK OR BASAL SCARS
4. TREES SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, HAVE NORMAL GROWTH HABITS, WELL-DEVELOPED, DENSELY FOLIATED BRANCHES, AND VIGOROUS AND FIBROUS ROOT SYSTEMS
5. ALL TREES, OR AT A MINIMUM REPRESENTATIVE SAMPLES OF ALL TREES, SHALL BE SUBJECT TO INSPECTION AT THE PLANTING SITE PRIOR TO PLANTING (IT IS RECOMMENDED THAT THE REPRESENTATIVE SAMPLES OF ALL TREES BE INSPECTED, RATHER THAN ALL TREES, IN THE EVENT ANY OR ALL TREES ARE REJECTED)PLANTINGS WILL BE APPROVED OR REJECTED FOR CAUSE ALL PLANTINGS SHALL BE UNIFORM TO THE STANDARDS OF THE PUBLICATION "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60 1) OF THE AMERICAN ASSOCIATION OF NURSERYMEN, LATEST EDITION
6. ALL TREES SHALL BE DUG WITH BALL AND BURLAP AND SHALL CONFORM WITH THE BALL DIAMETER TO DEPTH RATIO STANDARDS OF THE PUBLICATION "AMERICAN NURSERY STOCK"(ANSI Z60 n) OF THE AMERICAN ASSOCIATION OF NURSERYMEN, LATEST EDITION, I E ONE FOOT OF BALL FOR EACH TRUNK CALIPER MEASURED ONE FOOT ABOVE GROUND AND SHALL NOT BE LESS IN DEPTH THAN ⅓ OF THE BALL DIAMETER WIRE BASKETS WHICH MAY BE USED TO TRANSPORT TREES SHALL BE REMOVED PRIOR TO PLANTING

   TREES SHOULD BE PLANTED IN ELLIPTICAL PLANTING HOLES RATHER THAN THE STRAIGHT SIDED HOLES HOLES SHOULD BE DUG AT LEAST TWO (2) FEET WIDER THAN THE GREATEST WIDTH OF THE TREE BALL FOR TREES OF LESS THAN FIVE INCH (5) CALIPER AND FOUR (4) FEET WIDER FOR TREES OF GREATER THAN FIVE INCH (5") CALIPER ALL TREES SHALL BE SET ON FIRM SOIL THAT HAS NOT BEEN LOOSENED OR TO WHICH SOIL AMENDMENTS HAVE BEEN ADDED (THIS IS TO PREVENT FUTURE SETTLING OF THE TREE TO BELOW THE POINT THAT THE TREE WAS ORIGINALLY GROWN NATURALLY OR IN THE NURSERY)

   CHECK EACH TREE FOR THE START OF THE FLAIR OR ROOT SYSTEM AND PLANT AT THAT DEPTH UNTIE THE BURLAP ON THE BALL AND REMOVE IT FROM THE TOP ⅓ OF THE BALL PLASTIC BURLAP, IF USED, SHALL BE REMOVED USED GOOD QUALITY TOPSOIL FOR PLANTING FIRM UP SOIL TO ENSURE SOIL CONTACT TO ROOT MASS WATER THE TREE UNTIL THE ENTIRE ROOT BALL IS WET THEREAFTER, KEEP ROOT SYSTEM MOIST BUT NOT WET

   INJURED, DISEASED TREES AND TREES WITH BROKEN BRANCHES OR DOUBLE LEADERS SHOULD BE PRUNED FOR TREES WITH DOUBLE LEADERS, REMOVE ONE OF THE DOUBLE LEADERS TOTALLY DO NOT TOP THE CENTRAL LEADER

   MULCH SAUCER OF TREE AT A MINIMUM THICKNESS OF THREE INCHES (3"), BUT DO NOT PILE MULCH ON TREE TRUNK MAINTAINING A PERMANENTLY MULCHED AREA AROUND THE TREE PROMOTES GROWTH AND HELPS PREVENT MOWING INJURIES
7. TAKE CUSTOMARY PRECAUTIONS ACCORDING TO THE STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN IN PREPARING PLANTS FOR DIGGING, MOVING, TRANSPLANTING, AND PLANTING

SPECIFICATIONS FOR SHRUBS

1. ALL SHRUBS SHALL BE GUARANTEED FOR A PERIOD OF 18 MONTHS ANY SHRUB THAT DIES WITHIN THE GUARANTEE PERIOD SHALL BE REPLACED
2. SHRUBS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, HAVE NORMAL GROWTH HABITS, WELL-DEVELOPED, DENSELY FOLIATED BRANCHES, AND VIGOROUS AND FIBROUS ROOT SYSTEMS
3. SHRUBS SHOULD BE BALLED AND BURLAPPED OR CONTAINER GROWN

   A SPACING UNLESS A HEDGE IS PROPOSED, GIVE SHRUBS ROOM TO GROW BY PROVIDING PROPER SPACING, PLACE PLANTING HOLES ON CENTERS THAT APPROXIMATE TGHE HEIGHT OF THE SHRUB AT MATURITY IF SET AGAINST A BUILDING, SHRUBS SHOULD NOT TOUCH WALLS OR BE PLANTED IN THE BUILDING'S DRIP LINE WHERE PLANTS CAN BE DAMAGED BY EXCESSIVE WATER RUN-OFF, AND/OR FALLING ICE AND SNOW DO NOT PLANT IN AREAS THAT WILL HAVE LARGE PILES OF SNOW FROM PLOWING OF PARKING LOTS OR ROADWAYS

   B PLANTING: DIG A SEPARATE HOLE FOR EACH SHRUB ADD ORGANIC MATERIALS SUCH AS PEAT MOSS OR COMPOST TO SOIL HOLES SHOULD BE DUG AT LEAST EIGHT INCHES (8") WIDER THAN THE SHRUB, AND THE SAME DEPTH AS THE BALL PLANTS SHALL BE REMOVED FROM CONTAINERS, AND ALL PLASTIC BURLAP SHALL BE REMOVED NATURAL FIBER BURLAP MAY BE LEFT, BUT LOOSEN THE TOP AND REMOVE FROM THE STEM OF THE SHRUB SET SHRUB AT SAME LEVEL AS GROWN AT THE NURSERY OR ONE INCH (1") HIGHER, FILL WITH MIXTURE OF SOIL AND ORGANIC MATERIAL UNTIL THE HOLEIS ¾ FULL, THEN ADD WATER BUILD SAUCER AROUND SHRUB AND FINISH FILLING, TAMPING TO ENSURE GOOD SOIL TO ROOT CONTACT WATER AND COVER WITH MULCH, DO NOT PILE MULCH DEEPER THAN THREE INCHES (3") PRUNE OUT ANY BROKEN BRANCHES MAINTAIN A WATERING SCHEDULE WHENEVER RAINFALL IS INSUFFICIENT TO KEEP THE SOIL MOIST A SLOW RELEASE FERTILIZER SHOULD BE ADDED EARLY IN THE SPRING OF THE SECOND YEAR

   AZALEAS AND RHODODENDRONS AND OTHER ERICACEOUS PLANTS SHALL BE PLANTED IN SOIL WITH A pH VALUE BETWEEN 4 5 pH AND 6 5 pH THESE PLANTS ARE FIBROUS ROOTED AND GROW WITHIN THE UPPER 12 INCHES OF SOIL A MULCH WILL KEEP THE TOPSOIL COOL AND AID IN GROWTH

   MULCH ON ALL SHRUBS SHOULD BE RENEWED YEARLY 2" DEPTH MAX TO KEEP DOWN WEEDS, CONSERVE WATER, AND INCREASE SOIL HUMUS

LANDSCAPE REQUIREMENTS

§ 97-A.24 - STREET TREES: 1 SHADE TREE (3-31/2" CAL.) FOR EVERY 35 FEET OF ROAD LENGTH.	REQUIRED	PROPOSED
SOUTH WALNUT STREET LENGTH : 72' (72' / 35' = 2 0 ~ 2)	2	2*
WILLOW ALLEY LENGTH : 200' (200' / 35' = 5 71 ~ 6)	6	6
MECHANICS ALLEY LENGTH: 70 61' (70 61' / 35')= 2 ~ 2	2	2
TOTAL SHADE TREES	**10**	**10**
*TWO EXISTING TREES ALONG SOUTH WALNUT SHALL REMAIN AS REQUIRED SHADE TREES		

LANDSCAPING AND SCREENING	REQUIRED	PROPOSED
§ 97-33 D (5)(b) / (c)- BUILDING FACADE | BUILDING FACADE LENGTH: 92'		
1 (2 ½"-3" CAL) SPECIMEN DECIDUOUS TREE PER 50' LENGTH OF BUILDING FACADE (92'/50' = 1 8 ~ 2)	2	2
1 (6'-7') SPECIMEN EVERGREEN TREE PER 50' LENGTH OF BUILDING FACADE (92'/50' = 1 8 ~ 2)	2	2
5 (30" HT) EVERGREEN/DECIDUOUS SHRUB PER 20' LENGTH OF BUILDING FACADE (92'/20' = 4 6 ~ 5) (5 * 5=25 SHRUBS)	25	43
TOTAL SPECIMEN DECIDUOUS TREES	**2**	**2**
TOTAL EVERGREEN TREES	**2**	**2**
TOTAL SHRUBS	**25**	**43**

PLANT SCHEDULE

KEY	QTY	BOTANICAL / COMMON NAME	SIZE	SPECIFICATION	CATEGORY / CODE
(12					
A	3	Acer rubrum Armstrong / (Armstrong Red Maple)	3-3 5"c Single Stem 12' Min	B&B	Street Tree / Willow Alley
G	2	Gleditsia triacanthos inermis 'Skyline' / (Skyline Thornless Honeylocust)	3-3 5"c Single Stem 12' Min	B&B	Street Tree / Mechanics Alley
EVERGREEN TREES					
Io	2	Ilex opaca 'Greenleaf' / (Greenleaf American Holly)	6-7'	B&B	Specimen / Evergreen Tree Building Facade
To	23	Thuja occidentalis 'Emerald Green' / (Emerald Green Arborvitae)	5-6'	Container	Shrub / Building Facade
ORNAMENTAL SMALL / MID SIZE TREES					
Ax	3	Amelanchier x grandiflora 'Autumn Brilliance' / (Autumn Brilliance Serviceberry)	3-3 5"c Single Stem 12' Min	B&B	Street Tree / Willow Alley
MV1	2	Magnolia virginiana 'Green Mile' / (Green Mile Sweetbay Magnolia)	12' Min Multistem	B&B or #25 Container	Specimen / Dec Tree Building Facade
MV2	1	Magnolia virginiana 'Ned's Northern Belle' / (Ned's Northern Belle Sweetbay Magnolia)	10-12' Multistem	B&B	N/A
DECIDUOUS OR EVERGREEN SHRUBS					
Ad	18	Azalea x 'Delaware Valley White' / (Valley White Azalea)	30" Ht	#5 Container Min	Shrub / Building Facade
Hq	1	Hydrangea quercifolia 'Sike's Dwarf' / (Sike's Dwarf Oakleaf Hydrangea)	30" Ht	#7 Container Min	Shrub / Building Facade
Hc	8	Hypericum calycinum / (Spreading St Johnswort)	12-15" Ht /spd	#3 Container min	N/A
Iv	3	Itea virginica 'Little Henry' / (Little Henry Virginia Sweetspire)	18-24" Ht	#3 Container min	N/A
Li2	2	Lagerstroemia indica x fauriei 'Sioux' / (Sioux Crape Myrtle)	5-6' Multistem	#15 Container Min	N/A
Li1	1	Lagerstroemia indica x fauriei 'Sioux' / (Sioux Crape Myrtle)	5-6' Multistem	#15 Container Min	Shrub / Building Facade
Sj	9	Spiraea x bumalda 'Neon Flash' / Neon Flash Spirea	18-24" Ht	#3 Container min	N/A
GROUND COVERS					
at	11	Amsonia tabernaemontana 'Storm Cloud' / (Strom Cloud Eastern Bluestar)	---	#1 Container	N/A
cl	14	Chasmanthium latifolium / (Northern Sea Oats)	---	#1 Container	N/A
lm	330	Liriope muscari 'Big Blue' / (Big Blue Lilyturf)	---	#1 Container	N/A
pv	15	Panicum virgatum 'Cape Breeze' / (Cape Breeze Switch Grass)	---	#1 Container	N/A

LEGEND

- PROPERTY BOUNDARY
- EXISTING SIGHT OF WAY LINE
- EXISTING 1' CONTOUR W/ ELEVATION
- EXISTING 5' CONTOUR W/ ELEVATION
- EXISTING CONCRETE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING FENCE LINE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRES
- PROPOSED SETBACK LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED ROAD / PAVING
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PERVIOUS BRICK
- PROPOSED GRAVEL COURTYARD
- PROPOSED STORM STRUCTURES & PIPE
- PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED SANITARY CLEAN-OUT
- PROPOSED SANITARY LATERAL
- PROPOSED WATER VALVE
- PROPOSED WATER LINE

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

Pennsylvania One Call System
PA act 172 of 1986 requires three working days notice
Serial Numbers:
20253170513, 20253170655, 20253170702

PENNSYLVANIA ACT 187 REQUIREMENTS:
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-10-92 | DEED BOOK 9953 | PAGE 1611 & UPI: 1-10-93 | DEED BOOK 9953 | PAGE 1603

InLAND DESIGN
Engineering, Surveying & Land Planning
[redacted]
PENNSYLVANIA ERIC THOMAS LEESON REGISTERED LANDSCAPE ARCHITECT 1047-E

No.	Date:	Description:
1	06/26/2026	REVISED PER TWP REVIEWS

PRELIMINARY LAND DEVELOPMENT PLAN

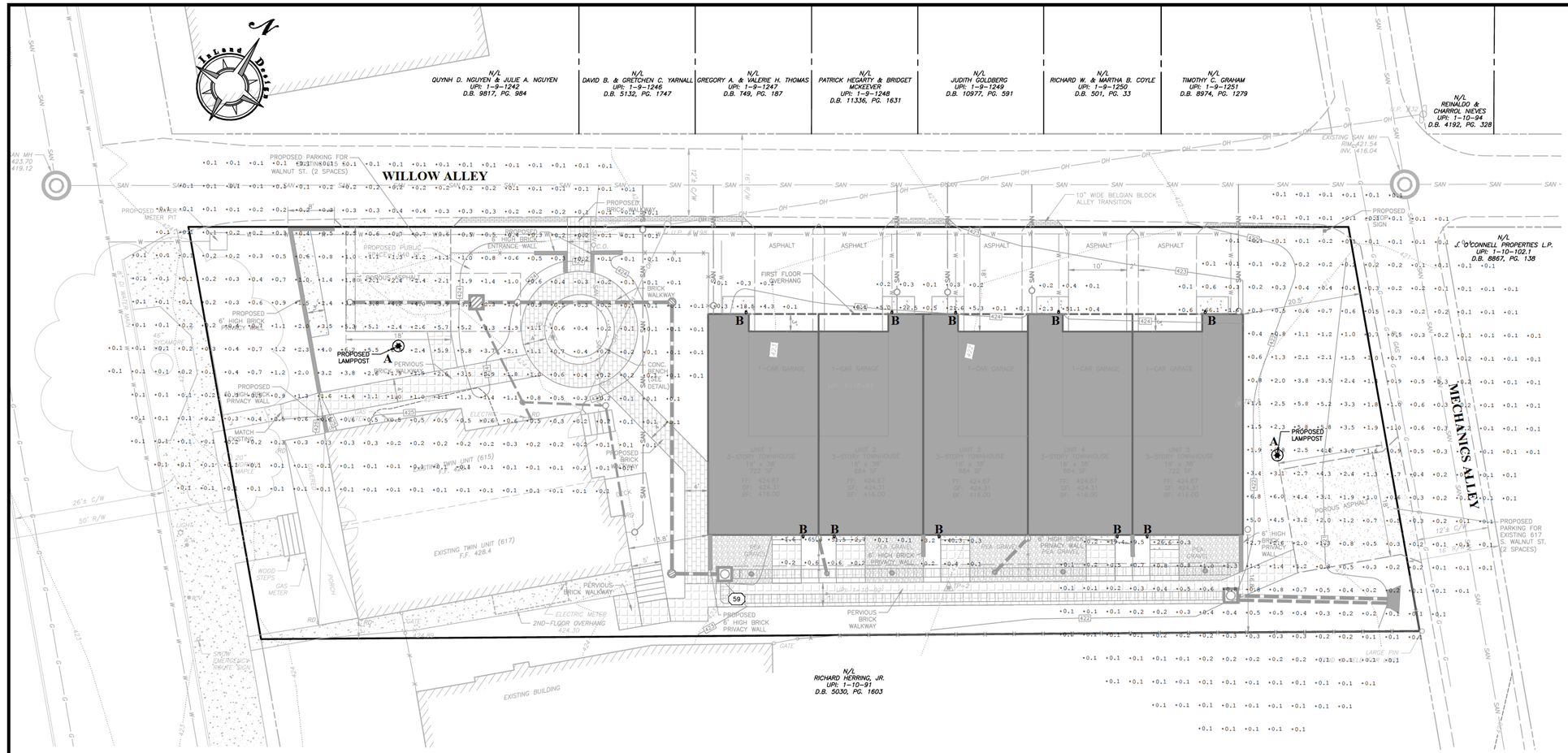
GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

Date: 4/27/2026
Scale: 1" = 10'
Drawn by: MEAS
Checked by: MEAS/MMH
Project No. 12706

LANDSCAPE PLAN FOR
TRBL WALNUT, LLC
615 & 617 S. WALNUT STREET
WEST CHESTER, PA 19382
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 11 OF 15

N:\12700\12706\dwg\Sheets\Preliminary Submission\11 LANDSCAPE PLAN.dwg





LOCATION MAP
SCALE: 1" = 2000'

LIGHTING NOTES:

1. LIGHTING SHALL HAVE INTENSITIES AND UNIFORMITIES IN ACCORDANCE WITH THE CURRENT RECOMMENDED PRACTICES OF THE ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA)
2. LIGHTING FIXTURES SHALL BE AIMED STRAIGHT DOWN , SHALL MEET IESNA FULL-CUTOFF CRITERIA, AND SHALL BE DARK SKY COMPLIANT
3. ALL NONESSENTIAL LIGHTING, INCLUDING DISPLAY, AESTHETIC, PARKING, AND SIGN LIGHTING, SHALL BE REQUIRED TO BE TURNED OFF OR REDUCED BY 75% AFTER BUSINESS HOURS OR 11:00 P.M , WHICHEVER IS EARLIER, LEAVING ONLY THE NECESSARY LIGHTING FOR SITE SECURITY. LIGHTING PROPOSED TO REMAIN ON AFTER 11:00 P.M. FOR A SPECIFIC SAFETY PURPOSE SHALL BE APPROVED BY THE TOWNSHIP
4. UNLESS OTHERWISE PERMITTED BY THE BOROUGH (E.G , FOR SAFETY, SECURITY, OR ALL-NIGHT OPERATIONS), LIGHTING SHALL BE CONTROLLED BY THE AUTOMATIC SWITCHING DEVICES, SUCH AS TIME CLOCKS OR COMBINATION MOTION DETECTORS AND PHOTOCELLS, TO PERMIT EXTINGUISHING OFFENDING SOURCES BETWEEN 11:00 P.M. AND DAWN TO MITIGATE NUISANCE GLARE AND SKYLIGHTING CONSEQUENCES
5. THIS PLAN IS FOR LIGHTING PURPOSES ONLY. ALL SITE IMPROVEMENTS INCLUDING, BUT NOT LIMITED TO, BUILDING LOCATIONS, CURBING, SIDEWALK, UTILITIES, AND THEIR ANCILLARY APPURTENANCES, ARE SHOWN FOR INFORMATION PURPOSES ONLY AND ARE SUBJECT TO MODIFICATION AND REVISION
6. PROPOSED LIGHT FIXTURES MAY BE SUBSTITUTED FOR AN EQUIVALENT LIGHT SUBJECT TO REVIEW AND APPROVED BY MUNICIPALITY

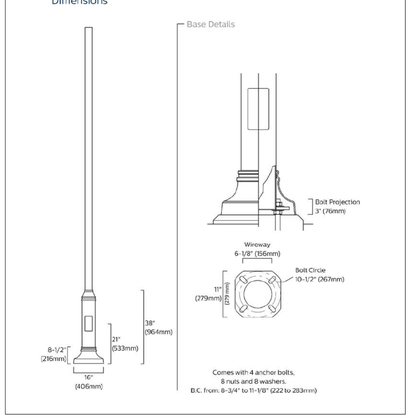
LEGEND

- PROPERTY BOUNDARY
- EXISTING RIGHT OF WAY LINE
- EXISTING 1' CONTOUR W/ ELEVATION
- EXISTING 5' CONTOUR W/ ELEVATION
- EXISTING CONCRETE
- EXISTING TREE SYMBOLS
- EXISTING LIGHT
- EXISTING UTILITY POLE
- EXISTING WATER VALVE
- EXISTING SIGN
- EXISTING FENCE LINE
- EXISTING SANITARY STRUCTURES & PIPE
- EXISTING CURB LINE
- EXISTING ROAD / PAVING
- EXISTING WATER LINE
- EXISTING GAS LINE
- EXISTING OVERHEAD WIRES
- PROPOSED SETBACK LINE
- PROPOSED 2' CONTOUR
- PROPOSED 10' CONTOUR
- PROPOSED ROAD / PAVING
- PROPOSED CONCRETE SIDEWALK
- PROPOSED PERVIOUS BRICK
- PROPOSED GRAVEL COURTYARD
- PROPOSED STORM STRUCTURES & PIPE
- PROPOSED SANITARY STRUCTURES & PIPE
- PROPOSED SANITARY CLEAN-OUT
- PROPOSED SANITARY LATERAL
- PROPOSED WATER VALVE
- PROPOSED WATER LINE

Outdoor Poles and Brackets

SM6 - Round Steel Bottleneck Pole

Dimensions



LIGHT POLE LIGHT 'A' (2)
NOT TO SCALE



B : METROSCAPE

NOTES:
1. MANUFACTURER:LUMEC BY SIGNIFY
2. MODEL NUMBER: MPTRRC-C-140L-450-WW-G1-UNV (3000K) (OR APPROVED EQUAL)
3. LUMINAIRE OPTION: FN2
4. COLOR: BLACK (BKTX)
5. POLE: PHILLIPS-LUMEC-POLE-SM6 ROUND STEEL BOTTLENECK POLE COLOR: BLACK TEXTURED (BKTX) NOM,INAL HEIGHT : 10'
6. CONTACT INFORMATION: https://www signify com/en-us 800-555-0050

CDLED2WD-10W-30D930-K

RAB

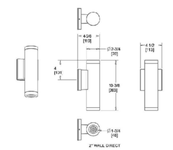


Cylinders are a complete design solution. They are available in various sizes, mounting options, colors and beam angles, and suitable for indoor/outdoor use.

Color: Matte black

Weight: 2.4 lbs

Dimensions



Technical Specifications

Compliance
UL Listed:
Suitable for wet locations

IESNA LM-79 & LM-80 Testing:
RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

Electrical
Driver:
Constant Current, Class 2, 120-277V, 50/60Hz, 120V: 0.10A, 208V: 0.06A, 240V: 0.05A, 277V: 0.05A

Dimming Driver:
0 - 10V (at 120-277V), TRIAC and ELV (at 120V only)

THD:
10.3% at 120V; 29.9% at 277V

Power Factor:
99.2% at 120V; 87.9% at 277V

Optical
Optics:
30°

Performance
Lifespan:
50,000 Hour LED lifespan based on IESNa 80 results and TM-21 calculations

LED Characteristics
LEDs:
Long-life, high-efficacy, surface-mount LEDs

Color Stability:
LED color temperature is warrantied to shift no more than 200K in color temperature over a 5-year period

Construction
Cold Weather Starting:
The minimum starting temperature is -4°F (-20°C)

Maximum Ambient Temperature:
Suitable for use in up to 104°F (40°C)

Lens:
TIR-Polycarbonate (Total Internal Reflection)

Reflector:
Vacuum-metalized polycarbonate

Housing:
Extruded aluminum

Gaskets:
High-temperature silicone

Green Technology:
Mercury and UV free, RoHS-compliant components

Finish:
Formulated for high durability and long-lasting color

Installation
Mounting:
Wall direct light only

Other
5-Year, No-Compromise Warranty:
RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish. RAB's warranty is subject to all terms and conditions found at rablighting.com/warranty.

WALL MOUNTED LIGHT 'B' (10)
NOT TO SCALE

LUMINAIRE SCHEDULE
(SEE NEXT SHEET FOR DETAILS)

- A (2) PROPOSED POLE LIGHTS (SEE METROSCAPE DETAIL)
- B (10) PROPOSED WALL PACKS (SEE RAB LIGHTING DETAIL)

CALCULATIONS SUMMARY

UNITS	AVG	MAX	MIN	AVG/MIN RATIO	MAX/MIN RATIO
WEST PARKING AREA					
Fc	2.4	5.7	0.6	4.0	9.5
EAST PARKING AREA					
Fc	1.6	4.4	0.2	8.2	22.0

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

Pennsylvania One Call System
PA act 172 of 1986 requires three working days notice
Serial Numbers:
20253170513, 20253170655, 20253170702

PENNSYLVANIA ACT 187 REQUIREMENTS:
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-10-92 | DEED BOOK 9953 | PAGE 1611 & UPI: 1-10-93 | DEED BOOK 9953 | PAGE 1603

INLAND DESIGN
Engineering, Surveying & Land Planning
[redacted]

COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SCOTT S. ZWIZANSKI ENGINEER PE091752

No.	Date:	Description:
1	06/26/2026	REVISED PER TWP REVIEWS

PRELIMINARY LAND DEVELOPMENT PLAN

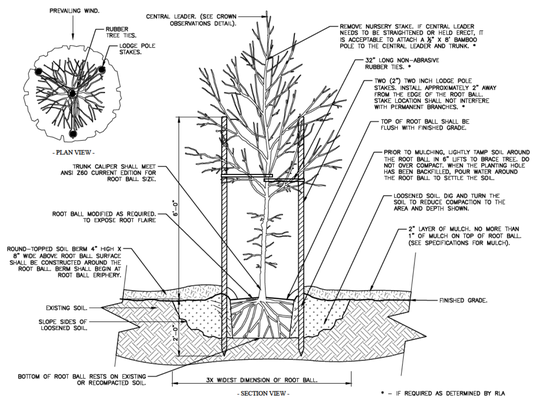
GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 Inch = 10'

Date: 4/27/2026
Scale: 1" = 10'
Drawn by: TAH
Checked by: SJZ
Project No. 12706

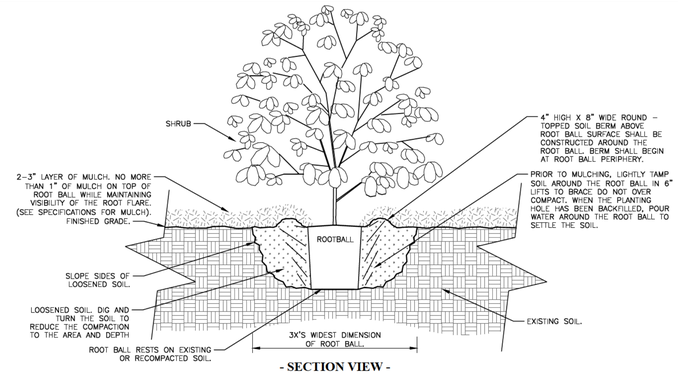
LIGHTING PLAN FOR
TRBL WALNUT, LLC
615 & 617 S. WALNUT STREET
WEST CHESTER, PA 19382
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 12 OF 15

N:\12700\12706\dwg\Sheets\Preliminary Submission\12 LIGHTING PLAN.dwg

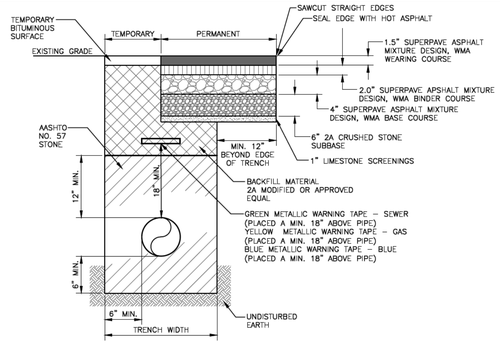


TYPICAL TREE PLANTING DETAIL
(NOT TO SCALE)

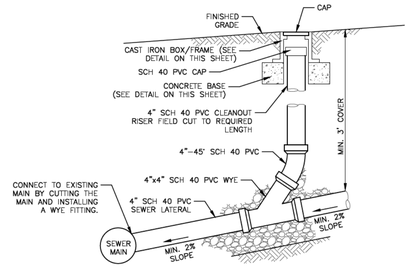


- SECTION VIEW -

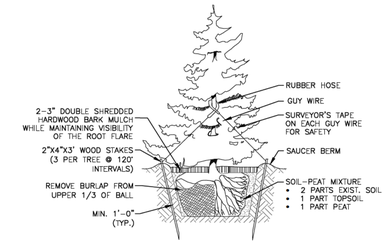
TYPICAL SHRUB PLANTING DETAIL
(NOT TO SCALE)



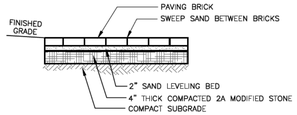
PAVEMENT RESTORATION DETAIL FOR WALNUT STREET, WILLOW ALLEY AND MECHANICS ALLEY
(NOT TO SCALE)



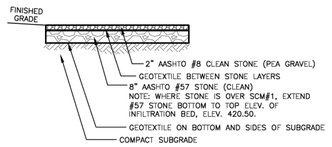
TYPICAL SANITARY SEWER LATERAL IN PAVED AREA



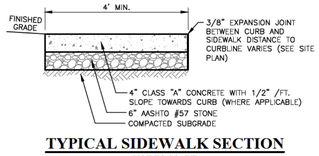
TYPICAL EVERGEEN TREE PLANTING DETAIL
(NOT TO SCALE)



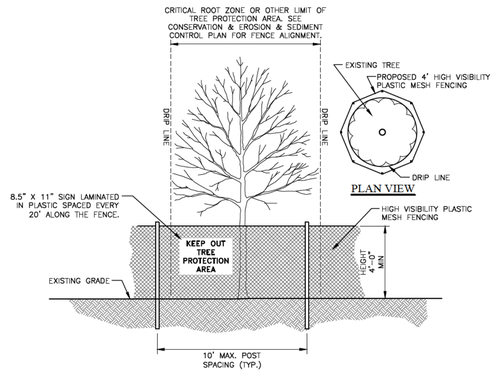
TYPICAL BRICK SIDEWALK SECTION
(NOT TO SCALE)



TYPICAL PERVIOUS PEA GRAVEL (PATIO) SECTION
(NOT TO SCALE)



TYPICAL SIDEWALK SECTION
(NOT TO SCALE)

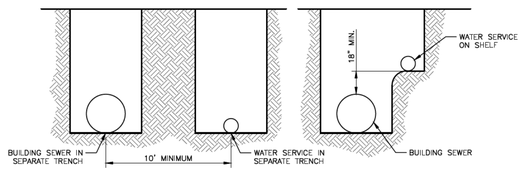


TREE PROTECTION DETAIL
NOT TO SCALE)

PROTECTIVE FENCING:
VINYL CONSTRUCTION FENCING, CHAIN LINK FENCING, SNOW FENCING OR OTHER SIMILAR FENCING AT LEAST FOUR FEET (4') HIGH AND SUPPORTED AT A MAXIMUM OF TEN-FOOT (10') INTERVALS BY APPROVED METHODS SUFFICIENT ENOUGH TO KEEP THE FENCING UPRIGHT AND IN PLACE. THE FENCING SHALL BE OF A HIGHLY VISIBLE MATERIAL, AND SHALL HAVE A TREE PROTECTION SIGN AFFIXED TO THE FENCE EVERY TWENTY (20) FEET IN SUCH A MANNER TO BE CLEARLY VISIBLE TO THE WORKERS ON-SITE

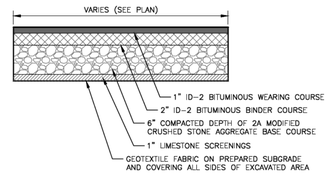
PRIOR TO CONSTRUCTION:
THE CONTRACTOR OR SUBCONTRACTOR SHALL CONSTRUCT AND MAINTAIN, FOR EACH PROTECTED TREE OR GROUP OF TREES ON A CONSTRUCTION SITE, A PROTECTIVE FENCING WHICH ENCIRCLES THE OUTER LIMITS OF THE CRITICAL ROOT ZONE OF THE TREES TO PROTECT THEM FROM CONSTRUCTION ACTIVITY. ALL PROTECTIVE FENCING SHALL BE IN PLACE PRIOR TO COMMENCEMENT OF ANY SITE WORK AND REMAIN IN PLACE UNTIL ALL EXTERIOR WORK HAS BEEN COMPLETED

DO NOT:
A ALLOW RUN OFF OF SPILLAGE OF DAMAGING MATERIALS INTO THE AREA BELOW ANY TREE CANOPY
B STORE MATERIALS, STOCKPILE SOIL, OR PARK OR DRIVE VEHICLES WITHIN THE TPZ
C CUT, BREAK, SKIN, OR BRUISE ROOTS, BRANCHES, OR TRUNKS WITHOUT FIRST OBTAINING AUTHORIZATION FROM THE CONSULTING ARBORIST
D ALLOW FIRES UNDER AND ADJACENT TO TREES
E DISCHARGE EXHAUST INTO FOLIAGE
F SECURE CABLE, CHAIN, OR ROPE TO TREES OR SHRUBS
G TRENCH, DIG, OR OTHERWISE EXCAVATE WITHIN THE DRIPLINE OR TPZ OF THE TREE(S) WITHOUT FIRST OBTAINING AUTHORIZATION FROM THE CONSULTING ARBORIST
H APPLY SOIL STERILANTS UNDER PAVEMENT NEAR EXISTING TREES

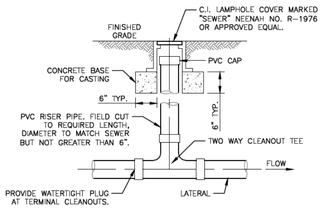


TYPICAL WATER & SEWER SERVICES SEPARATION DETAIL
(NOT TO SCALE)

NOTE:
1 THE BUILDING WATER SERVICE AND SEWER SERVICES SHALL BE 10-FEET APART
2 WHERE 10-FEET SEPARATION CAN NOT BE ACCOMPLISHED, THE SERVICES SHALL HAVE A VERTICAL SEPARATION OF 18-INCHES (MINIMUM)



TYPICAL DRIVEWAY / PARKING LOT SECTION
(NOT TO SCALE)



TYPICAL CLEANOUT FRAME AND COVER DETAIL PAVED SURFACES, SIDEWALKS, OR GRASSED AREAS
(NOT TO SCALE)

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

Pennsylvania One Call System
PA act 172 of 1986 requires three working days notice
Serial Numbers:
20253170513, 20253170655, 20253170702

PENNSYLVANIA ACT 187 REQUIREMENTS
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-10-92 | DEED BOOK 9953 | PAGE 1611 & UPI: 1-10-93 | DEED BOOK 9953 | PAGE 1603

INLAND DESIGN
Engineering, Surveying & Land Planning
[redacted]

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SCOTT T. ZWIZANSKI
ENGINEER
PE091752

No.	Date:	Description:
1	06/26/2026	REVISED PER TWP REVIEWS

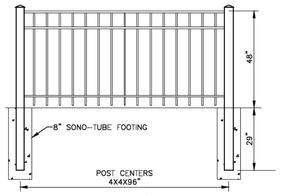
PRELIMINARY LAND DEVELOPMENT PLAN

Date: 4/27/2026
Scale: AS NOTED
Drawn by: MMH
Checked by: SJZ
Project No. 12706

CONSTRUCTION DETAILS 'A'
FOR
TRBL WALNUT, LLC
615 & 617 S. WALNUT STREET
WEST CHESTER, PA 19382
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

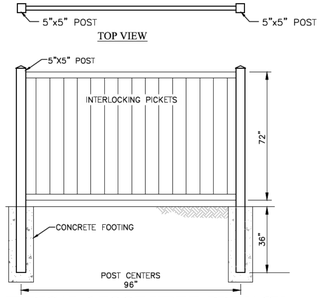
SHEET 13 OF 15

N:\12700\12706\dwg\Sheets\Preliminary Submission\13 CONSTRUCTION DETAILS 'A'.dwg



POWDER COATED ALUMINUM FENCE DETAIL

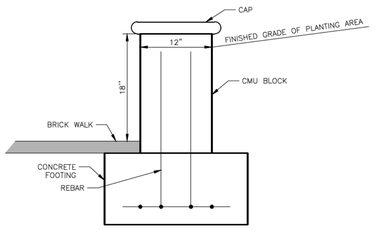
(NOT TO SCALE)



TYPICAL 6-FOOT VINYL PRIVACY FENCE DETAIL

(NOT TO SCALE)

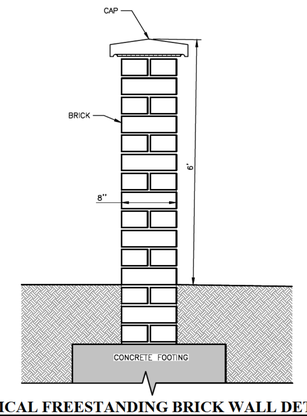
NOTE:
1 THE FENCE INSTALLED FOR THIS PROJECT SHALL BE A NON-WHITE COLOR



TYPICAL CONCRETE BENCH DETAIL

(NOT TO SCALE)

NOTE:
1 DETAIL WILL BE FINALIZED PRIOR TO CONSTRUCTION



TYPICAL FREESTANDING BRICK WALL DETAIL

(NOT TO SCALE)

NOTE:
1 DETAIL WILL BE FINALIZED PRIOR TO CONSTRUCTION

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

Pennsylvania One Call System
PA act 172 of 1986 requires
three working days notice
Serial Numbers:
20253170513, 20253170655, 20253170702

PENNSYLVANIA ACT 187 REQUIREMENTS:
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-10-92 | DEED BOOK 9953 | PAGE 1611 & UPI: 1-10-93 | DEED BOOK 9953 | PAGE 1603

INLAND DESIGN
Engineering, Surveying & Land Planning
[redacted]

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
SCOTT T. ZWIZANSKI
ENGINEER
PE091752

No.	Date:	Description:
1	06/26/2026	REVISED PER TWP REVIEWS

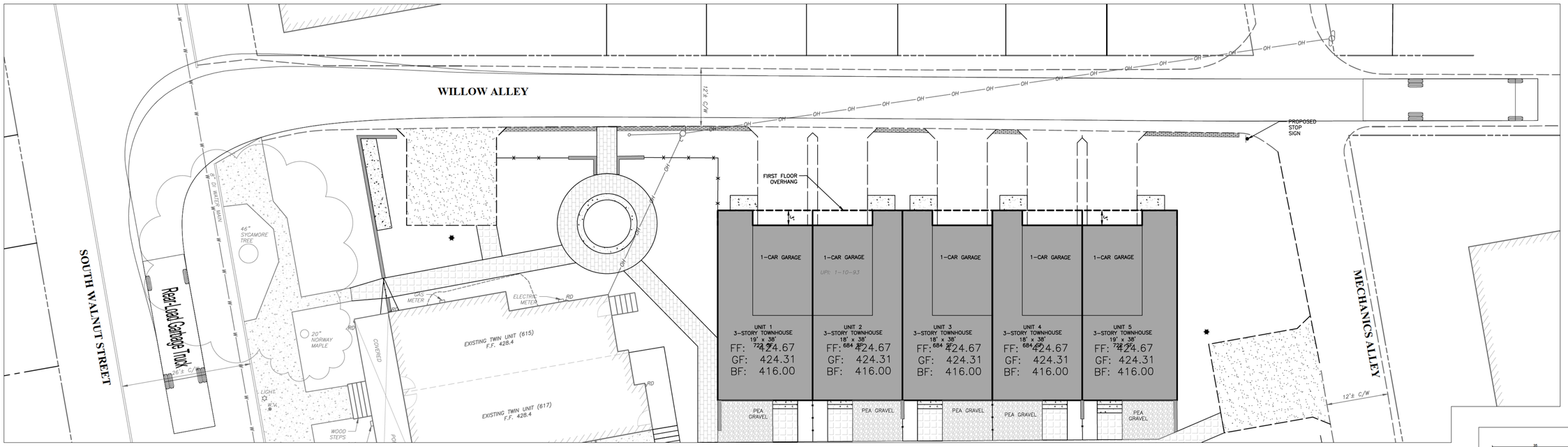
PRELIMINARY LAND DEVELOPMENT PLAN

Date: 4/27/2026
Scale: AS NOTED
Drawn by: SJZ
Checked by: MMH
Project No. 12706

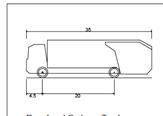
CONSTRUCTION DETAILS 'B'
FOR
TRBL WALNUT, LLC
615 & 617 S. WALNUT STREET
WEST CHESTER, PA 19382
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

SHEET 14 OF 15

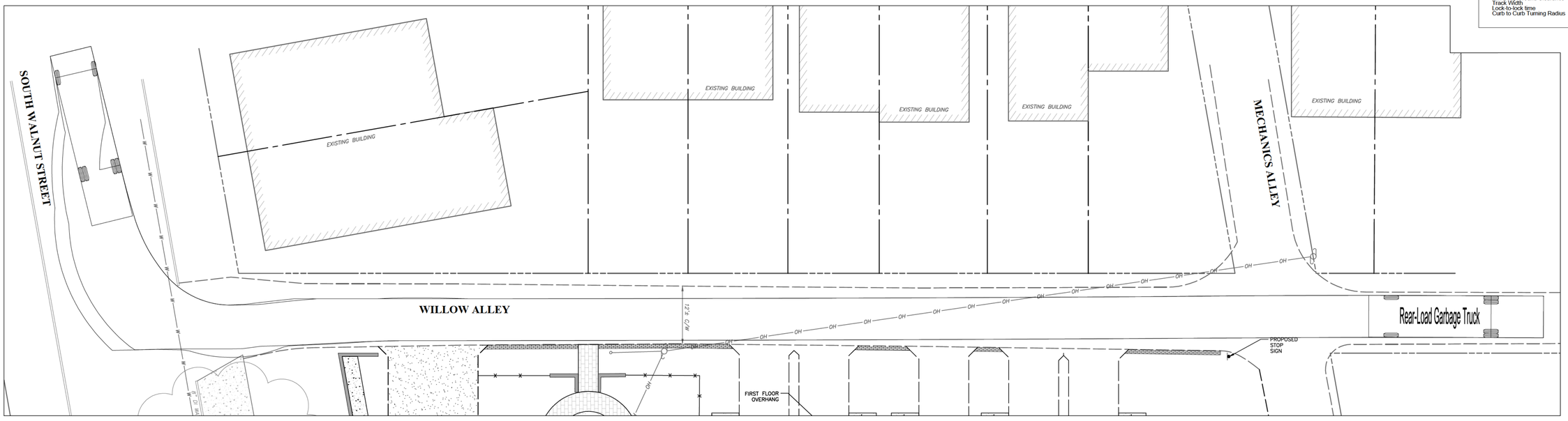
N:\12700\12706\dwg\Sheets\Preliminary Submission\14 CONSTRUCTION DETAILS 'B'.dwg



GARBAGE TRUCK ENTERING WILLOW ALLEY FROM SOUTH WALNUT ST.



Rear-Load Garbage Truck	
Overall Length	35.000ft
Overall Width	8.375ft
Overall Body Height	10.546ft
Min Body Ground Clearance	1.000ft
Track Width	8.375ft
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	29.300ft



GARBAGE TRUCK EXITING WILLOW ALLEY TO SOUTH WALNUT ST.

COPYRIGHT
InLand Design, LLC expressly reserves its common law copyright and all other proprietary rights in these plans. All drawings, specifications and copies thereof are and shall remain the property of InLand Design, LLC. They are to be used only in respect to this project and are neither to be used on any other project, nor are they to be assigned to any third party without first obtaining the expressed written permission and consent of InLand Design, LLC. Any re-use without written permission, verification, consent or adaptation by InLand Design, LLC for the specific purpose intended, will be at the third party's sole risk and without liability or legal exposure to InLand Design, LLC the third party shall further indemnify and hold harmless InLand Design, LLC from all claims, damages, losses, and expenses arising thereto or resulting therefrom.

Pennsylvania One Call System
PA act 172 of 1986 requires three working days notice
Serial Numbers:
20253170513, 20253170655, 20253170702

PENNSYLVANIA ACT 187 REQUIREMENTS:
InLand Design, LLC does not guarantee the accuracy of the locations for existing subsurface utility structures shown on the plans, nor does InLand Design, LLC guarantee that all subsurface structures are shown. The contractor shall verify the location and elevation of all underground utilities and structures before the start of work.

UPI: 1-10-92 | DEED BOOK 9953 | PAGE 1611 & UPI: 1-10-93 | DEED BOOK 9953 | PAGE 1603

INLAND DESIGN
Engineering, Surveying & Land Planning
[redacted]
COMMONWEALTH OF PENNSYLVANIA REGISTERED PROFESSIONAL SCOTT J. ZWIZANSKI ENGINEER PE091752

No.	Date:	Description:
1	06/26/2026	REVISED PER TWP REVIEWS

PRELIMINARY LAND DEVELOPMENT PLAN

GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1 inch = 10'

Date: 4/27/2026
Scale: 1" = 10'
Drawn by: MMH
Checked by: SJZ
Project No. 12706

TRUCK TURNING PLAN FOR
TRBL WALNUT, LLC
615 & 617 S. WALNUT STREET
WEST CHESTER, PA 19382
WEST CHESTER BOROUGH • CHESTER COUNTY • PENNSYLVANIA

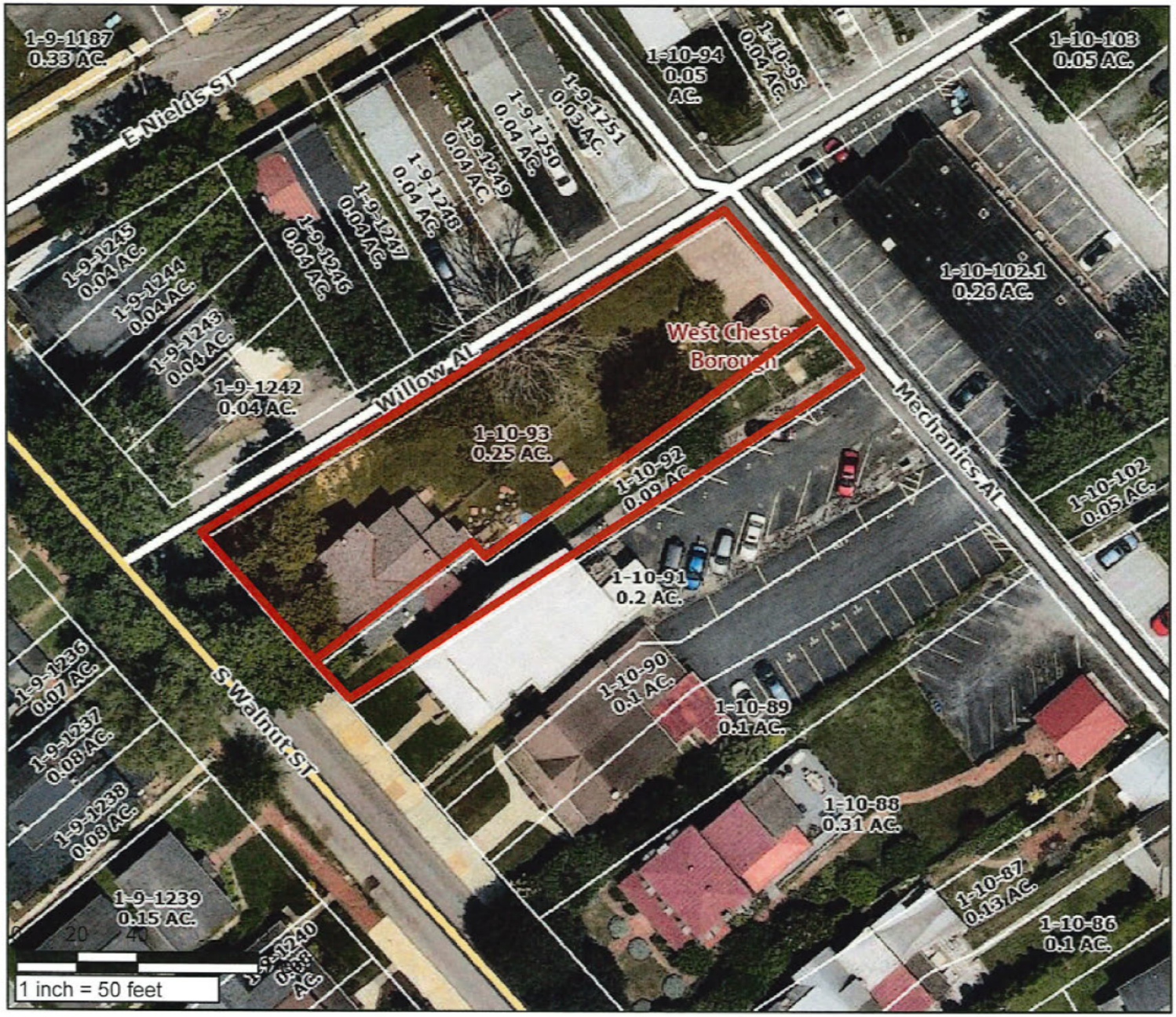
SHEET 15 OF 15

N:\12700\12706\dwg\Sheets\Preliminary Submission\15 TRUCK TURNING PLAN.dwg

EXHIBIT A-1

CHESCOVIEWS OF PROPERTY

CV4_Letter_Landscape



COUNTY OF CHESTER

PENNSYLVANIA



Find UPI Information

PARID: 0110 00930000
UPI: 1-10-93
Owner1: TRBL WALNUT LLC
Owner2:
Mail Address 1: [redacted]
Mail Address 2:
Mail Address 3:
ZIP Code: 19382
Deed Book: 11499
Deed Page: 1974
Deed Recorded Date: 12/16/2025
Legal Desc 1: ES OF S WALNUT ST
Legal Desc 2: LOT & DWG
Acres: 0.2523
LUC: R-10
Lot Assessment: 58130
Property Assessment: 70690
Total Assessment: 128820
Assessment Date: 12/12/2025 9:23:31 AM
Property Address: 615 S WALNUT ST
Municipality: WEST CHESTER
School District: West Chester Area

Map Created:
Friday, July 10, 2026

County of Chester

Limitations of Liability and Use:
County of Chester, Pennsylvania makes no claims to the completeness, accuracy, or content of any data contained herein, and makes no representation of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor are any such warranties to be implied or inferred with respect to the information or data furnished herein. For information on data sources visit the GIS Services page listed at www.chesco.org/gis.

Department of Building, Housing & Codes Enforcement
Regulations for the Protection of Public Health, Safety and Welfare

401 East Gay Street • West Chester, Pennsylvania 19380
610-696-1773 • housing@west-chester.com

11/3/25

Owner: TRBL Walnut LLC
Property
Address: 615-616 S Walnut Street, West Chester, PA

Applicant: Inland Design

Zoning Determination

The Applicant is responding to a review of land development plans submitted for the property at 615-617 S. Walnut Street, West Chester, PA done by Pennoni Associates Inc, Review Letter #1 Dated June 1, 2026

"Pennoni Associates Inc." Parking spaces shall not be located within any front yard areas. (§112-602.K(1))

"Inland Design Response." Per the West Chester Borough Zoning Ordinance, a 'Front Yard' is defined as a "A yard abutting a street line of a primary street". A 'Primary Street' is defined as "A street which serves as the principal means of vehicular travel to provide access to the front yard of abutting properties." A 'Secondary Street' is defined as a street which serves as a subordinate means of vehicular travel to provide access to the side yard or rear yard of abutting properties, such as an alley." Based upon the ordinance definitions the yard along South Walnut Street is the front yard for this parcel, and the proposed parking spaces along Willow Alley and Mechanics Alley are along secondary streets and are therefore not located in a front yard.

This is my determination on this response.

Definitions:
Yard, Front: A yard abutting a street line of a primary street extending the full width of the lot along the front lot line of such yard and extending in depth from the front lot line to the building setback line. In the case of a corner lot, the yards extending along all streets are front yards, and the remaining yards shall include a rear yard, opposite the street on which the principal building is generally faced, and a side yard opposite the other street. For lots fronting three streets, all yards abutting a street shall be considered a front yard. The remaining yard shall be either a rear yard or a side yard, determined by the position of the principle building facade.

Street, Primary: A street which serves as a principal means of vehicular travel to provide access to the front yard of abutting properties.

Street, Secondary: A street which serves as a subordinate means of vehicular travel to provide access to the side or rear yard of abutting properties, such as an alley.

Street: A right-of-way intended for the general public use to provide means of circulation for vehicles and pedestrians, furnishing access to abutting lots. The word "street" includes the words "road," "highway," "avenue," "boulevard,' "lane" and "alley."

This property has two sets of single-family attached and semidetached buildings. One set of semidetached buildings (twins) is fronting Walnut Street, the other set of five single-family Semidetached and attached homes (townhouses) are fronting Willow Alley. Street definition states that the word street includes the words “road,” “Avenue,” Boulevard,” “Lane,” and “alley”. Primary street definition states that it is a street which serves as a principal means of vehicular travel to provide access to the front yard of abutting properties. This means that Walnut Street and Willow Alley are both primary means of vehicular access to the homes on this property, they are both “Primary Streets.

Since both Walnut Street and Willow Alley are primary streets, then that makes the yard that abuts both Walnut Street and Willow Alley a “Front Yard. As stated in item #5 of Pennoni’s Review letter #1 Dated June 1, 2026, Parking spaces shall not be located within any front yard area.
Section 112-602.K(1) Parking in front of building.
(1) Parking spaces shall not be located within any front yard areas, except in the Industrial District, where parking in the front yard may be permitted as a special exception by the Zoning Hearing Board, provided that it does not comprise more than 50% of the front yard areas.

Right to Appeal:
The Applicant has the right to appeal a decision of the Zoning Officer, or seek relief of portions of Chapter 112, the Borough of West Chester, Zoning Ordinance through a variance, by applying to the Zoning Hearing Board within 30 days of determination. A link has been added below.
https://www.west-chester.com/DocumentCenter/View/27616/Zoning-Hearing-Board-Appeal-Application?bidId=

Sincerely,

Aaron Flook, Director
Borough of West Chester
610.696.1773/housing@west-chester.com

500 W Lafayette Zoning Variance

Applicant, as equitable owner under an executed agreement of sale, seeks a single dimensional variance from Section 112-306.B of the Zoning Ordinance to permit a principal-structure side yard setback of 11 feet along the westerly property line, in lieu of the required 15 feet, in connection with the construction of a single-family detached dwelling and detached garage — both permitted uses — in the NC-1 Neighborhood Conservation District.

The subject property is a lawfully pre-existing nonconforming lot of record, deficient in both lot width (50 feet, where 60 feet is required) and lot area (5,015 square feet, where 6,000 square feet is required). Neither nonconformity was created by the Applicant; both arise from the physical conditions of the lot as it has long existed. Strict application of the 15-foot side yard requirement to this 50-foot lot yields a building envelope of only 20 feet, whereas a conforming lot in the district enjoys a 30-foot envelope as of right. The requested relief permits a dwelling 24 feet in width — substantially narrower than what the Ordinance itself contemplates on a conforming lot — and constitutes the minimum variance necessary to afford reasonable relief.

The relief is sought on the westerly side for a specific site-planning reason: the adjoining property to the east is improved with a garage located approximately 1.5 feet from the shared property line. Positioning the dwelling toward the west preserves the full 15-foot setback on the east, maintaining maximum practicable separation, light, air, and fire safety between the proposed dwelling and the existing structure.

The proposal complies with, and in several respects exceeds, all other dimensional and intensity requirements of the district: rear yard of 41.3 feet (35 feet required), impervious coverage of 44.3% (50% permitted), and building coverage of 27% (30% permitted), with combined side yards of 26 feet against the 30 feet otherwise required. The requested variance will not alter the essential character of the neighborhood, impair the use or development of adjacent property, or be detrimental to the public welfare, and represents the least modification of the regulation at issue consistent with reasonable use of the property.

Department of Building, Housing & Codes Enforcement
Regulations for the Protection of Public Health, Safety and Welfare

401 East Gay Street • West Chester, Pennsylvania 19380
610-696-1773 • housing@west-chester.com

Date :

PARCEL INFORMATION

Parcel Address:	500 West Lafayette Street, West Chester, PA
Unified Parcel Id:	1-5-10.5
Lot Size (S.F)	6,000
Owners:	Atlas Property Group LLC
Zoning District :	NC-1 District (Neighborhood Conservation)

Applicant: Chadd Martin
Address: [redacted]
Applicant Contact: [redacted] (P) [redacted] (Email)

Existing/Proposed Dimensional Requirements

	Proposed	Required
Lot Area	5015 S.F. (existing)	5015 S. F.
Lot Width	50'*	60'
Principal Building Setbacks		
Front Yard	19'	Match Existing Adjacent Setbacks
Side Yard	11'	15'
Rear Yard	41.3'	35'
Impervious Surface (less than 12,000 sq. ft.)	44.3%	50%
Building Coverage (less than 12,000 sq. ft.)	27%	30%
Accessory Building Setbacks		
Side Yard	5'	5'
Rear Yard	5'	5'

- = Existing nonconformity

DETERMINATION

Description of the work to be done, does it meet Zoning District Dimensional requirements for conforming uses, conforming buildings on nonconforming lots.
Section 112-810.E Nonconformities
Conforming uses, conforming buildings on nonconforming lots. Conforming buildings of which a conforming use is made, and which are located on a lot which is nonconforming at the effective date or amendment of this section may be enlarged or additional buildings may be erected, subject to the following:
(1) Provided that all of the area and bulk regulations, except minimum lot size and minimum lot width at building line and all design standards for the district in which the lot is located, are complied with and not exceeded.

(2)
If a lot on which a single-family detached dwelling has been constructed is rendered nonconforming in the minimum lot size by an amendment to this section adopted after the construction and residential use and occupancy of such dwelling, subject to the grant of a special exception by the Zoning Hearing Board, the owner may enlarge the dwelling by encroachment into the existing rear yard, provided that:
(a)
There is no encroachment of such enlargement within any side yard; and
(b)
The dwelling enlarged is a minimum of 30 feet from the rear property line in the NC-1 District and a minimum of 20 feet from the rear property line in the NC-2 District.
(3)
Provided, if the owner of such lot owns or controls adjacent land sufficient to enable him to enlarge the lot in conformity or more nearly in conformity with the district regulations, he shall be required to enlarge the lot before any extensions, enlargements or additional buildings are permitted; provided, however, that such enlargement of a nonconforming lot shall not create nonconformity of any kind on such adjacent land.

The zoning review is DENIED per information as recorded on the submitted Site Plan.

1. The Applicant proposes conforming use, conforming buildings on a nonconforming lot. Section 112-810.E (1-3) allow for expansion and addition of buildings on this type of nonconforming lot provided they meet specific requirements. The first requirement is provided that all of the area and bulk regulations, expect minimal lot width at building line and all design standards for the district which the lot is located, are complied with and not exceeded.
    a. The placement of the “House” on the property will require only 11’ side setback to the left side of the house. (as viewed from the primary street) This nonconformity cannot be used as Primary building setback (side yard) is not met.

RIGHT TO APPEAL
The applicant has the right to appeal to the Zoning Hearing Board, within 30 days, all determinations made by the Zoning Officer (Borough of West Chester’s Zoning Ordinance Section 112-1107 Appeals and application procedure.)
The applicant may wish to submit a Zoning Variance request to receive relief from Section 112-306.B Dimensional requirements Principal Structure Side Yard Setback.

https://www.west-chester.com/DocumentCenter/View/27616/Zoning-Hearing-Board-Appeal-Application?bidId=

Aaron Flook

Aaron Flook
Director of Building, Housing and Code Enforcement/Zoning Officer
Borough of West Chester.

ZONING DATA

ZONING DISTRICT: NC-1 (NEIGHBORHOOD CONSERVATION DISTRICT)
PROPOSED LAND USE: SINGLE-FAMILY DETACHED DWELLING

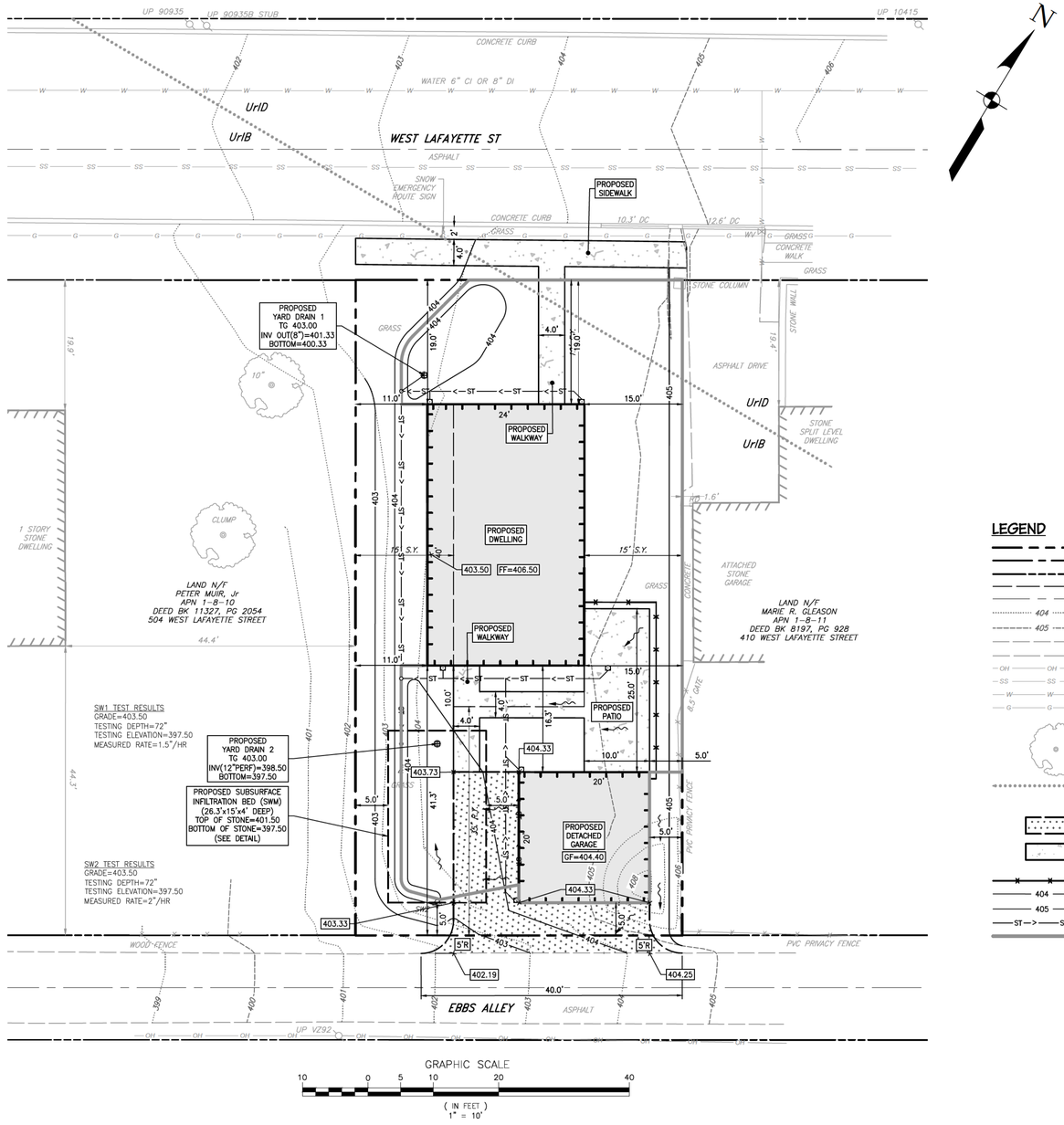
	REQUIRED	EXISTING	PROPOSED
LOT AREA	MEDIAN VALUE OF LOTS ON THE BLOCK FACE	5,015 S.F.	5,015 S.F.
LOT WIDTH AT BUILDING LINE	60' (MIN.)	50.00' *	50.00' *
PRINCIPAL BUILDING SETBACKS			
FRONT YARD	MATCH EXISTING ADJACENT SETBACKS	N/A	19'
SIDE YARD	15' (MIN.)	N/A	11' **
REAR YARD	35' (MIN.)	N/A	41.3'
IMPERVIOUS SURFACE (LOTS LESS THAN 12,000 S.F.)	50% (MAX.)	8.5% (424 S.F.)	44.3% (2,221 S.F.)
BUILDING COVERAGE (LOTS LESS THAN 12,000 S.F.)	30% (MAX.)	1.8% (89 S.F.)	27.1% (1,360 S.F.)
ACCESSORY BUILDING SETBACKS			
SIDE YARD	5' (MIN.)	17.8'	5'
REAR YARD	5' (MIN.)	0.6' *	5'

* = EXISTING NON-CONFORMITY
** = REQUIRES ZONING RELIEF

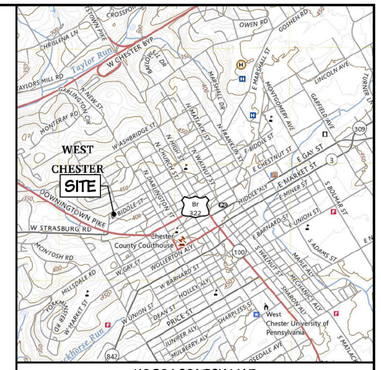
REFER TO WEST CHESTER BOROUGH ZONING ORDINANCE FOR ANY ADDITIONAL REGULATIONS THAT MAY APPLY

IMPERVIOUS SURFACE SUMMARY

	EXISTING	TO BE REMOVED	PROPOSED	TOTAL
DWELLING			960 S.F.	960 S.F.
GARAGE			400 S.F.	400 S.F.
SHED	89 S.F.	89 S.F.		
(BUILDING AREA)	89 S.F.			1,360 S.F.
PAVED DRIVEWAY			351 S.F.	351 S.F.
CONCRETE DRIVEWAY	189 S.F.	189 S.F.		
CONCRETE WALK/PATIO	89 S.F.	89 S.F.	460 S.F.	460 S.F.
CONCRETE PAD	57 S.F.	57 S.F.		
FUTURE ALLOWANCE			50 S.F.	50 S.F.
IMPERVIOUS SURFACE TOTAL	513 S.F.	424 S.F.	2,221 S.F.	2,221 S.F.
IMPERVIOUS INCREASE =				1,708 S.F.



GRAPHIC SCALE
10 0 5 10 20 40
(IN FEET)
1" = 10'



USGS LOCATION MAP
WEST CHESTER, PA 2023 SCALE: 1" = 2,000'

LEGEND

- PROPERTY LINE
- ADJOINER PROPERTY LINE
- EXISTING RIGHT-OF-WAY
- BUILDING SETBACK LINE
- ROAD CENTERLINE
- 404 — EXISTING 1' CONTOUR W/ ELEVATION
- 405 — EXISTING 5' CONTOUR W/ ELEVATION
- EXISTING EDGE OF PAVING
- EXISTING EDGE OF DRIVEWAY
- OH — EXISTING AERIAL UTILITY WIRES
- SS — EXISTING SANITARY SEWER MAIN
- W — EXISTING WATER LINE
- G — EXISTING GAS LINE
- EXISTING DECIDUOUS TREE
- SOILS BOUNDARY
- SW1 △ STORMWATER INFILTRATION TEST LOCATION
- PROPOSED PAVED DRIVEWAY
- PROPOSED CONCRETE WALKWAY/PATIO
- PROPOSED FENCE
- 404 — PROPOSED 1' CONTOUR
- 405 — PROPOSED 5' CONTOUR
- ST—>—ST—> — PROPOSED STORM PIPE
- SCM DRAINAGE BOUNDARY

UPI: 1-8-10.5

GEOLOGY DESCRIPTION

UNIT NO.	MAP SYMBOL	NAME	AGE	LITH1
191	fgp	FELSIC GNEISS	PRECAMBRIAN	FELSIC GNEISS

REFERENCE: PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, eMapPA

SOILS DESCRIPTION

SYMBOL	DESCRIPTION	DEPTH TO RESTRICTIVE FEATURE	NATURAL DRAINAGE CLASS	DEPTH TO WATER TABLE	HYDROLOGIC SOIL GROUP	HYDRIC SOIL RATING
UrlB	URBAN LAND-GLADSTONE COMPLEX, 0-8% SLOPES	60-100" TO LITHIC BEDROCK	WELL DRAINED	MORE THAN 80"	A	NO
UrlD	URBAN LAND-GLADSTONE COMPLEX, 8-25% SLOPES	60-100" TO LITHIC BEDROCK	WELL DRAINED	MORE THAN 80"	A	NO

REFERENCE: UNITED STATES DEPARTMENT OF AGRICULTURE, NATURAL RESOURCE CONSERVATION SERVICE, WEB SOIL SURVEY.

CALL BEFORE YOU DIGI

PENNSYLVANIA ONE CALL SYSTEM 1-800-242-1776 CALL BEFORE YOU DIG!

PENNSYLVANIA LAW REQUIRES: 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STATE – STOP CALL. Pennsylvania One Call System, Inc

PENNSYLVANIA ACT 187 REQUIREMENTS: DELLA PENNA ENGINEERING, INC. DOES NOT GUARANTEE THE ACCURACY OF THE LOCATIONS FOR EXISTING SUBSURFACE UTILITY STRUCTURES SHOWN ON THE PLANS, NOR DOES DELLA PENNA ENGINEERING, INC. GUARANTEE THAT ALL SUBSURFACE STRUCTURES ARE SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES AND STRUCTURES BEFORE THE START OF WORK.

NUM.	DATE	REVISION

PLAN PREPARED BY:

DELLA PENNA ENGINEERING, INC.
CONSULTING CIVIL ENGINEERS
[redacted]
P: [redacted] F: [redacted] E: [redacted]

PLAN PREPARED FOR:

IHII5, LLC
500 WEST LAFAYETTE STREET
WEST CHESTER BOROUGH * CHESTER COUNTY * PENNSYLVANIA

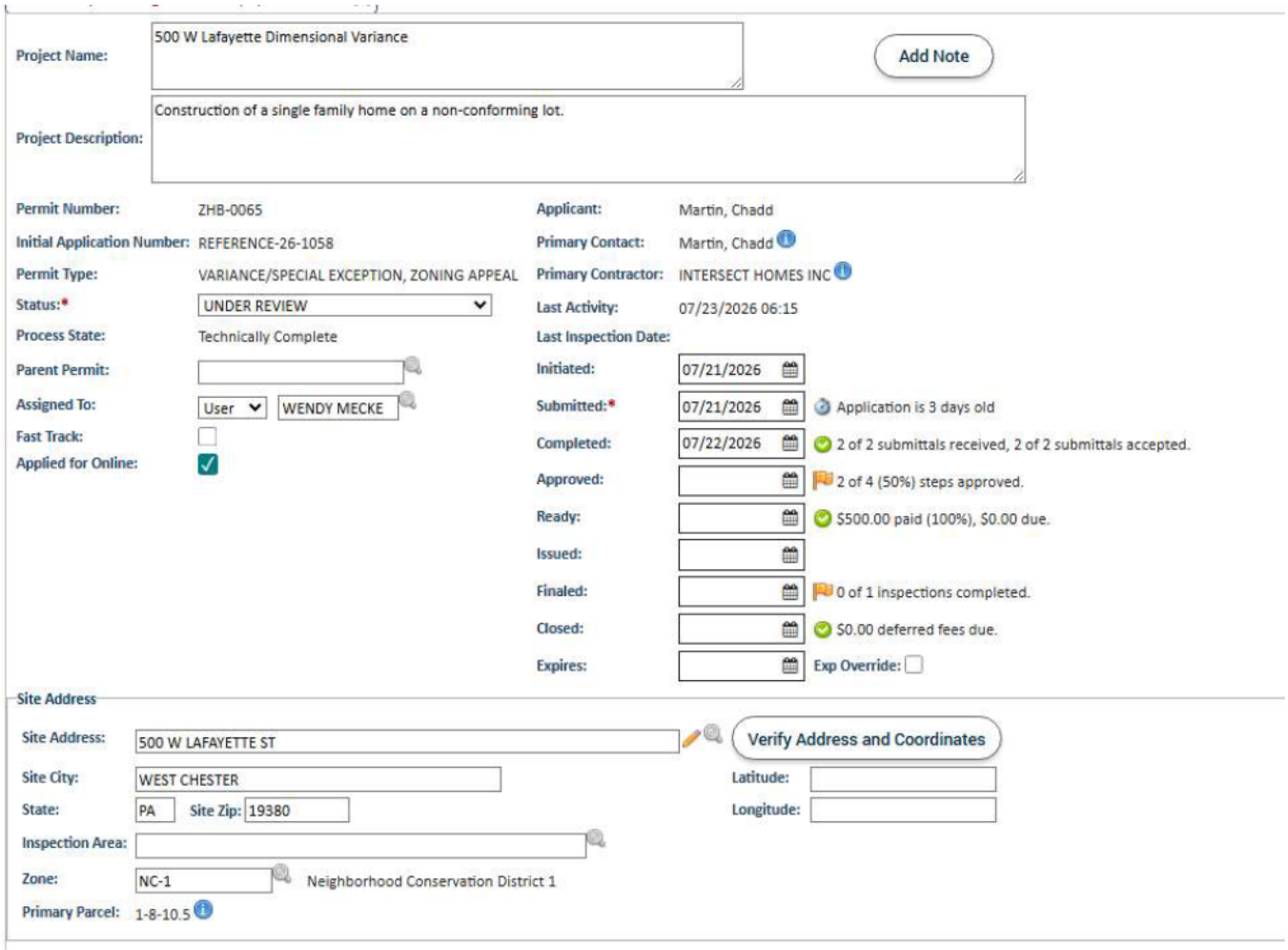
CHRISTOPHER R. DELLA PENNA, P.E.

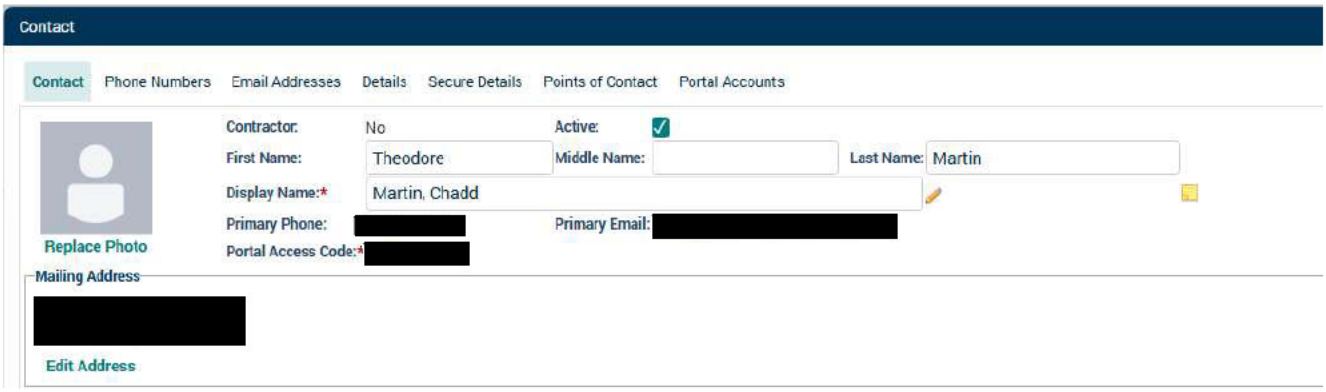
SKETCH PLAN 2
PROPOSED SITE PLAN

DATE: DRAFT

SHEET 2 OF 2

SCALE: 1" = 10'


Project Name:
500 W Lafayette Dimensional Variance
Add Note
Project Description:
Construction of a single family home on a non-conforming lot.
Permit Number: ZHB-0065
Initial Application Number: REFERENCE-26-1058
Permit Type: VARIANCE/SPECIAL EXCEPTION, ZONING APPEAL
Status:* UNDER REVIEW
Process State: Technically Complete
Parent Permit:
Assigned To: User WENDY MECKE
Fast Track:
Applied for Online:
Applicant: Martin, Chadd
Primary Contact: Martin, Chadd
Primary Contractor: INTERSECT HOMES INC
Last Activity: 07/23/2026 06:15
Last Inspection Date:
Initiated: 07/21/2026
Submitted:* 07/21/2026 Application is 3 days old
Completed: 07/22/2026 2 of 2 submittals received, 2 of 2 submittals accepted.
Approved: 2 of 4 (50%) steps approved.
Ready: $500.00 paid (100%), $0.00 due.
Issued:
Finaled: 0 of 1 inspections completed.
Closed: $0.00 deferred fees due.
Expires: Exp Override:
Site Address
Site Address: 500 W LAFAYETTE ST
Verify Address and Coordinates
Site City: WEST CHESTER
State: PA Site Zip: 19380
Latitude:
Longitude:
Inspection Area:
Zone: NC-1 Neighborhood Conservation District 1
Primary Parcel: 1-8-10.5


Contact
Contact
Phone Numbers
Email Addresses
Details
Secure Details
Points of Contact
Portal Accounts
Replace Photo
Contractor: No
Active:
First Name: Theodore
Middle Name:
Last Name: Martin
Display Name:* Martin, Chadd
Primary Phone: [redacted]
Primary Email: [redacted]
Portal Access Code:* [redacted]
Mailing Address
[redacted]
Edit Address

Permit #: ZHB-0065	**Status:** UNDER REVIEW	**Contact:** Martin, Chadd	**Site Address:** 500 W LAFAYETTE ST
Type: VARIANCE/SPECIAL EXCEPTION, ZONING APPEAL	**Project Name:** 500 W Lafayette Dimensional Variance	**Contractor:** INTERSECT HOMES INC	WEST CHESTER, PA 19380

Name	Value
REASON FOR APPEAL/ SPECIAL EXCEPTION:*	Non-conforming lot dimensional variance
APPLICABLE CODE SECTION:*	112-306.B
VARIANCE, SPECIAL EXCEPTION TYPE:*	Single Family Dwelling, Commercial Signs
REQUEST TYPE:*	Zoning Appeal

Chapter 66

HOUSING AND PROPERTY MAINTENANCE

§ 66-1.	Adoption of International Property Maintenance Code; copies on file.	§ 66-2.	Amendments, additions and deletions to code.
		§ 66-3.	Graffiti.

[HISTORY: Adopted by the Council of the Borough of West Chester 10-28-1987 by Ord. No. 11-1987.[1] Amendments noted where applicable.]

GENERAL REFERENCES

Brush, grass and weeds — See Ch. 41.

Building construction — See Ch. 43.

Electrical standards — See Ch. 54.

Fire prevention — See Ch. 57.

Garbage, rubbish and refuse — See Ch. 62.

Mechanical standards — See Ch. 72.

Numbering of buildings — See Ch. 75.

Plumbing — See Ch. 82.

§ 66-1. Adoption of International Property Maintenance Code; copies on file. [Amended 7-21-1993 by Ord. No. 10-1993; 7-17-1996 by Ord. No. 15-1996; 4-21-2004 by Ord. No. 18-2004; 8-15-2007 by Ord. No. 13-2007; 2-17-2010 by Ord. No. 9-2010; 1-16-2013 by Ord. No. 2-2013]

There is hereby adopted by the Borough of West Chester the International Property Maintenance Code, 2012 Edition, as now and as hereafter supplemented, reissued, amended and revised as published by the International Code Council, Inc. Not fewer than three copies of the International Property Maintenance Code, 2012 Edition are filed in the Borough's Office of Building, Housing and Codes Enforcement, and the same is hereby adopted and incorporated as fully as if set out at length herein.

§ 66-2. Amendments, additions and deletions to code. [Amended 1-25-1989 by Ord. No. 2-1989; 5-10-1989 by Ord. No. 11-1989; 6-12-1991 by Ord. No. 10-1991; 10-23-1991 by Ord. No. 20-1991; 11-18-1992 by Ord. No. 20-1992; 7-21-1993 by Ord. No. 10-1993; 6-15-2005 by Ord. No. 13-2005; 6-28-2006 by Ord. No. 7-2006; 8-15-2007 by Ord. No. 13-2007; 2-17-2010 by Ord. No. 9-2010; 8-5-2012 by Ord. No. 15-2012; 1-16-2013 by Ord. No. 2-2013; 9-29-2015 by Ord. No. 14-2015; 11-20-2024 by Ord. No. 07-2024; 3-19-2025 by Ord. No. 03-2025; 9-17-2025 by Ord. No. 08-2025]

The following amendments, additions, deletions, and changes are hereby made to the International Property Maintenance Code, 2012 Edition:

A. Section 101.1 shall be amended by the deletion of the words "[NAME OF JURISDICTION]" and the replacement thereof with the words, "the Borough of West Chester."

B. The heading of Section 103 shall be deleted in its entirety and replaced with the following: **"SECTION 103 DEPARTMENT OF BUILDING, HOUSING AND CODES**

1. **This ordinance also repealed former Ch. 66, Housing and Property Maintenance, adopted 2-12-1975 by Ord. No. 4-1975, as amended.**

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

ENFORCEMENT."

C. Section 103.1 shall be deleted in its entirety and replaced with the following:

> **103.1 Code Official.** The Department of Building, Housing and Codes Enforcement shall administer and enforce the provisions of this code and Chapter 66 of the Code. The term "Code Official" shall mean the executive official in charge of the Department of Building, Housing and Codes Enforcement and the executive official's designees.

D. Section 103.5 shall be deleted in its entirety and reserved.

E. Section 106.4 shall be deleted in its entirety and replaced with the following:

> **106.4. Violation and penalties.** Any person who violates or permits the violation of any provision of this code or Chapter 66 of the Code of the Borough of West Chester or shall fail to comply with any of the requirements thereof, or who shall erect, construct, alter or repair a building or structure in violation of an approved plan or directive of the Code Official, or of a permit or a certificate issued under the provisions of this code or Chapter 66 of the Code of the Borough of West Chester shall, upon conviction thereof in a summary proceeding brought before a District Justice, be guilty of a summary offense and shall be subject to the payment of a fine of not less than $25 and not more than $1,000, plus the costs of prosecution. Upon default of payment thereof, the defendant may be sentenced to imprisonment in the county prison for a period of not more than 30 days. Each section of this code or Chapter 66 of the Code of the Borough of West Chester that is violated shall constitute a separate offense, and each day or portion thereof in which a violation of a section of this code or Chapter 66 of the Code of the Borough of West Chester is found to exist shall constitute a separate offense, each of which violations shall be punishable by a separate fine imposed by the District Justice of not less than $25 and not more than $1,000, plus the costs of prosecution, and, upon default of payment thereof, the defendant may be sentenced to imprisonment in the county prison for a term not more than 30 days.

F. Section 202 shall be amended by adding the following definitions:

> **ABANDONED VEHICLE.** Any nonoperating, disassembled, stripped, damaged or dismantled vehicle which cannot be driven, any vehicle which is not currently registered and licensed, or any vehicle having an invalid and expired state motor vehicle inspection sticker.
>
> **CODE OF THE BOROUGH OF WEST CHESTER.** The compilation of all ordinances and resolutions adopted by the Borough of West Chester which is known as and cited officially as the Code of the Borough of West Chester.
>
> **FAMILY.** One or more individuals living together in a dwelling unit as a single nonprofit housekeeping unit, and doing their cooking on the premises, when said individuals are related by blood, marriage, or adoption; or no more than four unrelated individuals living together as a single nonprofit housekeeping unit in a single-family dwelling and no more than two unrelated individuals living together as a single nonprofit housekeeping unit in a two-family or multifamily dwelling; provided however that no more than three unrelated individuals living together may be permitted as a special exception under Chapter 112 of the Code of the Borough of West Chester. This definition excludes occupants of a club, dormitory, fraternity, sorority house, lodge or rooming house, group quarters and a student home.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

RENTS, LEASES OR LETS. The oral or written agreement or oral or written permission by an owner of a dwelling unit or rooming unit with a non-owner person for the use and occupancy of a dwelling unit or rooming unit.

VEHICLE. Any machine propelled by power other than human power which is designed to travel along the ground by use of wheels, treads, runners or slides and which is used to transport persons or property. Vehicles shall include but not be limited to motorcycles, automobiles, tractors, farm equipment and construction equipment.

G. Section 202 shall be amended by deleting the definition of the word "person" and the replacement thereof with the following definition:

PERSON. A business, governmental body, individual, corporation, union, association, firm, partnership, limited liability company, limited liability partnership, committee, club, or other organization, entity or group of persons.

H. Section 111, "Means of Appeal", shall be deleted and replaced with the following:

SECTION 111. BOARD OF APPEALS

111.1. General. The Borough, along with five other municipalities in Chester County, is a member of the West Chester Area Council of Governments ("WCACOG") pursuant to an Intergovernmental Cooperation Agreement to Create the West Chester Area Council of Governments dated the first day of April, 2003 (the "Agreement"). The WCACOG has formed a Board of Appeals for the members in the WCACOG which Board shall hear and decide appeals of orders, decisions or determinations made by the respective municipalities' building official relative to the application and interpretation of the municipalities' building code and property maintenance code. The Board of Appeals shall be appointed by the WCACOG and shall be governed by rules and regulations adopted by the WCACOG pursuant to the Agreement.

I. Section 302.8 shall be deleted and replaced with the following:

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

302.8.1 Motor vehicles. No person shall permit any abandoned vehicle to remain outside on public or private property within the Borough for a period of more than five days unless the vehicle is parked at a public garage or automotive service station with the permission of the owner thereof. If the Code Official determines that an abandoned vehicle has remained on private property in the Borough in violation of this section, the Code Official shall send written notice to the property owner in accordance with Section 107 of this code demanding that such abandoned vehicle be removed within 48 hours. If the Code Official determines that an abandoned vehicle has remained on public property in the Borough in violation of this section, the Code Official shall send written notice to the owner of the vehicle in accordance with Section 107 of this code demanding that such abandoned vehicle be removed within 48 hours. If the Code Official cannot determine the owner of the vehicle, the Code Official shall post such notice on the vehicle. Failure of the property owner or vehicle owner to remove or have the abandoned vehicle removed within 48 hours after the receipt of the notice or posting of the notice shall constitute a violation of this section and shall subject the property owner or vehicle owner to the penalties set forth in Section 106.4 of this code. The Code Official shall be authorized to remove or cause the removal of any abandoned vehicle which remains on public property in the Borough in violation of this section. The Code Official shall be authorized to remove or cause the removal of any abandoned vehicle which remains on private property in the Borough in violation of this section, provided that such abandoned vehicle constitutes a public nuisance or hazard to the public health, safety and general welfare. Any abandoned vehicle which the Borough removes or causes to remove shall be impounded and stored at a parking area, lot or garage designated by the Borough to store such vehicles. The abandoned vehicle may be released to the property owner or owner of the abandoned vehicle (upon proper proof of ownership) after payment of all of the penalties imposed by the Borough for a violation of this section and the payment of all fees and costs that the Borough has incurred to enforce this section and to remove and store the abandoned vehicle.

302.8.2. Parking shall be prohibited on green space as such term is defined in the Borough's Zoning Code.

J. Section 304.3 shall be amended as follows:

304.3. Premises identification. Buildings shall have approved address numbers placed in a position to be plainly legible and visible from the streets, roads or alleys in front of and behind the property. These numbers shall contrast with their background. Address numbers shall be Arabic numerals or alphabet letters. Numbers shall be a minimum of four inches (102 mm) high with a minimum stroke width of 0.5 inch (12.7 mm).

K. Section 304.14 shall be amended by the deletion of the words "[DATE]" and the replacement thereof with "May 1" and "November 1."

L. Section 404.6 titled "Efficiency unit" shall be deleted and such section shall be reserved.

M. Section 602.3 shall be deleted in its entirety and replaced with the following:

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

602.3 Residential buildings. Every owner of any structure who rents, leases or lets one or more dwelling units or guest rooms on terms, either express or implied, to furnish heat to the occupants thereof shall supply sufficient heat so as to maintain a room temperature not less than 68° in all habitable spaces, bathrooms and toilet rooms at all times. All heat shall be supplied exclusively by a central-type heating system or systems and shall not be augmented by any portable-type heaters or cooking devices. When the exterior temperature falls below 0° F. and the heating system is operating at its full capacity, a minimum room temperature of 63° shall be maintained at all times.

N. Section 602.4 shall be deleted in its entirety and replaced with the following:

602.4. Nonresidential structures. Every owner of any structure who rents, leases or lets a structure or any part thereof on terms, either express or implied, to furnish heat to the occupant thereof, every occupant of any structure or a part thereof who rents or leases said structure or part thereof on terms, either express or implied, to supply its own heat shall supply sufficient heat so as to maintain a room temperature of not less than 65° during all working hours in all enclosed spaces or rooms where persons are employed and working.

Exceptions.

1. Processing, storage and operation areas that require cooling or special temperature conditions.
2. Areas in which persons are primarily engaged in vigorous physical activities.

O. Section 704 shall be amended by adding a new Section 704.1.2 which shall provide as follows:

704.1.2. Automatic fire alarms. Inspection, testing and maintenance of automatic fire alarms shall be in accordance with NFPA 72.

P. Section 704.3 shall be revised by deleting the exception.

Q. Section 704.4 shall be revised by deleting the exceptions.

R. A new Chapter 10 is hereby added to read as follows:

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.1. Purpose/legislative findings.

A. It is the purpose of this chapter and the policy of the Council of the Borough of West Chester, in order to protect and promote the public health, safety and welfare of its citizens, to establish rights and obligations of owners and occupants relating to the rental of certain residential dwelling units in the Borough of West Chester and to encourage owners and occupants to maintain and improve the quality of rental housing within the Borough. It is also the policy of the Borough of West Chester that owners, responsible local agents and occupants share responsibilities to obey the laws, statutes, codes and ordinances which are adopted to protect and promote public health, safety and welfare. As a means to those ends, this chapter provides for a system of inspections, issuance and renewal of rental licenses and imposes penalties for violations. This chapter is also enacted to develop a point system for certain Code violations and disorderly conduct that occurs at residential rental dwellings and to authorize the non-renewal, revocation or suspension of a rental license when the owner of a residential rental dwelling unit accumulates 10 points in one rental license year. This chapter shall be liberally construed and applied to promote its purpose and policies.

B. In considering the adoption of this chapter, the Borough of West Chester makes the following findings:

(1) There are approximately ~~4,800~~5820 rental residential dwelling and rooming ~~units and approximately 1,050 rooming~~ units in the Borough. Because the occupants of these rental units have no ownership interest in the property, they have allowed the properties to deteriorate.

(2) In many cases, the owners of the properties live long distances from the Borough of West Chester. As a result, property maintenance of many rental units in the Borough of West Chester has been somewhat lax.

(3) In addition, problems have occurred because many tenants have not been concerned about following the codes of the Borough of West Chester, including codes which govern maintenance and safety of the property. This, in turn, has caused problems for other home owners who own property near the rental units.

(4) There is a greater incidence of violation of various codes of the Borough of West Chester in residential rental properties where owners rent properties to tenants.

(5) The Borough has experienced public nuisances from the tenants of rental dwelling units, such as excessive noise; accumulation of trash and litter; public lewdness; and a decline in the aesthetics of residential dwellings due to lack of proper maintenance and upkeep in the dwellings wherein tenants reside.

(6) There is a greater occurrence of problems with maintenance and upkeep of residential rental dwelling units and rooming units where owners rent such units than at owner occupied residential properties.

(7) There is a greater demand for police services in areas where there is a high concentration of student rental dwelling units.

(8) The police incur costs in responding to calls concerning complaints of public nuisances which occur at residential rental dwelling units and rooming units.

(9) The police spend significant time and resources to respond to calls of disorderly conduct at residential rental dwelling units, especially student rental dwelling units. Often, these calls result in the police issuing citations to the tenants and occupants for violations of Chapter 73 of the Borough Code, titled "Noise Disturbance," and/or Chapter 84 of the Borough Code, titled "Public Nuisances."

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.2. Definitions. As used in this Chapter 10, the following terms have the meanings indicated below:

BOROUGH. The Borough of West Chester, Chester County, Pennsylvania.

CODE(S). Any code or ordinance adopted, enacted and/or in effect in and for the Borough of West Chester concerning fitness for habitation or the construction, maintenance, operation, occupancy, use or appearance of any premises or residential rental unit or rooming unit. Such ordinances shall include the following:

Chapter 37 - Animals

Chapter 41 - Brush, Grass and Weeds

Chapter 43 - Building Code

Chapter 44 - Existing Building Code

Chapter 45 - Residential Building Code

Chapter 57 - Fire Prevention Code

Chapter 59 - Electrical Code

Chapter 62 - Garbage, Rubbish and Refuse

Chapter 66 - Property Maintenance

Chapter 73 - Noise

Chapter 84 - Public Nuisance

Chapter 95 - Streets and Sidewalks

Chapter 112 - Zoning

CODE OFFICIAL. The executive official in charge of the Department of Building, Housing and Codes Enforcement and the executive official's designees.

COUNCIL. The Borough Council of West Chester, Chester County, Pennsylvania.

DISRUPTIVE CONDUCT. Any form of conduct, action, incident or behavior perpetrated, caused or permitted by any occupant or visitor of a residential rental dwelling unit or rooming unit that is so loud, untimely (as to the hour of the day), offensive, riotous or that otherwise disturbs other persons of reasonable sensibility in their peaceful enjoyment of their premises such that a report is made to the police and/or Code Official complaining of such conduct, action, incident or behavior. It is not necessary that such conduct, action, incident or behavior constitute a criminal offense, nor that criminal charges be filed against any person in order for a person to have perpetrated, caused or permitted the commission of disruptive conduct, as defined herein; provided, however, that no disruptive conduct shall be deemed to have occurred unless the Code Official or police shall investigate and make a determination that such did occur, and keep written records, including a disruptive conduct report, of such occurrence.

DISRUPTIVE CONDUCT REPORT. A written report of disruptive conduct to be completed by the Code Official or police, as the case may be, who actually investigate an alleged incident of disruptive conduct and which shall be maintained by the Code Official.

DWELLING UNIT. One or more rooms in a building, designed for occupancy by one family for living purposes and having its own permanently installed cooking and sanitary facilities, with no enclosed space (other than vestibules, entrances or other hallways or porches) in common with any other dwelling unit.

Commented [RR1]: Is this chapter 10 or 1000?

Commented [AF2R1]: Both. Section 1000 is chapter 10 of Chapter 66

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.2. Definitions. As used in this Chapter 10, the following terms have the meanings indicated below:

GUEST. A person on the premises with the actual or implied consent of an occupant.

LANDLORD. One or more persons, jointly or severally, in whom is vested all or part of the legal title to the premises or all or part of the beneficial ownership and a right to the present use and enjoyment of the premises, including a mortgage holder in possession of a residential rental unit (same as "owner").

LANDLORD-TENANT ACT. The Landlord and Tenant Act of 1951, 68 P.S. § 250.101, et seq., as the same may be amended from time to time.

LOCAL RESPONSIBLE AGENT. An adult individual designated by the owner of a residential rental dwelling unit or rooming unit who is responsible for providing the Code Official with access to the dwelling unit or rooming unit for the purpose of making inspections necessary to ensure compliance with Chapter 66 of the Code. A responsible local agent is required to either reside on the premises in which the dwelling unit or rooming unit is located or reside within a radius of five miles of the Borough of West Chester. An owner may designate himself or herself as a responsible agent if he or she either resides on the premises in which the dwelling unit or rooming unit is located or resides within a radius of five miles of the Borough of West Chester offices at 401 E Gay Street, West Chester, PA 19380.

OCCUPANT. A person who occupies a dwelling unit or rooming unit who is the owner of the dwelling unit or rooming unit or occupies with permission of the owner or tenant.

OWNER. One or more persons, jointly or severally, in whom is vested all or part of the legal title to the premises or all of part of the beneficial ownership and a right to the present use and enjoyment of the premises, including a mortgage holder in possession of a residential rental unit.

OWNER-OCCUPIED RESIDENTIAL RENTAL DWELLING UNIT. A residential rental dwelling unit in which the owner resides on a regular, permanent basis.

PERSON. Any individual, association, trust, partnership or corporation, including any members, directors, officers, employees, partners or principals thereof. Whenever used in any clause prescribing and imposing a penalty, "person" includes the members, trustees, partners, directors, officers, managers and supervisors, or any of them, of partnerships, associations, corporations or other forms of entity.

PREMISES. Any parcel of real property in the Borough, including the land and all buildings and appurtenant structures or appurtenant elements, on which one or more residential rental dwelling units or rooming units are located.

PUBLIC SAFETY/QUALITY OF LIFE COMMITTEE. The duly appointed Committee of Borough Council who shall serve as the Board of Appeals to hear and decide appeals which are filed pursuant to this chapter.

RENTAL AGREEMENT OR LEASE. An oral or written agreement or oral permission or consent between an owner or owner's agent and an occupant complying with the requirements of Section 1000.3.E of this Chapter. If a written agreement or lease is not utilized, the owner or owner's agent shall provide a written document to the occupant which includes the terms required by Section 1000.3.E(2) through (6) of this Chapter.

RENTAL LICENSE. The license issued to the owner of a residential rental dwelling unit or rooming unit under this chapter, which is required for the lawful rental and occupancy of the same.

Commented [AF3]: I have had one or two people tell me that they do not get points even if the person who cause the disruptive conduct is convicted as they are not tenants. They say they never gave the person permission to be there. To simplify this and make it clearer i want to say permission from the owner or tenant.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.2. Definitions. As used in this Chapter 10, the following terms have the meanings indicated below:

RENTS, LEASES OR LETS. The oral or written agreement or oral or written permission by an owner of a dwelling unit or rooming unit with a non-owner person for the use and occupancy of a dwelling unit or rooming unit. The non-owner person may be an individual who is related to the owner by blood, marriage, or legal adoption.

RESIDENTIAL RENTAL DWELLING UNIT. Any dwelling unit or rooming unit within the Borough which is occupied by a person who is not the owner of the dwelling unit or rooming unit as determined by the most recent deed for the premises where the dwelling unit or rooming unit is located, whether or not by an oral or written lease, for contractual consideration or no contractual consideration, or pursuant to the laws of the Commonwealth of Pennsylvania.

REVOKE. The loss of the privilege to rent a residential rental dwelling unit or rooming unit for a period of time set by the Code Official and the loss of the privilege to apply for the renewal of the rental license at the expiration of that time period.

ROOMING UNIT. A dwelling providing lodging with or without meals, but including common cooking and sanitary facilities.

SUSPEND. The loss of the privilege to rent a residential rental dwelling unit or rooming unit for a period of time set by the Code Official. After the expiration of the suspension time period, the owner may apply for the renewal of the rental license.

TENANT. An individual who resides in a residential rental dwelling unit or rooming unit, whether or not he or she is the owner thereof, with whom a legal relationship with the owner/landlord is established by a lease or by the laws of the Commonwealth of Pennsylvania (same as "occupant").

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.3. Owner's duties.

A. General. It shall be the duty of every owner of a residential rental dwelling unit and rooming unit to keep and maintain such dwelling units and rooming units in compliance with all applicable commonwealth laws and regulations and codes and to keep the premises in good and safe condition. The owner/landlord shall be responsible for regularly performing all maintenance, including lawn mowing and ice and snow removal, and for making any and all repairs in and around the premises. As provided for in this chapter, every owner/landlord shall make every reasonable effort to regulate the proper and lawful use and maintenance of every residential rental dwelling unit and rooming unit which he, she or it owns. As provided for in this chapter, every owner shall also be responsible for regulating the conduct and activities of the occupants of every residential rental dwelling unit and rooming unit which he, she or it owns in the Borough, which conduct or activity takes place at such residential rental dwelling unit or rooming unit. In order to achieve those ends, every owner of a residential rental dwelling unit and rooming unit shall regulate the conduct and activity of the occupants thereof, both contractually and through enforcement, as more fully set forth below. This section shall not be construed as diminishing or relieving, in any way, the responsibility of occupants or their guests for their conduct or activity, nor shall it be construed as an assignment, transfer or projection over or onto any owner of any responsibility or liability which occupants or their guests may have as a result of their conduct or activity under any private cause of action, civil or criminal enforcement proceeding, or criminal law. This section shall not be construed so as to require an owner to indemnify or defend occupants or their guests when any such action or proceeding is brought against the occupant based upon the occupant's conduct or activity. Nothing herein is intended to impose any additional civil or criminal liability upon owner other than that which is imposed by existing law. This chapter is not intended to, nor shall its effect be, to limit any other enforcement remedies which may be available to the Borough against an owner, occupant or guest thereof.

B. Designation of local responsible agent. Any owner who rents, leases or lets a residential rental dwelling unit or a rooming unit shall designate and appoint an adult individual to serve as the responsible local agent for such dwelling unit or rooming unit. The responsible local agent shall be responsible for providing the Code Official with access to the dwelling unit or the rooming unit for the purpose of making inspections necessary to ensure compliance with the Borough Code, including Chapter 66 of the Code, titled "Housing and Property Maintenance." A responsible local agent is required to either reside on the premises in which the dwelling unit or rooming unit is located or reside within a radius of five miles of the Borough of West Chester offices at 401 E. Gay Street, West Chester, PA 19380. An owner may designate himself or herself as a responsible agent if he or she either resides on the premises in which the dwelling unit or rooming unit is located or resides within a radius of five miles of the Borough of West Chester offices at 401 E. Gay Street, West Chester, PA 19380. The local responsible agent shall be the agent of the owner for service of process and receiving of notices and demands, as well as for performing the obligations of the owner under this chapter and under rental agreements with the occupants. The identity, address and telephone number(s) of a person who is designated as local responsible agent hereunder shall be provided by the owner to the Borough on a form that the Borough shall create and such information shall be kept current and updated as it changes. Address of owner and responsible agent must be their residential address. No PO Boxes shall be used as an address.

C. Disclosure. The owner or responsible local agent shall disclose to all occupants in writing on or before the commencement of the rental agreement:

(1) The name, address and telephone number of the responsible local agent, if applicable;

(2) The name, address and telephone number of the owner of the premises.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.3. Owner's duties.

D. Maintenance of premises. The owner shall maintain the premises in compliance with the codes of the Borough and shall regularly perform all routine maintenance, including lawn mowing and ice and snow removal and shall promptly make any and all repairs necessary to fulfill this obligation. The owner and occupant may agree that the occupant is to perform the routine maintenance of the premises, including lawn mowing and ice and snow removal. In such a case, however, such agreement between the owner and occupant must be in writing. Such an agreement may be entered into between the owner and occupant only if: (i) the agreement of the parties is entered into in good faith and not for the purpose of evading the obligations of the owner or occupant; and (ii) the agreement does not diminish or affect the obligation of the owner to other occupants in the premises. In no case shall the existence of any agreement between owner and occupant relieve an owner of any responsibility under this chapter or other ordinances or codes for maintenance of the premises.

E. Rental agreement. All disclosures and information required to be given to occupants by the owner shall be furnished at or before the commencement of the rental agreement. The owner shall provide all occupants with copies of any rental agreement and addendum upon execution.

(1) Terms and conditions. Owner and occupant may include in a rental agreement terms and conditions not prohibited by this chapter or other applicable ordinances, regulations and laws, including rent, term of the agreement and other provisions governing the right and obligations of the parties.

(2) The rental agreement shall specify that the occupants may not engage in disruptive conduct as defined in this chapter or any action which constitutes a violation of the codes and that it shall be a breach of the rental agreement if the occupants engage in such disruptive conduct or violations and that the landlord may exercise the right to terminate the rental agreement and evict the occupants if such disruptive conduct or violations occur.

(3) Right of inspection. The rental agreement shall specify that the Borough has the right to periodically inspect the residential rental dwelling unit or rooming unit for purposes of issuing a rental license pursuant to this chapter. The rental agreement shall be signed by all tenants who shall consent to routine inspections of the dwelling unit or rooming unit required by this chapter.

(4) Prohibited provisions. Except as otherwise provided by this chapter, no rental agreement may provide that the occupant or owner agrees to waive or forego rights or remedies under this chapter. A provision prohibited by this subsection included in a rental agreement is unenforceable.

(5) Provision of Summary Ordinance to Occupant. Following the effective date of this chapter, a summary of the tenant's obligations pursuant to this chapter, in substantially the form set forth in Appendix A,[2] shall be provided to the occupant at or before commencement of the rental agreement. If a summary has been provided at or before commencement of the rental agreement, a summary does not have to be provided upon renewal. Where a rental agreement has been entered into prior to the effective date of this chapter, the owner shall provide the occupants with a copy of the summary within 60 days after the effective date of this chapter.

---

2. **Editor's Note: Appendix A is included as an attachment to Ch. 66 of the Code of the Borough of West Chester.**

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.3. Owner's duties.

(6) The owner shall secure a written acknowledgement from occupants that the occupants have received the disclosures and information required by this chapter.

F. Complaints. The owner shall promptly reply to reasonable complaints and inquires from occupants.

G. Landlord-Tenant Act. The owner shall comply with all provisions of the Landlord-Tenant Act.

H. Inspections. The Code Official shall perform routine inspections on all residential rental dwelling units and rooming units subject to the provisions of this chapter and Chapter 66 of the Code of the Borough of West Chester to determine compliance with all applicable terms of the Code. The frequency of such routine inspections shall be determined in accordance with a schedule adopted by the Department of Building, Housing and Codes Enforcement. The owner shall include in the rental agreement the Borough's right to make such inspections upon reasonable notice to the owner and the owner shall notify the tenants prior to the scheduled inspection(s). If necessary, the Code Official may seek to obtain a search warrant issued by a competent authority for the purpose of compelling an inspection or otherwise enforcing the terms and conditions of the Code. Any premises which has been found to be in noncompliance with the Code shall be subject to reinspection by the Code Official.

1000.4. Occupant duties.

A. General. All occupants of residential rental dwelling units and rooming units shall comply with all obligations imposed upon occupants by this chapter, all applicable codes and ordinances of the Borough and all applicable provisions of commonwealth law.

B. Health and safety regulations. The maximum number of persons permitted in any residential rental dwelling unit or rooming unit at any time shall not exceed the number permitted by the Zoning Ordinance.[3] The occupant shall deposit all rubbish, garbage and other waste from his or her residential rental dwelling unit into containers provided by the owner in a clean and safe manner and shall separate and place for collection all recyclable materials, in compliance with Chapter 62 of the Borough Code and all other applicable ordinances, laws and regulations.

C. Peaceful enjoyment. The occupant shall conduct himself or herself and require other person(s) including, but not limited to, guests on the premises and within his or her residential rental dwelling unit or rooming unit with his or her express or implied consent, to conduct themselves in a manner that will not disturb the peaceful enjoyment of the premises by others, and that will not disturb the peaceful enjoyment of adjacent or nearby dwellings by the person(s) occupying same.

D. Illegal activities. The occupant shall not engage in, nor tolerate, nor permit others on the premises to engage in any conduct declared illegal under the Pennsylvania Crimes Code (18 Pa.C.S.A. § 101 et seq.) or Liquor Code (47 P.S. § 1-101 et seq.) or the Controlled Substance, Drug, Device and Cosmetic Act (35 P.S. § 780-101 et seq.).

3. **Editor's Note: See Ch. 112 of the Code of the Borough of West Chester.**

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.4. Occupant duties.

E. Disruptive conduct. The occupant shall not engage in, nor tolerate, nor permit others on the premises to engage in disruptive conduct. When the Code Official or police investigate an alleged incident of disruptive conduct, he or she shall complete a disruptive conduct report upon a finding that the reported incident did, in his or her judgment, constitute disruptive conduct as defined herein. The information filled in on said report shall include, if possible, the identity or identities of the alleged perpetrator(s) of the disruptive conduct and all other obtainable information including the factual basis for the disruptive conduct requested on the prescribed form. Where the police make such investigation, said police officer shall then submit the completed disruptive conduct report to the Code Official. In all cases, the Code Official shall mail a copy of the disruptive conduct report to the owner or responsible local agent within ~~three~~ seven business days of receiving the report.

F. Compliance with rental agreement. The occupant shall comply with all lawful provisions of the rental agreement entered into between owner and occupant, including the addendum to rental agreement which is required pursuant to Section 1000.3E(5) of this chapter. Failure to comply may result in the eviction of the occupant by the owner in accordance with the rental agreement and Landlord-Tenant Act.

G. Damage to premises. The occupant shall not intentionally cause, nor permit or tolerate others to cause, damage to the premises.

H. Inspection of premises. The occupant shall permit inspections by the Code Official of the premises at reasonable times and upon reasonable notice to the owner as provided in the rental agreement and this chapter.

1000.5. Licenses and inspections.

A. License required. No person shall rent, lease or let a residential rental dwelling unit or rooming unit unless such person holds a valid rental license for such unit issued by the Code Official.

B. Rental license fees. Every person applying for and obtaining a rental license for a residential rental dwelling unit or rooming unit shall pay a yearly rental license fee which shall be established by Borough Council by resolution from time to time.

C. Application for rental license; registration of rental dwelling units and rooming units; form and content. Application for and registration of a rental license for a residential rental dwelling unit or a rooming unit shall be made in writing on forms prepared and provided by the Department of Building, Housing and Codes Enforcement and shall be accompanied with payment of the applicable rental license fee. Such forms shall require, but shall not be limited to requiring, the following information and shall be signed and sworn to by the owner of such dwelling unit or rooming unit:

(1) The names and addresses of all of the owners of the dwelling unit or rooming unit.

(2) The name, address telephone number and email address of the person authorized to collect rent for the dwelling unit or rooming unit.

(3) The name, local address, telephone numbers, business and home, and email address of the responsible local agent.

(4) The address of the premises in which the dwelling unit or the rooming unit is located.

(5) Identification of the unit as a dwelling unit or a rooming unit.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.5. Licenses and inspections.

(6) The number of dwelling units or rooming units located on the premises in which the dwelling unit or rooming unit is located.

(7) Whether such dwelling unit or rooming unit is a student home, as defined by the Chapter 112 of the Code of the Borough of West Chester (Zoning).

D. Filing tenant and landlord information form.

(1) At the time that an owner files an application for a rental license for a residential rental dwelling unit or rooming unit, the owner shall complete, sign and file a tenant and landlord information form. The tenant and landlord information form shall be prepared by or at the direction of the Code Official and shall require the owner to provide the names and the addresses of the owner, the responsible local agent, the address of the dwelling unit and/or rooming unit, the names and unit addresses of the tenants and/or occupants [except as otherwise provided in Section 1000.5D(2) below] the lease commencement and expiration date, a brief summary of the Borough ordinances relating to trash collection, permit parking areas, snow and ice removal, grass and weed control, maximum number of persons permitted to reside in a rooming unit and/or dwelling unit and noise disturbances and such additional information as the Code Official may require for purposes of the implementation, administration and enforcement of this chapter. At any time there is a change of tenants and/or occupants, the owner shall provide the Borough with an updated tenant and landlord information form.

(2) Notwithstanding the provisions of Section 1000.5D(1) above, the owner shall not be required to disclose the name and unit address of a tenant or occupant if the owner has reason to believe that such a disclosure may jeopardize the personal safety and well-being of a tenant or occupant and the owner provides the Code Official with such information and documentation to support such belief as may be reasonably required by the Code Official.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.5. Licenses and inspections.

E. Issuance of initial rental license. Upon receipt of a fully completed application and registration form for an initial rental license for a residential rental dwelling unit or a rooming unit and receipt of payment of the applicable rental license fee, the Code Official shall inspect the residential rental dwelling unit or rooming unit to determine if such rooming unit or dwelling unit is in compliance with the applicable provisions of the Code. In connection with the inspection of a dwelling unit or a rooming unit, the Code Official is authorized to inspect the interior and exterior of the rooming house in which the rooming unit is located or the building in which the dwelling unit is located. If the Code Official determines that the rooming unit or dwelling unit is in compliance with the applicable provisions of the Code, the Code Official shall issue a rental license to the owner or responsible local agent; provided, however, that if the owner of the property where the dwelling unit or rooming unit is located is delinquent in the payment of municipal taxes or municipal claims, the rental permit may be denied until such time as such taxes or claims are paid in full. In the event that the Code Official finds that the rooming unit or dwelling unit is in violation of any applicable provision of the Code, the Code Official shall not issue the rental license and instead shall issue a notice of violation as provided by this chapter. After receipt of notice from the owner or the responsible local agent that the violations have been abated or remedied, the Code Official shall reinspect the rooming unit or rental dwelling unit to determine if the items cited in the notice of violation have been remedied or corrected, in which case the rental license shall be issued. The rental license shall, at all times, be maintained in the rooming unit or dwelling unit or on the premises in which the rooming unit or dwelling unit is located and shall be available for inspection by Borough officials.

F. Reregistration of residential rental dwelling units and rooming units; renewal; transfer of ownership:

(1) The owner of any rooming unit or residential rental dwelling unit must renew the rental license for such rooming unit or dwelling unit every year by the first of July by payment of the applicable license fee and completing and filing the forms prepared and provided by the Department of Building, Housing and Codes Enforcement with respect to such reregistration. The Code Official shall not be required to perform an inspection in connection with the renewal of a rental license.

(2) In the event of a transfer of ownership, the rental license shall be transferred to the new owner by the new owner's payment of a transfer fee in an amount established by resolution of Borough Council and the filing, within 10 days of the transfer of ownership, of a completed written rental license application and registration form for each rooming unit and dwelling unit provided by the Department of Building, Housing and Codes Enforcement. It shall be the responsibility of the owner(s) to notify the Code Official of the transfer not more than five days prior to the date of the transfer of ownership. The new owner shall register and obtain a rental license for each rooming unit or dwelling unit and pay the applicable rental license fee therefor within five days after the date of the transfer of ownership.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.6. Disciplinary action.

A. General. In addition to imposing fines and penalties as prescribed in Section 1000.8, the Code Official may initiate disciplinary action against an owner that may result in a written warning, nonrenewal, suspension or revocation of the owner's rental license for violating any provision of this chapter that imposes a duty upon the owner as provided for herein.

B. Grounds for imposing discipline. Any of the following may subject an owner to discipline as provided for in this chapter:

(1) Failure to take steps to remedy and prevent incidents of disruptive conduct by occupants of residential rental dwelling units and rooming units after notice as required by this chapter.

(2) Failure to take steps to remedy and prevent violations of the Code by occupants of residential rental dwelling units and rooming units after notice as required by this chapter.

(3) Failure to file and implement an approved plan to remedy and prevent incidents of disruptive conduct by occupants of the residential rental dwelling units and rooming units as required by this chapter.

(4) Failure to file and implement an approved plan to remedy and prevent violations of the Code by occupants of the residential rental dwelling units and rooming units as required by this chapter.

(5) Failure to pursue eviction and diligently prosecute said eviction of the occupants in accordance with the terms of the rental agreement and Landlord-Tenant Act after incidents of disruptive conduct, violations of the Code have occurred and having been directed to do so by the Code Official as provided for in this chapter.

C. Types of disciplinary action.

(1) Written warning; corrective action plan.

[a] Upon the first report of disruptive conduct within a license period or the accumulation of at least five points for Code violations at a residential rental dwelling unit or rooming house within a license period, the Code Official shall issue a written warning advising the owner that future occurrences of disruptive conduct or assignment of points for Code violations shall lead to further disciplinary action as specified herein.

[b] Within 20 days after receipt of a written notice from the Code Official that an occupant of a residential rental dwelling unit or rooming unit has engaged in disruptive conduct or at least five points for violations of the Code have accumulated at a residential rental dwelling unit or rooming house, the owner shall file with the Code Official a report setting forth what action the owner has taken to prevent a reoccurrence of such conduct or violation. The report shall also set forth a plan as to the steps the owner will take in the future if the disruptive conduct or violation shall reoccur.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.6. Disciplinary action.

[c] The Code Enforcement Officer shall review the report, and if adequate steps have been taken and the plan is adequate to address future disruptive conduct and Code violations, shall approve the plan. If the Code Enforcement Officer does not find that the plan is adequate to prevent reoccurrence of similar disruptive conduct, Code violations by the occupants, he shall specify this in writing to the owner and suggest alternative measures to be taken by the owner. The owner shall thereafter revise the plan to incorporate the Code Official's recommendations.

[d] The owner shall, on his or her initiative, enforce the plan and failure to do so shall be a violation of this chapter.

[e] Upon satisfactory compliance with the corrective action plan and any conditions imposed by the Code Official, the formal warning shall be removed when the owner applies for a license renewal, provided that there were no other instances of disruptive conduct or accumulation of additional points for violations at the same residential rental dwelling unit or rooming unit in the same license period.

(2) Commencement of eviction of occupant(s). Upon the second report of disruptive conduct within a license period involving the same occupant or occupants, the Code Official shall direct the owner to initiate eviction proceedings against the occupant(s) who violated this chapter in accordance with the rental agreement and procedures in the Landlord-Tenant Act and to prohibit the occupant(s) from occupying the premises during the subsequent licensing period. If so ordered, the owner shall take all necessary action to evict the occupants in accordance with the terms of the rental agreement and Landlord-Tenant Act.

(3) Nonrenewal, suspension and revocation.

[a] Upon the third report of disruptive conduct or the accumulation of at least 10 points for Code violations at a residential rental dwelling unit or rooming house within a license period, involving the same occupant or occupants, the Code Official shall impose one of the following disciplinary actions: (i) deny the owner the privilege to apply for license renewal after the expiration of the license term; (ii) suspend the rental license for a period of time set by the Code Official; or (iii) revoke the rental license for a time specified by the Code Official.

[b] If the Code Official denies the owner the privilege to renew a rental license, the owner may maintain occupants in the premises until the end of the license term, but will not be permitted to apply for renewal of the license until a time set by the Code Official.

[c] If the Code Official imposes the discipline of suspension of the rental license, upon suspension, the owner shall take steps to declare the occupants in breach of the rental agreement and seek eviction of the occupants in accordance with the Landlord-Tenant Act. The owner shall take all necessary action to evict the occupants in accordance with the terms of the rental agreement and Landlord-Tenant Act. The owner, after the expiration of the suspension period, may apply for license renewal without the need to show cause why the owner's privilege to apply for a license should be reinstated.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.6. Disciplinary action.

[d] If the Code Official imposes the discipline of revocation of the rental license, the owner shall take steps to declare the occupants in breach of the rental agreement and seek eviction of the occupants in accordance with the Landlord-Tenant Act. The owner shall take all necessary action to evict the occupants in accordance with the terms of the rental agreement and Landlord-Tenant Act.

D. Criteria for applying discipline. The Code Official, when imposing discipline authorized pursuant to Section 1000.6C above shall consider the following:

(1) The effect of the disruptive conduct or Code violations on the health, safety and welfare of the occupants of the residential rental dwelling unit and rooming unit and other residents of the premises.

(2) The effect of the disruptive conduct or Code violations on the neighborhood.

(3) Whether the owner has prior violations of this chapter and other ordinances of the Borough or has received other notices of violations as provided for in this chapter.

(4) Whether the owner has been subject to disciplinary proceedings under this chapter.

(5) The effect of disciplinary action on the occupants.

(6) The action taken by the owner to remedy the disruptive conduct, Code violations to prevent future incidents of disruptive conduct and Code violations, including any written plan submitted by the owner.

(7) The policies and lease language employed by the owner to manage the residential rental dwelling unit or rooming unit to enable the owner to comply with the provisions of this chapter.

(8) In addition to applying discipline as set forth above, the Code Official may recommend that as a condition of issuing subsequent rental license, reasonable conditions related to fulfilling the purposes of this chapter be imposed.

E. Points for Code violations. Points for Code violations shall be assigned as follows:

(1) One point shall be assigned for each violation of the following ordinances as set forth in Section 1000.8: Property Maintenance Code, Refuse, Sidewalks, Vegetation, and Animals.

(2) Two points shall be assigned for each violation of the following ordinances as set forth in Section 1000.8: Fire Prevention Code, Electrical Code, and Occupancy Limits under Chapters 43, 44, 45 and 112 of the Code of the Borough of West Chester.

(3) Three points shall be assigned for the first violation in a rental license year of the following ordinances as set forth in Section 1000.8: Public Nuisance and Noise. Four points for the second violation in the same rental license year of the following ordinances as set forth in Section 1000.8: Public Nuisance and Noise. Five points for the third violation in the same rental license year of the following ordinances as set forth in Section 1000.8: Public Nuisance and Noise.

(4) Five points shall be assigned for unlawfully using a dwelling unit as a student home in violation of Chapter 112 of the Borough Code.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.6. Disciplinary action.

(5) Upon discovery of multiple violations at a residential rental dwelling unit or rooming unit or the property in which the rooming unit is located, the maximum number of points that can accumulate in a twenty-four-hour period is three, except for the offense of unlawfully using a dwelling unit as a student home in violation of Chapter 112 in which case five points may be assessed for one violation.

(6) When a complaint made by the owner of a dwelling unit or a rooming unit, the owner's responsible local agent or by the tenants and/or occupants thereof results in prosecution against another tenant and/or occupant of the dwelling unit or rooming unit, such violation shall not be counted when imposing disciplinary action.

(7) The Borough Code Official shall provide written notice to the owner by first-class mail within ~~three~~seven days of receiving the Disruptive Conduct Report from the Borough Police Dept., informing the owner of the occurrence of the Code violation which may potentially lead to an assessment of point(s).

(8) Points for all Code violations shall accumulate against a residential rental dwelling unit or rooming unit or the Premises in which the dwelling unit or rooming unit is located at the time that the owner, tenant or occupant is adjudicated guilty or liable, enters a plea of guilty, a plea of no contest or a plea of nolo contendere at the District Court hearing, and with respect to the appeal of an enforcement notice issued pursuant to Section 616.1 of the Municipalities Planning Code, the Borough's Zoning Hearing Board rules in favor of the Borough. The points shall also accumulate if after being charged or a citation or zoning violation notice is issued, the owner or occupant ignores the citation or arrest and a warrant is issued against the owner or occupant.

F. Procedure for nonrenewal, suspension or revocation of license; notification. Following a determination that grounds for nonrenewal, suspension or revocation of a license exist, the Code Official shall notify the owner of the action to be taken and the reason therefor. Such notification shall be in writing, addressed to the owner in question, be sent certified mail and shall contain the following information:

(1) The address of the premises in question and identification of the particular residential rental dwelling unit(s) or rooming unit(s) affected.

(2) A description of the disruptive conduct or Code violations which have occurred.

(3) A statement that the license for said residential rental dwelling unit(s) or rooming unit(s) shall be either suspended or revoked, or will not be renewed for the next license year or that the owner will receive a formal warning. In the case of a suspension or revocation, the notice shall state the date upon which such suspension or revocation will commence and in the case of a suspension shall also state the duration of said suspension.

(4) A statement that, due to the nonrenewal, suspension or revocation, the owner or any person acting on his, her or its behalf is prohibited from renting, leasing or permitting occupancy of the residential rental dwelling unit(s) or rooming unit(s) from and during the period said action is in effect.

(5) A statement informing the owner that he, she or it has a right to appeal the decision suspending, revoking or declining to renew the license to the Public Safety/Quality of Life Committee in accordance with the procedure in Section 1000.7 of this chapter.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.6. Disciplinary action.

G. Delivery of notification. All notices shall be sent to the owner and responsible local agent, if applicable, by certified mail. In the event the notice is returned by postal authorities marked "unclaimed" or "refused" then the Code Official shall attempt delivery by personal service on the owner or responsible local agent, if applicable. The Code Official shall also post the notice at a conspicuous place on the premises.

H. Effect of suspension or revocation of rental license. Upon the commencement of suspension or revocation and after the owner has evicted the occupants in accordance with the provisions in the rental agreement and Landlord-Tenant Act, the residential rental dwelling unit or rooming unit shall be secured by the owner, and no person, firm, or corporation shall operate or rent/lease to another for residential occupancy any dwelling unit or rooming unit during such time that the rental license for such unit is suspended or revoked. The transfer of the ownership of a rental property by an owner to an entity in which such owner holds an ownership or equity interest will not void any existing suspension or revocation relating to such rental property.

I. Nonexclusive remedies. The discipline provisions of this section and the license nonrenewal, suspension and revocation procedures provided in this chapter shall be independent, non-mutually exclusive separate remedies, all of which shall be available to the Borough as may be deemed appropriate for carrying out the purposes of this chapter. The remedies and procedures provided in this chapter for violation hereof are not intended to supplant or replace to any degree and the remedies and procedures available to the Borough in the case of a violation of any other code or ordinance of the Borough, whether or not such other code or ordinance is referenced in this chapter and whether or not an ongoing violation of such other code or ordinance is cited as the underlying ground for a finding of a violation of this chapter.

1000.7. Appeals.

A. The owner of a residential rental dwelling unit or rooming unit has the right to appeal a decision suspending, revoking or declining to renew a rental license to the Public Safety/ Quality of Life Committee by submitting in writing to the Borough Manager, within 30 days from the date printed on the notice, a detailed statement of the appeal including grounds therefore and the reason(s) alleged as to why the determination of the Code Official is incorrect or should be overturned, and a statement of relief requested by the appellant. Such notice of appeal shall be required to be submitted on a form to be prescribed therefore by the Borough, and signed by the appellant.

B. There is hereby imposed a fee for filing of such appeals, the amount of which shall be determined and established, from time to time, by resolution of Council.

C. Upon receipt of such an appeal in proper form, accompanied with the requisite filing fee, the Borough Manager shall schedule an appeal hearing of the Public Safety/Quality of Life Committee to be held within 30 days of the request.

D. The appellant, Code Official and the owners of properties within a radius of 300 feet from the premises for which the license is at issue shall receive written notice of the hearing on appeal.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.7. Appeals.

E. The Public Safety/Quality of Life Committee shall hold a hearing on the appeal which shall be conducted in accordance with the Local Agency Law, 2 Pa.C.S.A. § 551 et seq. and 2 Pa.C.S.A. § 751 et seq. The appellant and all other parties having an interest may be heard. Based on the facts and arguments of the appellant and the Code Official and any police or other public officials involved, and any relevant factual presentations of other parties, the Public Safety/Quality of Life Committee shall make a decision affirming, reversing or modifying the action of the Code Official from which the appeal was taken. Among other facts presented, the Public Safety/Quality of Life Committee shall consider the factors set forth in Section 1000.6D when determining if the decision to suspend, revoke or not to renew a license shall be upheld. The Committee shall also have the discretion to remove points that have been assessed against a particular dwelling unit or rooming unit in instances where the owner has taken steps to implement an approved corrective action plan to remedy and prevent violations of the Code or incidents of disruptive conduct by occupants. Such decision shall be rendered at a public meeting either immediately following the hearing or within 30 days thereafter. The decision shall be reduced to writing stating clearly the factual and legal basis for the decision, within 45 days after the hearing. If the Public Safety/Quality of Life Committee deems it necessary or desirable, it may continue the hearing to a subsequent time and date not later than 30 days from the initial hearing and in such case the time limits for rendering the decision and reducing it to writing set forth herein shall be calculated from the last hearing date at which the substance of the decision or orally announced.

1000.8. Violations.

A. For purposes of this chapter, violations are those as set forth in the following ordinances or statutes:

(1) Occupancy: Refers to regulations relating to occupancy of rooming units, dwelling units and dwellings as contained in Chapters 43, 44, 45 and 112 of the Code of the Borough of West Chester.

(2) Refuse: Refers to regulations relating to Garbage, Rubbish and Refuse, Chapter 62 of the Code of the Borough of West Chester.

(3) Property maintenance (interior and exterior): Refers to regulations relating to International Property Maintenance Code, 2012 Edition, as now and as hereafter supplemented, reissued, amended and revised as published by the International Code Council, Inc., as contained in Chapter 66 of the Code of the Borough of West Chester.

(4) Sidewalks: Refers to regulations relating to snow and ice removal contained in Streets and Sidewalks, Chapter 95 of the Code of the Borough of West Chester.

(5) Noise: Refers to regulations relating to Noise Disturbance, Chapter 73 of the Code of the Borough of West Chester.

(6) Vegetation: Refers to regulations relating to Brush, Grass and Weeds, Chapter 41 of the Code of the Borough of West Chester.

(7) Animals: Refers to regulations relating to Animals, Chapter 37 of the Code of the Borough of West Chester.

(8) Student housing: Refers to student housing regulations contained in Chapter 112 of the Code of the Borough of West Chester.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.8. Violations.

(9) Fire Prevention Code: Refers to regulations relating to Fire Prevention, Chapter 57 of the Code of the Borough of West Chester.

(10) Electrical Code: Refers to regulations in the Electrical Code, Chapter 54 of the Code of the Borough of West Chester.

(11) Public nuisance: Refers to violations of Chapter 84 of the Code of the Borough of West Chester.

1000.9. Miscellaneous provisions.

A. Notice. All official notices of the Borough relating to a residential rental dwelling unit or rooming unit shall be served on the owner of the unit and the local responsible agent, if applicable. There shall be a rebuttable presumption that any notice required to be given to the owner under this chapter shall have been received by such owner if the notice was given to the owner in the manner provided by this chapter. A claimed lack of knowledge by the owner of any violation hereunder cited shall be no defense to license nonrenewal, suspension or revocation proceedings as long as all notice prerequisite to institution of such proceedings have been given and deemed received in accordance with the applicable provisions of this chapter.

B. Owners severally responsible. If any residential rental dwelling unit or rooming house is owned by more than one person, in any form of joint tenancy, as a partnership or otherwise, each person shall be jointly and severally responsible for the duties imposed under the terms of this chapter and shall be severally subject to prosecution for the violation of this chapter.

C. Confidentiality. All registration and contact information shall be maintained in a confidential manner by the Code Official and shall only be utilized for the purpose of enforcement of this chapter by the Code Official.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1000.10. Enforcement; violations and penalties.

Any person who violates or permits the violation of any provision of this Chapter 10 or shall fail to comply with any of the requirements thereof, shall, upon conviction thereof in a summary proceeding brought before a District Justice, be guilty of a summary offense and shall be subject to the payment of a fine of not less than $100 and not more than $1,000, plus the costs of prosecution. Upon default of payment thereof, the defendant may be sentenced to imprisonment in the county prison for a period of not more than 30 days. Each section of this chapter that is violated shall constitute a separate offense, and each day or portion thereof in which a violation of a section of this chapter is found to exist shall constitute a separate offense, each of which violations shall be punishable by a separate fine imposed by the District Justice of not less than $100 and not more than $1,000, plus the costs of prosecution, and, upon default of payment thereof, the defendant may be sentenced to imprisonment in the county prison for a term not more than 30 days. In addition to the fines set forth herein, the Borough shall be entitled to reasonable attorneys' fees and costs incurred in enforcing this chapter. The said fees shall be added to any penalties set forth above.

1000.11. Imposition of police service costs.

A. Definition. For purposes of this section, "police service costs" shall be the costs incurred by the Borough of West Chester Police Department for police services which are rendered in response to calls of disruptive conduct. Such costs include, but are not limited to, the salaries and other compensation of police officers, appropriate administrative expenses allocable thereto and prorated costs of equipment necessary for the police to respond. The police services fees shall be established from time to time by Council in a resolution and shall be based on the average cost for a typical police response to a call of disruptive conduct.

B. An owner and/or occupant is required to pay police service costs which are incurred by the Borough of West Chester Police Department in responding to incidents of disruptive conduct in excess of one response during any consecutive thirty-day period of time.

C. Whenever the police are called to respond to an incident of disruptive conduct, the Code Official shall notify the owner and/or occupant of the property where the disruptive conduct took place and also the local responsible agent of such property, by regular mail at the last known address of such owner and agent, that the police were called to respond to disruptive conduct at the owner's property and that if the police are again called to respond to disruptive conduct at such property within 30 days after their initial response, such owner and/or occupant shall be required to pay police service costs to the Borough for such responses.

D. After the second response to disruptive conduct within 30 days as provided in Section 1000.11C, the Chief of Police or the Code Official shall notify the Borough Treasurer, in writing, of the name and address of the owner and/or occupant of the property where the disruptive conduct took place, the dates of the initial and subsequent response(s) and the total amount of police service costs incurred for or during such responses. The Borough Treasurer or his/her duly authorized designee shall then bill the owner and/or occupant for the said amount, which shall be due and payable to the Borough within 30 days of such billing.

E. Any police service costs which have not been paid within 30 days of the billing therefore may be collected, together with a penalty of 10% thereof and interest at the rate of 10% per annum added thereto, by civil action against the owner and/or may be imposed or assessed against the owner's property as a municipal claim as provided by law.

S. Adopting a new Article 11 titled "Short Term Rental License" to provide as follows:

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1100.1. Applicability.

The provisions in this Chapter 11 shall only apply to dwelling units used as short term rentals.

1100.2. Definitions.

As used in this chapter, the following words and phrases shall have the meanings set forth herein unless the context otherwise clearly requires:

LEASE. Any permission, written or oral, to occupy a short term rental however denominated.

OWNER. The person(s) in whose name(s) the property on which the short term rental is located in is titled as set forth in the Office of the Recorder of Deeds of Chester County, Pennsylvania, and/or as reflected on the tax duplicate issued by the Chester County Assessor, or any person, as hereinafter defined, in control or with right of control, directly or indirectly, over the occupancy or right of occupancy of the short term rental.

SHORT TERM RENTAL PERMIT. A permit issued by the Borough to allow the use of a dwelling unit as a short term rental which identifies the rental unit and the owner(s) thereof and which certifies that the short term rental has been subject to such inspections as may be required and is deemed in compliance with all relevant Borough regulations and may be occupied by the occupant for the purposes intended.

SHORT TERM RENTAL. Any dwelling unit rented for the purpose of overnight lodging for a period of less than 30 days. The leasing of one or more bedrooms in a dwelling unit shall not be permitted as a short term rental.

EVENT SPACE. A location where a celebration, ceremony, wedding reception, corporate function or similar activity for the benefit of someone other than the property owner takes place on a periodic basis involving the gathering of individuals assembled for the common purpose of attending the special event.

1100.3. Short Term Rental Permit Required.

No owner of any property in the Borough of West Chester shall lease any short term rental to any person or persons until the Codes Enforcement Officer or his designee has issued a short term rental permit.

1100.4. Short Term Rental Permit Requirements.

A. The Borough shall provide application forms for a short term rental permit.

B. A short term rental permit shall be required for each dwelling unit that is rented as a short-term rental. No short term rental shall be occupied by a tenant without a rental permit.

C. A short term rental permit shall be effective for a period of one year or until the property is transferred to a new owner.

D. A short term rental permit must be renewed annually.

E. A short term rental permit application shall contain all of the following information:

1. The address of the subject property intended for use as a short term rental.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

2. The names(s), mailing address, telephone number and email address of the owners thereof and telephone number where the owner may be contacted in event of emergency. In the case of all ownership except that of individuals the names of the agents or officers of the owner shall be set forth therein with their permanent address, mailing address, phone number and e-mail address.
3. The name, mailing address, telephone number and email address of the property manager and/or local agent of the short term rental who may be contacted in event of emergency 24 hours a day seven days a week in lieu of the owner.
4. Floor plans for the short term rental, identifying the rooms on all floors and specific location of bedrooms.
5. A diagram or aerial photograph showing the location and number of off-street parking spaces available for the short term rental.
6. If the dwelling unit is part of a homeowners association or other community association, a copy of the written notice to the association indicating owner's intent to apply for a rental permit.
7. Signatures of both the owner and property manager and/or local agent.

1100.5. Short Term Rental Unit Standards.

A. A short term rental shall be subject to the following regulations:

1. If the owner of the short term rental does not reside at the property where the short term rental is located or within 15 miles of the property where the short term rental is located, he or she shall designate a managing agency, agent or local contact person to manage the short term rental. Such company or individual must be located within 15 miles from the short term rental and be available to be contacted in the event of an emergency 24 hours a day seven days a week in lieu of the owner. Such managing agency agent or local contact person shall have written authorization to accept service for the owner.
2. Overnight occupancy for short term rentals shall be limited to no more than two persons per bedroom.
3. No bedrooms shall contain any cooking facilities.
4. No food shall be served to guests.
5. Guests of the short term rental unit may not occupy overnight any recreational vehicles, campers or trailers on the property where the short term rental unit is located.
6. The requirements of all other applicable ordinances of the Borough, including but not limited to building, electrical, fire, and plumbing codes, shall be met. At a minimum, all short term rentals shall have a functioning smoke detector, carbon monoxide detector and fire extinguisher in the dwelling.
7. Occupants of a short term rental shall not be permitted to sleep outdoors or in tents.
8. There shall be no signs identifying the short term rental.
9. The owner shall maintain a guest register and shall preserve registration records for a minimum of three years. The register and all records shall be made available for inspection by the Codes Enforcement Officer at any time.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

10. The short term rental shall have a clearly visible and legible notice posted within the dwelling unit on or adjacent to the front door containing the following information:
    a. The name of the owner of the unit or the managing agency, agent, property manager, or local contact authorized in writing to accept service on behalf of the owner of the unit, and a telephone number at which that party can be reached on a twenty-four-hour basis.
    b. The 911 address of the property.
    c. The maximum number of occupants permitted to stay in the dwelling unit at any one time.
    d. The maximum number of vehicles allowed to be on the property and the requirement that all guest parking must be in the available off-street parking areas on the property.
    e. The trash and/or recycling pick-up day and notification that trash and refuse shall not be left or stored on the exterior of the property.
    f. Notification that the guests and/or the property owner may be cited or fined for creating a disturbance or for violating any other provision of the Borough Code, or state or federal law.
11. Short term rental tenants and guests may not engage in disorderly conduct or disturb the peace and quiet of any nearby neighborhood or person by loud unusual or excessive noise, including fireworks, by tumultuous or offensive conduct, public indecency, threatening, quarrelling, challenging to fight or fighting or creating a dangerous or physically offensive condition. The owner shall use best efforts to assure that the tenants and guests do not create unreasonable noise or disturbances, engage in disorderly conduct or otherwise violate provisions of the Borough Code or any state law pertaining to noise or disorderly conduct including but not limited to notifying the tenants and or guests of the rules regarding short term rentals.
12. The short term rental may not be used as an event space.
13. The owner of the short term rental must develop and provide to all guests a written plan for emergency evacuation of the dwelling.
14. If smoking is permitted on the property, the owner of the short term rental must inform guests of designated locations where smoking is permitted, provide safety ashtrays and bins, and instruct guests to fully and safely extinguish all smoking materials.

B. Prior to the issuance of a short term rental permit, and annually thereafter upon renewal of the short term rental permit, the Codes Enforcement Officer shall inspect the short term rental unit to determine if it complies with the standards in this chapter. If the Codes Enforcement Officer determines that all of the requirements of this chapter and other applicable codes and regulations are met, the Codes Enforcement Officer shall issue a short term rental permit which shall be valid for a period of one year, unless sooner revoked for violation of any condition imposed in this article.

C. Upon nonrenewal or revocation of the short term rental permit for cause shown, the use of the dwelling as a short term rental unit shall immediately cease, and continuation thereof shall subject the owner to the penalty provisions of this chapter and/or such other legal action as the Borough shall determine necessary.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

1100.6. Fees.

The Borough Council shall, by resolution, adopt and may, from time to time by resolution, amend a schedule of fees and charges for the administration of this chapter and for the cost of a short term rental permit.

1100.7. Enforcement; violations and penalties.

Any person who violates or permits the violation of any provision of this Chapter 11 or shall fail to comply with any of the requirements thereof, shall, upon conviction thereof in a summary proceeding brought before a District Justice, be guilty of a summary offense and shall be subject to the payment of a fine of not less than $100 and not more than $1,000, plus the costs of prosecution. Upon default of payment thereof, the defendant may be sentenced to imprisonment in the county prison for a period of not more than 30 days. Each section of this chapter that is violated shall constitute a separate offense, and each day or portion thereof in which a violation of a section of this chapter is found to exist shall constitute a separate offense, each of which violations shall be punishable by a separate fine imposed by the District Justice of not less than $100 and not more than $1,000, plus the costs of prosecution, and, upon default of payment thereof, the defendant may be sentenced to imprisonment in the county prison for a term not more than 30 days. In addition to the fines set forth herein, the Borough shall be entitled to reasonable attorneys' fees and costs incurred in enforcing this chapter. The said fees shall be added to any penalties set forth above.

§ 66-3. Graffiti. [Added 12-14-1994 by Ord. No. 20-1994]

A. Definitions. As used in this section, the following words shall have the meanings indicated:

GRAFFITI — The unauthorized inscription, writing, marking and/or drawing, whether etched, scratched, painted or drawn on any surface, including but not limited to buildings, walls, sidewalks, streets and structures.

B. Defacement of property prohibited. No person shall place graffiti on publicly or privately owned property.

C. Violations and penalties. **[Amended 3-17-1999 by Ord. No. 5-1999]**

(1) Any person who violates or permits the violation of any provision of this chapter shall, upon conviction thereof in a summary proceeding brought before a District Justice, be guilty of a summary offense and shall be subject to the payment of a fine of not less than $25 and not more than $1,000, plus the costs of prosecution. Upon default of payment thereof, the defendant may be sentenced to imprisonment in the county prison for a period of not more than 30 days. Each section or provision of this chapter that is violated shall constitute a separate offense, and each day or portion thereof in which a violation of this chapter is found to exist shall constitute a separate offense, each of which violations shall be punishable by a separate fine imposed by the District Justice of not less than $25 and not more than $1,000, plus the costs of prosecution, and, upon default of payment thereof, the defendant may be sentenced to imprisonment in the county prison for a term not more than 30 days.

(2) All persons convicted of a violation under this section shall also be responsible for the restoration of the vandalized property to the original appearance and/or the cost of cleaning, repairing, painting or otherwise restoring the property.

(3) The parent and/or guardian of any person under the age of 18 years who is convicted of an

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

offense under this section may be subject to restitution.

D. Enforcement. The enforcement of this section shall be the responsibility of both the Police Department and the Department of Building and Housing. Nothing herein shall grant to the Department of Building and Housing the power of arrest.

E. Provisions to be liberally construed. It is declared to be the intention of this section that its provisions shall be liberally construed so as to curb or reduce juvenile delinquency.

Downloaded from https://ecode360.com/WE0442 on 2026-08-04

Application Numbers: 2026-15

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
Borough of West Chester
Historical and Architectural Review Board

PROJECT ADDRESS: 122 S. High Street

1) ***Date of HARB Review:*** *July 30, 2026*

2) ***Applicant's Proposal:*** *Front Railing*

3) ***Findings:***

The applicants, Frank and Linda Gruber, were present to describe the proposed replacement of the deteriorated front entrance stair railing as follows:

- *The single existing galvanized metal pipe railing has separated from the face of the building and needs to be replaced.*
- *New, traditional-style steel railings will be installed at both sides of the existing marble stairs (two total railings). The railings will be powder coated in black color.*
- *The new railings will be anchored to the face brick of the building (top) and to the brick sidewalk (bottom) at ground level. Note – It was determined the existing marble steps may be damaged if the new railings were anchored into them.*

The HARB reviewed the application as follows:

- *The members concluded that the proposed railings are appropriate to the character of the HARB district.*
- *Mr. Yocum commented he would prefer all square metal vertical balusters instead of the proposed design to alternate square and twisted vertical balusters. Other members did not object to the proposed alternating balusters design.*
- *Aaron Flook, Director of Building and Housing, commented that the ground level attachment bracket to the brick pavers should have a tubular concrete foundation below the brick pavers to provide stable anchorage for the attachment bolts.*

4) ***Recommendations from HARB:***

The Board recommends Approval of a Certificate of Appropriateness for Application 2026-15 as submitted with the following clarifications:

1. *The new railings will be anchored to the face brick of the building (top). The anchor bolts shall be located to align with the mortar joints, not drilled into the existing face brick.*
2. *The ground level railing attachment brackets to the brick pavers shall have a tubular concrete foundation below the brick pavers to provide stable anchorage for the attachment bolts. The new concrete foundation shall not be visible.*

Application Numbers: 2026-15

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
Borough of West Chester
Historical and Architectural Review Board

PROJECT ADDRESS: 122 S. High Street

5) Borough Council's Action and Date

- ❑ Approved per HARB recommendation:
- ❑ Denied for the following reasons:
- ❑ Approved with the following differences from HARB recommendation:

Date of Action Taken: _____ , 2026

Borough Manager's Signature:

DATE APPLICATION RECEIVED: 06/18/2026

APPLICATION NUMBER: 2026-15

PROPERTY ADDRESS: 122 S High St

APPLICANT'S EMAIL: [redacted]

Note: All projects must have the appropriate sections completed in its entirety and attached to this form. *Only attach the applicable sections.* The application number will be assigned by the Building & Housing Department.

1) This application is for (check all appropriate boxes):
   - ❑ Section #1 – Sign
   - ❑ Section #2 – Canopy or Awning
   - ❑ Section #3 – Repair, replacement or alteration from original
   - ❑ *(please supply photos or elevations of original)*
   - ❑ *Section #4 – Addition*
   - ❑ *(supply architectural elevations and site drawings, as well as photos of the existing structure)*
   - ❑ *Section #5 – New Construction*
   - ❑ *(supply architectural elevations and site drawings, as well as photos of buildings next to and around the site)*
   - ❑ *Section #6 - Demolition*

2) Please indicate which items you are submitting with your application form. Do not submit originals, since they will be kept by the HARB for its official archives:
   - ❑ Color or B/W Sketches
   - ❑ Old or Historic Photographs
   - ❑ Plot or Site Plans
   - ❑ Architectural Elevations
   - ❑ Photographs of the current existing site showing where changes are to be made, location of buildings and streetscape.

All sketches, elevations, and plans must be signed by the preparer(s)

The owner of this property and the applicant agree to conform to all applicable findings of the Borough of West Chester Historical and Architectural Review Board.

Applicant's name (print): Michael Adams - A&R Iron Works

Applicant's Signature: Michael Adams — Date: 6/8/2026

Owner's Name (print): FRANK GRUBER

Owner's Signature: [signature] — Date: 6/10/26

Note: Check with the Building and Housing office of the Borough of West Chester to see if you need a building permit as well as a Certificate of Appropriateness ***before*** you begin your project

DATE APPLICATION RECEIVED: 06/18/2026

APPLICATION NUMBER: 2026-15

SECTION #3 – REPAIR, REPLACEMENT OR ALTERATION

(Attach a separate Section #3 for each of the repairs, replacements or alterations you wish to make)

Instructions: Provide clear photographs showing the location of each proposed improvement, including photos of streetscape and the adjacent buildings. Provide architectural elevations and/or photographs clearly showing the location of the proposed work. Provide material specifications and manufacturer's pamphlets on the replacement materials proposed.

Name of business: High Street Suites

Applicant's name: Frank Gruber

Applicant's address: [redacted]

Applicant's phone number: [redacted]

Owner's name: Frank Gruber

Owner's address: [redacted]

Owner's telephone number: [redacted]

1) Which element do you wish to change: ___Doors ___Windows ___Roofing ___Gutters ___Walls ___Steps ___Sidewalk ___Fence ___Trim _X_Railing ___Porch or Balcony ___ Other (specify)_____

2) On how many facades?_____ _____Front 2 Sided railing _____Back

3) What was the old is the material? Steel

4) What is the proposed new material? Steel

5) How will it be installed? Posts Core Drilled / Anchord to Wall

6) Are you using any historical materials? N/A

7) Is so, what and how?_____

8) What were the old dimensions? Height: 32" x Width:_____ Depth: 63"

9) What are the new dimensions? Height: 36" x Width:_____ Depth: 63"

10) What were the old colors? Black

11) What are the new colors? Black

12) Why do you wish to make these changes? Safety & Code / Insurance Requrements



122 South High St.
Proposed Railing Location



Application Numbers: 2026-16

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
Borough of West Chester
Historical and Architectural Review Board

PROJECT ADDRESS: 145W. Gay Street

1) ***Date of HARB Review:*** *July 30, 2026*

2) ***Applicant's Proposal:*** *Sign*

3) ***Findings:***

The applicant, Maria Papadopoulos, was present and described the proposed sign project as follows:

- *New round hanging sign, wood construction, colors to be light brown field with deep brown text and trim. The message on the sign is "***Brewing Love***".*
- *The sign will hang from a new L-shaped black metal bracket, as illustrated in the first rendering of the application.*
- *Note – the application also included a design for an alternate projecting metal bracket configured of twisted metal. This bracket was REMOVED from the application because of sidewalk-to-sign height restrictions.*
- *No new illumination will be installed.*

The HARB reviewed the application as follows:

- *The HARB members concluded that the proposed sign is appropriate to the character of the HARB district.*
- *The L-shaped sign bracket illustrated in the initial rendering will allow the sign to be mounted higher above the sidewalk to comply with the 8-foot clearance requirement.*
- *The bracket should be fabricated with anchor holes located to match up with the existing building's brick wall mortar joints. Bracket anchors must be through the mortar joints, not the face of the bricks.*

4) ***Recommendations from HARB:***

The Board recommends Approval of a Certificate of Appropriateness for Application 2026-16 as submitted with the following clarifications:

1. *The sign bracket will be the new upright L-shaped black metal bracket, as illustrated in the first rendering of the application.*
2. *Anchor bolt holes in the bracket shall be located to align with the existing building's brick wall mortar joints. Bracket anchor bolts must be installed through the mortar joints, not the face of the bricks.*

Application Numbers: 2026-16

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
Borough of West Chester
Historical and Architectural Review Board

PROJECT ADDRESS: 145 W. Gay Street

5) Borough Council's Action and Date

- ❑ Approved per HARB recommendation:
- ❑ Denied for the following reasons:
- ❑ Approved with the following differences from HARB recommendation:

Date of Action Taken: _____ , 2026

Borough Manager's Signature:

Permit #: COA-26-0013 Alerts | Status: COMPLETENESS REVIEW | Contact: Papadopoulos, Maria | Site Address: 143 W GAY ST WEST CHESTER, PA 19380

Type: CERTIFICATE OF APPROPRIATENESS- SIGNS | Project Name: Brewing Love Sign | Contractor:

Name	Value
REASON FOR APPROPRIATENESS APPLICATION:*	Sign
LOCATION OF PROJECT:*	145 west gay street west chester pa
NAME OF BUSINESS:*	Brewing Love
ARE YOU REPLACING AN EXSISTING SIGN:*	No
HOW MANY SIGNS DO YOU WISH TO INSTALL:*	1
HOW MANY FACADES WILL SIGN DISPLAY ON:*	Front
HANGING SIGN:	Yes
BUILDING MOUNTED:	Yes
OTHER:	
IF OTHER PLEASE SPECIFY:	
GIVE A THOROUGH DESCRIPTION OF SIGN:	
IS THERE NEW ILLUMINATION:	No
FIXTURE TEXT:	Brewing Love
SIGN DIMENSION HEIGHT:	
SIGN DIMENSION WIDTH:	
SIGN DIMENSION DEPTH:	

Replace Photo

Contractor: No | Active: ☑

First Name: Maria | Middle Name: | Last Name: Papadopoulos

Display Name:* Papadopoulos, Maria

Primary Phone: [redacted] | Primary Email: [redacted]

Portal Access Code:* IDZJN-0CYY6

Mailing Address

[redacted]

Edit Address

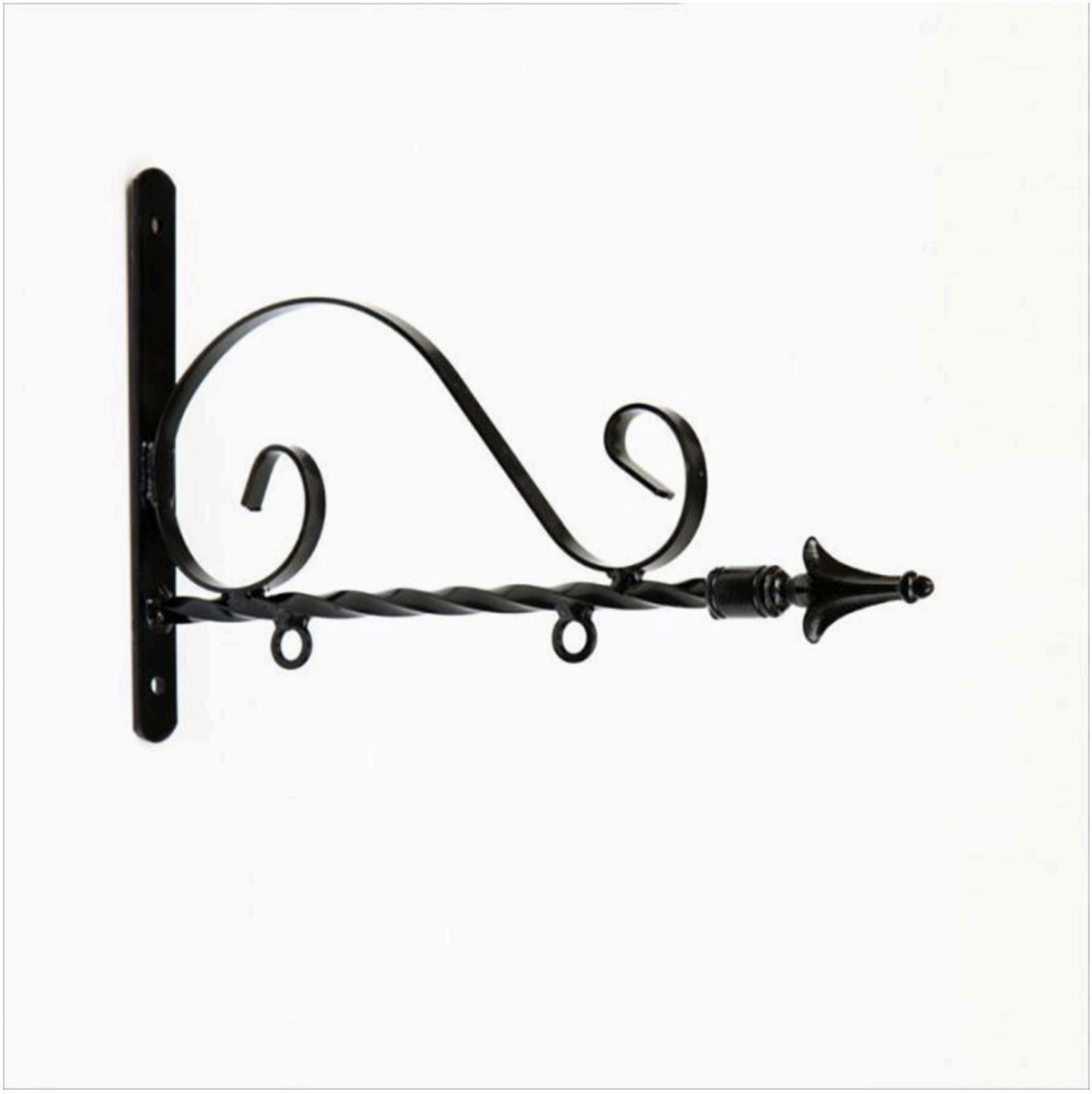

BREWING
LOVE

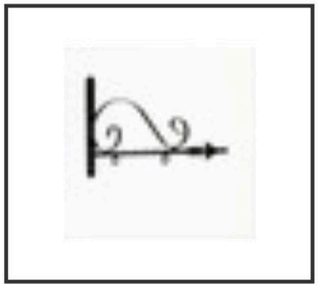

NO PARKING 2AM TO 5AM
NO BICYCLES OR SKATEBOARDS ON SIDEWALK
SALOON
BREWING LOVE
145
WOODSBURY
FOR RENT
OUTRIGN
4MATIC


Bookstore
Bakery
145
145
145 W GAY ST

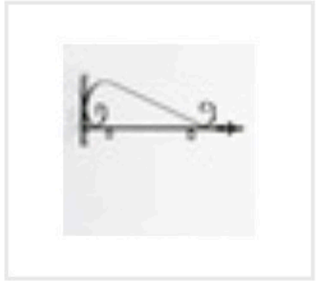
BREWING
LOVE

/ Standard Scroll Blade Sign Bracket



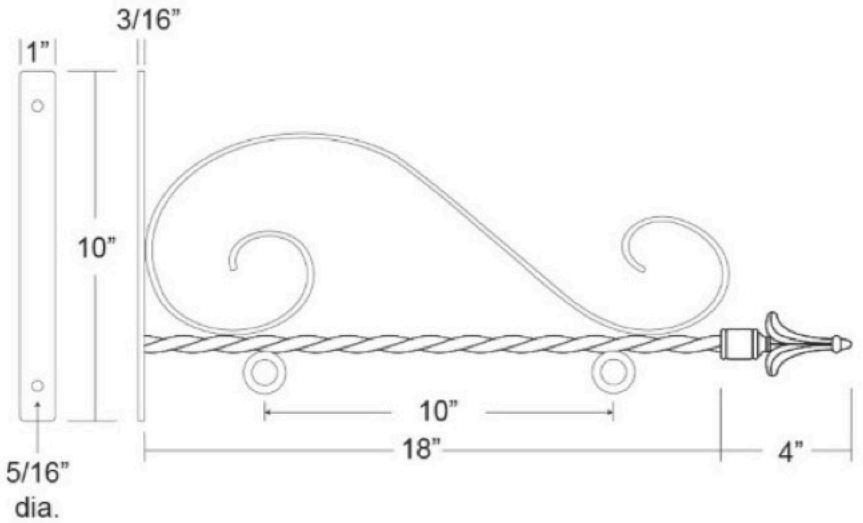








M3-LD22



SIGN DETAILS

Type: Double Sided Projecting Sign

Shape: Round

Size: 15" Diameter

Material: Wood with Painted Graphics

Mounting: Wall Mounted Scroll Blade Bracket

Bracket Finish: Black

Sign Projects: Approx. 21" Perpendicular to Building

Overall Height from Grade to Top of Bracket: Approx. 9'-0"

LOCATION NOTE

Sign to be installed between the top of the front windows of the first floor and the bottom of the front windows of the second floor of the Building per Lease Agreement Section 10(a).

NOTES

1. Sign is double sided and projects perpendicular to the building so it is visible from both directions along the sidewalk.
2. All materials and installation to comply with local codes and landlord approval.

PROJECT:

145 W GAY STREET
WEST CHESTER, PA

DRAWING:

SIGN LOCATION & DETAILS

SCALE: 1/4" = 1'-0"

DATE: 05/07/2025

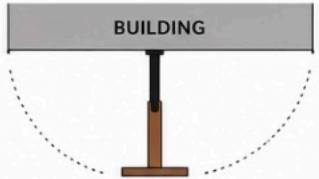
SIDE VIEW (ELEVATION)



FRONT ELEVATION (ENLARGED)



PLAN VIEW (TOP)



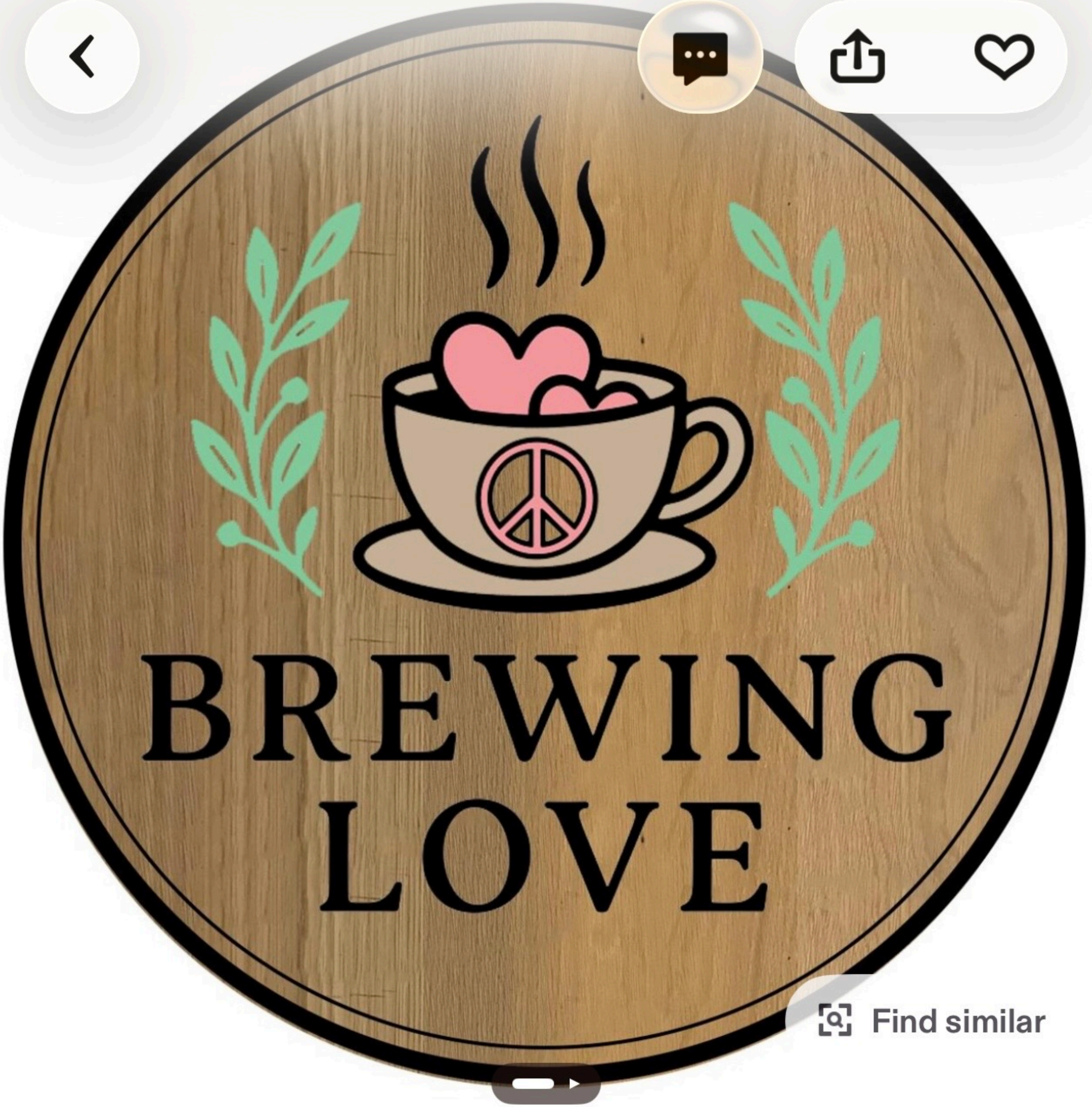
VISIBLE FROM
BOTH DIRECTIONS
ALONG SIDEWALK

PROJECT:
145 W GAY STREET
WEST CHESTER, PA

DRAWING:
SIGN LOCATION & DETAILS

SCALE: 1/4" = 1'-0"

DATE: 05/07/2025



Find similar

Application Numbers: 2026-17

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
Borough of West Chester
Historical and Architectural Review Board

PROJECT ADDRESS: 200 N. High Street

1) ***Date of HARB Review:*** *July 30, 2026*

2) ***Applicant's Proposal:*** *Sign*

3) ***Findings:***

The applicant, David Dockery, was present and described the proposed modifications to the UNIVEST Bank's existing ATM awning as follows:

- *The new cantilevered rectangular metal box awning will replace a similar existing metal awning above the ATM machine on the east wall of the building facing High Street.*
- *The new awning will match the materials, Duranodic Bronze color, and construction of the existing awning but will project an additional 2-feet beyond the current awning; for a total projection of 4-feet from the face of the building. This will provide additional weather protection for customers.*
- *The existing awning measures 6'-4"W x 2'-0"D x 8"H. The new awning will measure 6'-4"W x 4'-0"D x 8" H.*
- *The existing lighting fixture will be relocated to the underside of the new awning .*

The HARB reviewed the application as follows:

- *The HARB members concluded that the proposed enlarged awning is appropriate to the character of the HARB district.*
- *Mr. Ritchie requested that the bottom panel of the awning be fabricated to include a raised recess to integrate the relocated light to be concealed within the awning enclosure, so that it no longer hangs visibly below the awning side panels.*

4) ***Recommendations from HARB:***

The Board recommends Approval of a Certificate of Appropriateness for Application 2026-17 as submitted with the following clarification:

1. *The awning's bottom panel shall be fabricated to include a raised recess to conceal the existing relocated light within the awning enclosure, so that it no longer hangs visibly below the awning perimeter face panels.*

Application Numbers: 2026-17

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
Borough of West Chester
Historical and Architectural Review Board

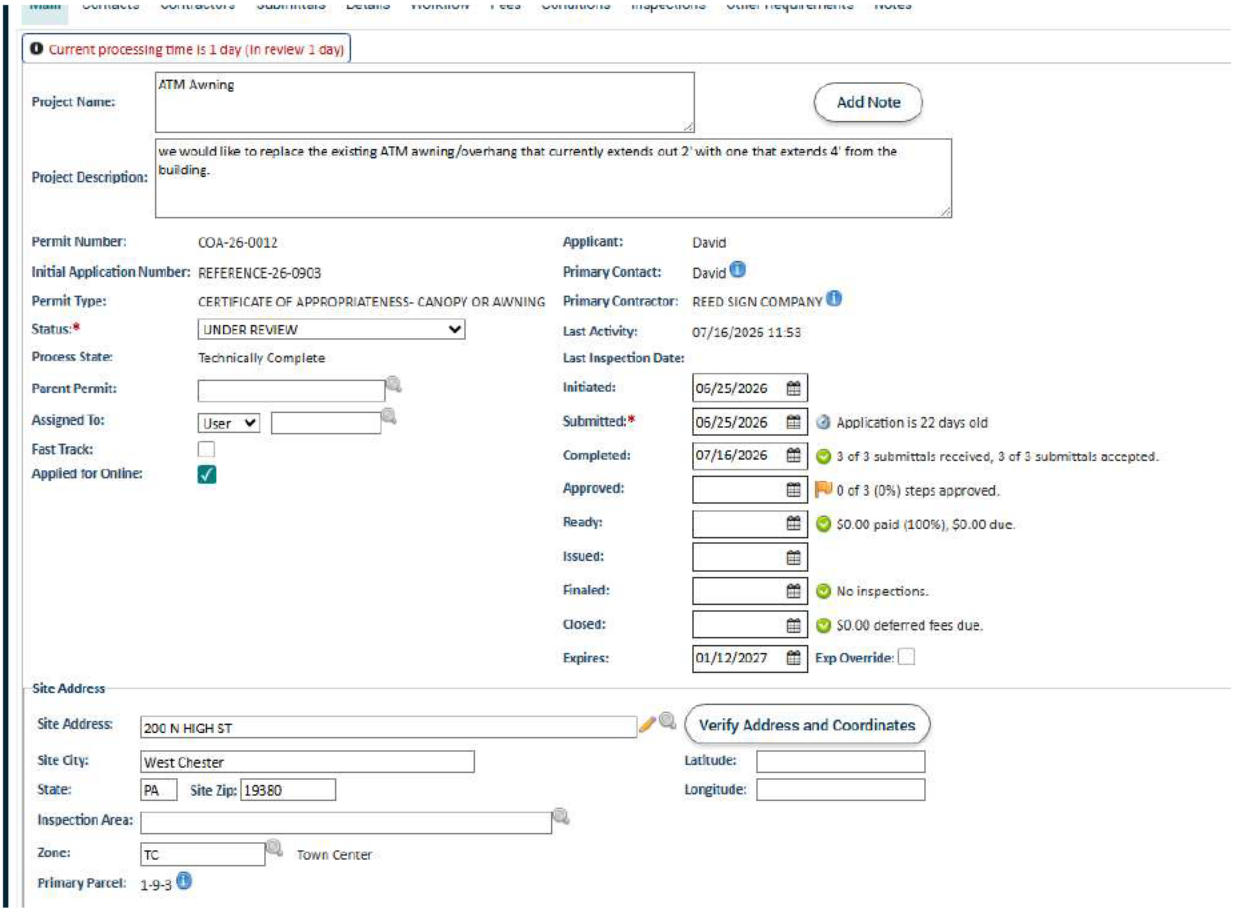
PROJECT ADDRESS: 200 N. High Street

5) Borough Council's Action and Date

- ❑ Approved per HARB recommendation:
- ❑ Denied for the following reasons:
- ❑ Approved with the following differences from HARB recommendation:

Date of Action Taken: _____ , 2026

Borough Manager's Signature:



Current processing time is 1 day (In review 1 day)

Project Name: ATM Awning

Add Note

Project Description: we would like to replace the existing ATM awning/overhang that currently extends out 2' with one that extends 4' from the building.

Permit Number:	COA-26-0012	Applicant:	David
Initial Application Number:	REFERENCE-26-0903	Primary Contact:	David
Permit Type:	CERTIFICATE OF APPROPRIATENESS- CANOPY OR AWNING	Primary Contractor:	REED SIGN COMPANY
Status:*	UNDER REVIEW	Last Activity:	07/16/2026 11:53
Process State:	Technically Complete	Last Inspection Date:	
Parent Permit:		Initiated:	06/25/2026
Assigned To:	User	Submitted:*	06/25/2026 — Application is 22 days old
Fast Track:	☐	Completed:	07/16/2026 — 3 of 3 submittals received, 3 of 3 submittals accepted.
Applied for Online:	☑	Approved:	0 of 3 (0%) steps approved.
		Ready:	$0.00 paid (100%), $0.00 due.
		Issued:	
		Finaled:	No inspections.
		Closed:	$0.00 deferred fees due.
		Expires:	01/12/2027 — Exp Override: ☐

Site Address

Site Address: 200 N HIGH ST — Verify Address and Coordinates

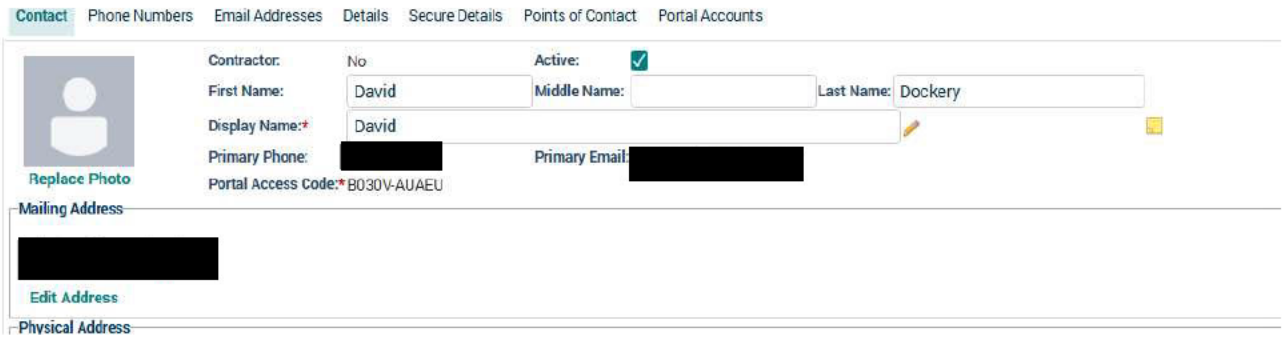
Site City: West Chester — Latitude:

State: PA — Site Zip: 19380 — Longitude:

Inspection Area:

Zone: TC — Town Center

Primary Parcel: 1-9-3



Contact | Phone Numbers | Email Addresses | Details | Secure Details | Points of Contact | Portal Accounts

Replace Photo

Contractor: No — Active: ☑

First Name: David — Middle Name: — Last Name: Dockery

Display Name:* David

Primary Phone: [redacted] — Primary Email: [redacted]

Portal Access Code:* B030V-AUAEU

Mailing Address

[redacted]

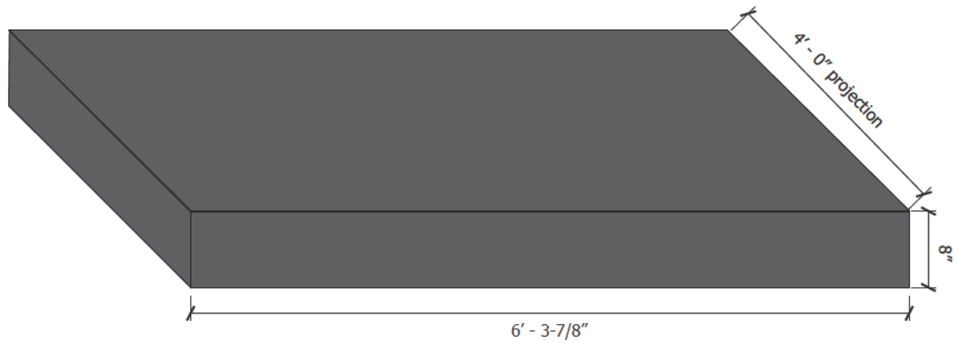
Edit Address

Physical Address

Permit #: COA-26-0012		**Status:** UNDER REVIEW	**Contact:** David	**Site Address:** 200 N HIGH ST	
Type: CERTIFICATE OF APPROPRIATENESS- CANOPY OR AWNING		**Project Name:** ATM Awning	**Contractor:** REED SIGN COMPANY	West Chester, PA 19380	

Name	Value
REASON FOR APPROPRIATENESS APPLICATION:*	Canopy awning
LOCATION OF PROJECT:*	200 N High St West Chester Pa. 19380
NAME OF BUSINESS:*	Univest Bank
ARE YOU REPLACING AN EXSISTING CANOPY OR AWNING:	Yes
HOW MANY CANOPIES OR AWNINGS DO YOU WISH TO INSTAL:	1
ON HOW MANY FACADES:	1
MATERIAL GIVE A THOROUGH DESCRIPTION:	welded aluminum channel frame, brake form welded aluminum channel frame, brake formed .060 aluminum enclosure
HOW WILL IT BE MOUNTED:	existing Welded steel supports built into inte existing Welded steel supports built into interior wall
ARE YOU REUSING AN EXSISTING CANOPY OR AWNING:	Yes
CANOPY OR AWNING DIMENSIONS:	8" H x 6'-3 7/8" W x 4'-0" Projecting
WHAT IS THE HEIGHT FROM THE SIDEWALK TO THE BOTTOM:	9
COLORS:	Duranodic Bronze
MESSAGE:	
LETTERING STYLE:	

Fabricated Aluminum Awning
- painted Duranodic Bronze
- attach to existing steel structure
- one (1) require

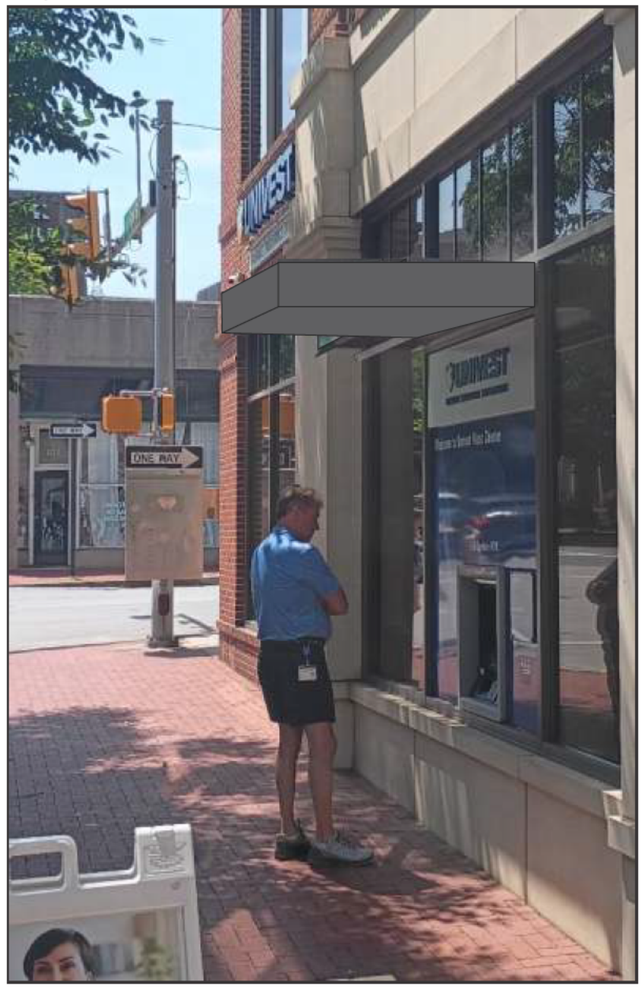


Existing underside of canopy



remove & re-use existing light fixture

Proposed



Existing - remove 2ft projecting canopy



REED SIGN COMPANY
SINCE 1972
Design | Manufacture | Install

1050 Main St. Pennsburg, PA 18073
215-679-5066 | www.reedsign.com

Customer:
Univest

Location:
West Chester

Address:
200 N. High St.,
West Chester, PA 19380

Project:
ATM Canopy Replacement

Drawing Number:
11740

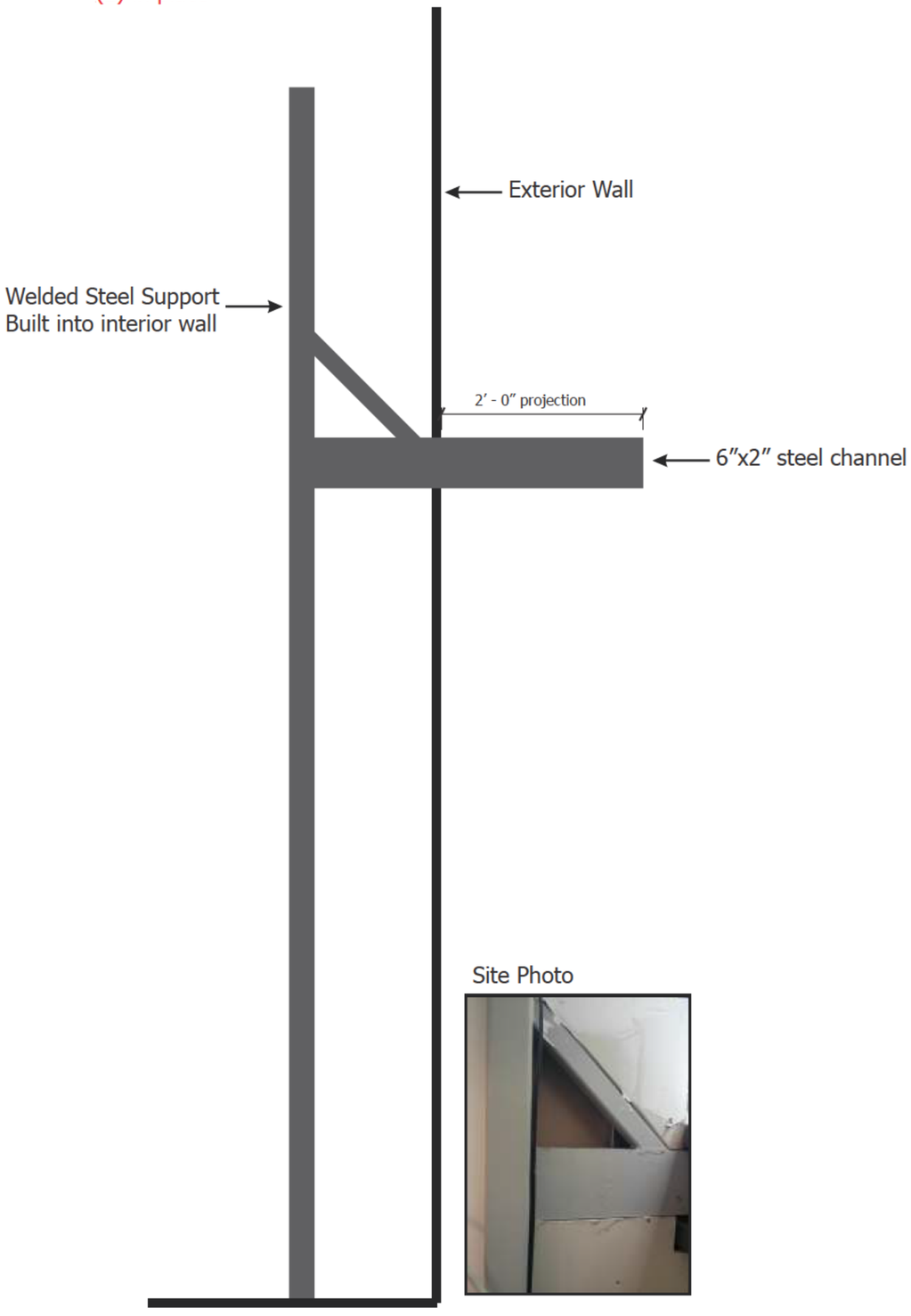
Date / Revisions:
06/16/26

Customer Approval:
Note to customer:
Please confirm all verbiage and spelling is accurate before approving.

25230

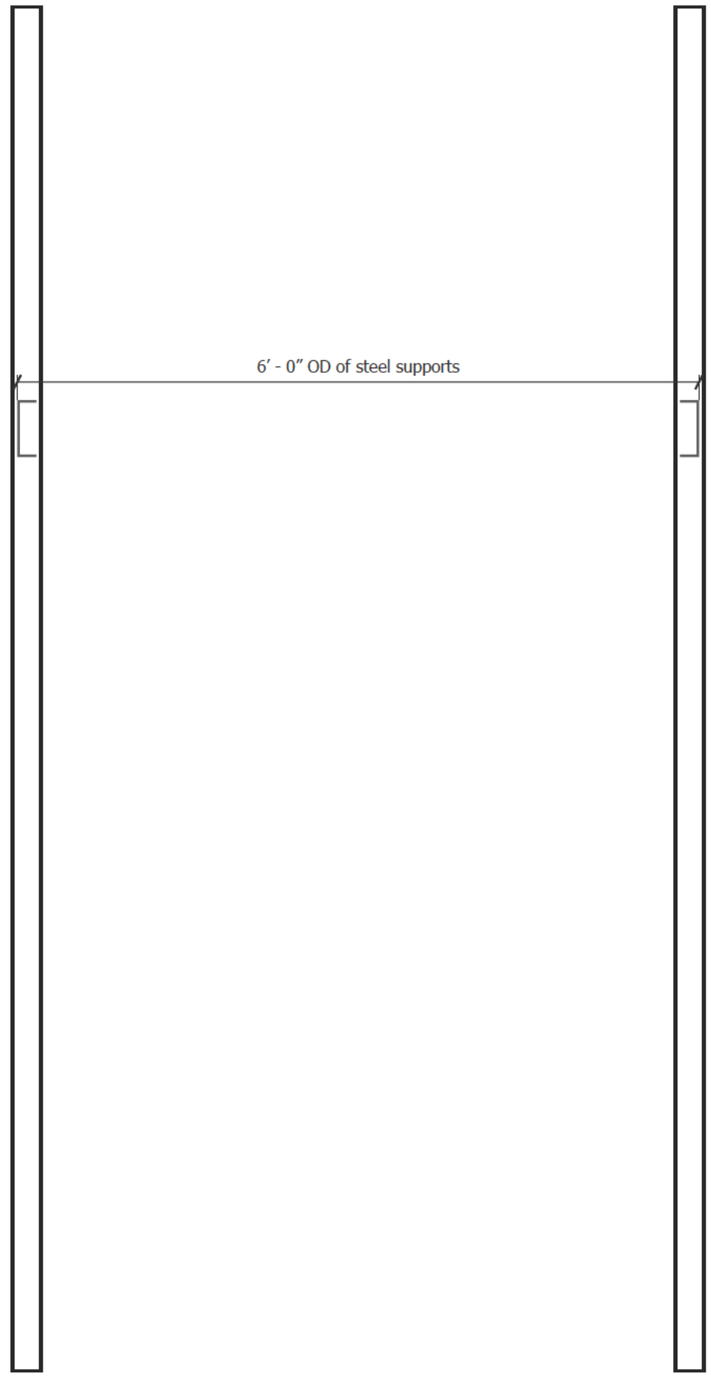
This is an original unpublished design created by Reed Sign Company. It is submitted for the use of our customer and the project mentioned above. This drawing is not to be reproduced, copied, or exhibited in any fashion without written consent of Reed Sign Company, LLC.

Side view of existing steel supports
(2) in place



Site Photo

Face view of existing steel supports



REED SIGN COMPANY
SINCE 1972
Design | Manufacture | Install

1050 Main St. Pennsburg, PA 18073
215-679-5066 | www.reedsign.com

Customer:
Univest

Location:
West Chester

Address:
200 N. High St.,
West Chester, PA 19380

Project:
ATM Canopy Replacement

Drawing Number:
11740

Date / Revisions:
06/16/26

Customer Approval:
Note to customer:
Please confirm all verbiage and spelling is accurate before approving.

25230

UL Solutions ISA

This is an original unpublished design created by Reed Sign Company. It is submitted for the use of our customer and the project mentioned above. This drawing is not to be reproduced, copied, or exhibited in any fashion without written consent of Reed Sign Company, LLC.


Washington St
School Alley
N High St
Chester County
History Center
Displays showing
300 years of history
YMCA of
Brandywi
Patton Alley
IT 21 Solutions
Univest Bank
and Trust Co
Chestnut St
Law Alley
Chestnut St
Hotel Warner
4.3 (511)
3-star hotel
Mayday Cof
N High
Alley

Application Numbers: 2026-18

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
Borough of West Chester
Historical and Architectural Review Board

PROJECT ADDRESS: 18/20 W. Market Street

1) ***Date of HARB Review:*** *July 30, 2026*

2) ***Applicant's Proposal:*** *HVAC Equipment*

3) ***Findings:***

The applicant, Shannon Mandeen, was present to describe the proposed installation of new HVAC equipment at the exiting building as follows:

- *Three new mini-split condensing units will be located on the roof of the existing one-story rear addition. The units will each serve an existing apartment (3 total) located at the building's second and third floors.*
- *Note – there was some confusion because the drawings appeared to show three wall-mounted units. The applicant clarified all units will be mounted on wood frames above the roof. Their roofer has confirmed there should be no negative impact on the metal roof.*
- *The HVAC service lines connecting the units can hopefully be routed inside the building and concealed. The worst case is the lines need to be exterior mounted. In that case they will be concealed in a metal downspout type enclosure. The applicant proposed painting it gold to match the existing building windows and trim.*

The HARB reviewed the application as follows:

- *The members concluded that the units at the rear of the building are not highly visible.*
- *The members were generally pleased that the units were roof mounted, not wall mounted.*
- *Aaron Flook, Director of Building and Housing, commented that the HVAC units must be located so that they provide adequate (36-inch wide) clearance for safe egress from the adjacent apartment windows and access to the existing exit stair.*
- *The members preferred that if the HVAC service lines require exterior mounting, the enclosing metalwork should be painted to match the color of the existing brick wall.*

4) ***Recommendations from HARB:***

The Board recommends Approval of a Certificate of Appropriateness for Application 2026-18 as submitted with the following clarifications:

1. *The three new HVAC units shall be roof mounted.*
2. *The HVAC units shall be located to provide adequate (36-inch wide) clearance for safe egress from the adjacent apartment windows and access to the existing exit stair.*
3. *If the HVAC service lines are mounted on the exterior, the enclosing metalwork should be painted to match the color of the existing brick wall (Brick Red/Brown).*

Application Numbers: 2026-18

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
Borough of West Chester
Historical and Architectural Review Board

PROJECT ADDRESS: 18/20 W. Market Street

5) Borough Council's Action and Date

- ❑ Approved per HARB recommendation:
- ❑ Denied for the following reasons:
- ❑ Approved with the following differences from HARB recommendation:

Date of Action Taken: _____ , 2026

Borough Manager's Signature:

DATE APPLICATION RECEIVED: 07/20/2026

APPLICATION NUMBER: 2026-18

PROPERTY ADDRESS: 18 / 20 West Market Street

APPLICANT'S EMAIL: [redacted]

Note: All projects must have the appropriate sections completed in its entirety and attached to this form. *Only attach the applicable sections*. The application number will be assigned by the Building & Housing Department.

1) This application is for (check all appropriate boxes):
   - ❑ Section #1 – Sign
   - ❑ Section #2 – Canopy or Awning
   - ☒ Section #3 – Repair, replacement or alteration from original
   - ❑ *(please supply photos or elevations of original)*
   - ❑ *Section #4 – Addition*
   - ❑ *(supply architectural elevations and site drawings, as well as photos of the existing structure)*
   - ❑ *Section #5 – New Construction*
   - ❑ *(supply architectural elevations and site drawings, as well as photos of buildings next to and around the site)*
   - ❑ *Section #6 - Demolition*

2) Please indicate which items you are submitting with your application form. Do not submit originals, since they will be kept by the HARB for its official archives:
   - ❑ Color or B/W Sketches
   - ❑ Old or Historic Photographs
   - ❑ Plot or Site Plans
   - ❑ Architectural Elevations
   - ☒ Photographs of the current existing site showing where changes are to be made, location of buildings and streetscape.

All sketches, elevations, and plans must be signed by the preparer(s)

The owner of this property and the applicant agree to conform to all applicable findings of the Borough of West Chester Historical and Architectural Review Board.

Applicant's name (print): Chris and Shannon Mandeen

Applicant's Signature: _____ Date: 20July26

Owner's Name (print): Chris and Shannon Mandeen

Owner's Signature: _____ Date: 20July26

Note: Check with the Building and Housing office of the Borough of West Chester to see if you need a building permit as well as a Certificate of Appropriateness ***before*** you begin your project

DATE APPLICATION RECEIVED: 07/20/2026

APPLICATION NUMBER: 2026-18

SECTION #3 – REPAIR, REPLACEMENT OR ALTERATION

(Attach a separate Section #3 for each of the repairs, replacements or alterations you wish to make)

Instructions: Provide clear photographs showing the location of each proposed improvement, including photos of streetscape and the adjacent buildings. Provide architectural elevations and/or photographs clearly showing the location of the proposed work. Provide material specifications and manufacturer's pamphlets on the replacement materials proposed.

Name of business: Project M LLC

Applicant's name: Chris and Shannon Mandeen

Applicant's address: [redacted]

Applicant's phone number: [redacted]

Owner's name: Chris and Shannon Mandeen

Owner's address: [redacted]

Owner's telephone number: [redacted]

1) Which element do you wish to change: ____Doors ____Windows ____Roofing ____Gutters ____Walls ____Steps ____Sidewalk ____Fence ____Trim ____Railing ____Porch or Balcony __X__ Other (specify) Addition of 3 Mini Split HVAC conpressor units

2) On how many facades? 1 _____Front __X__Side _____Back

3) What was the old is the material? n/a

4) What is the proposed new material? n/a

5) How will it be installed? No new wall material, just addition of 3 Mini split compressors

6) Are you using any historical materials? n/a

7) Is so, what and how? n/a

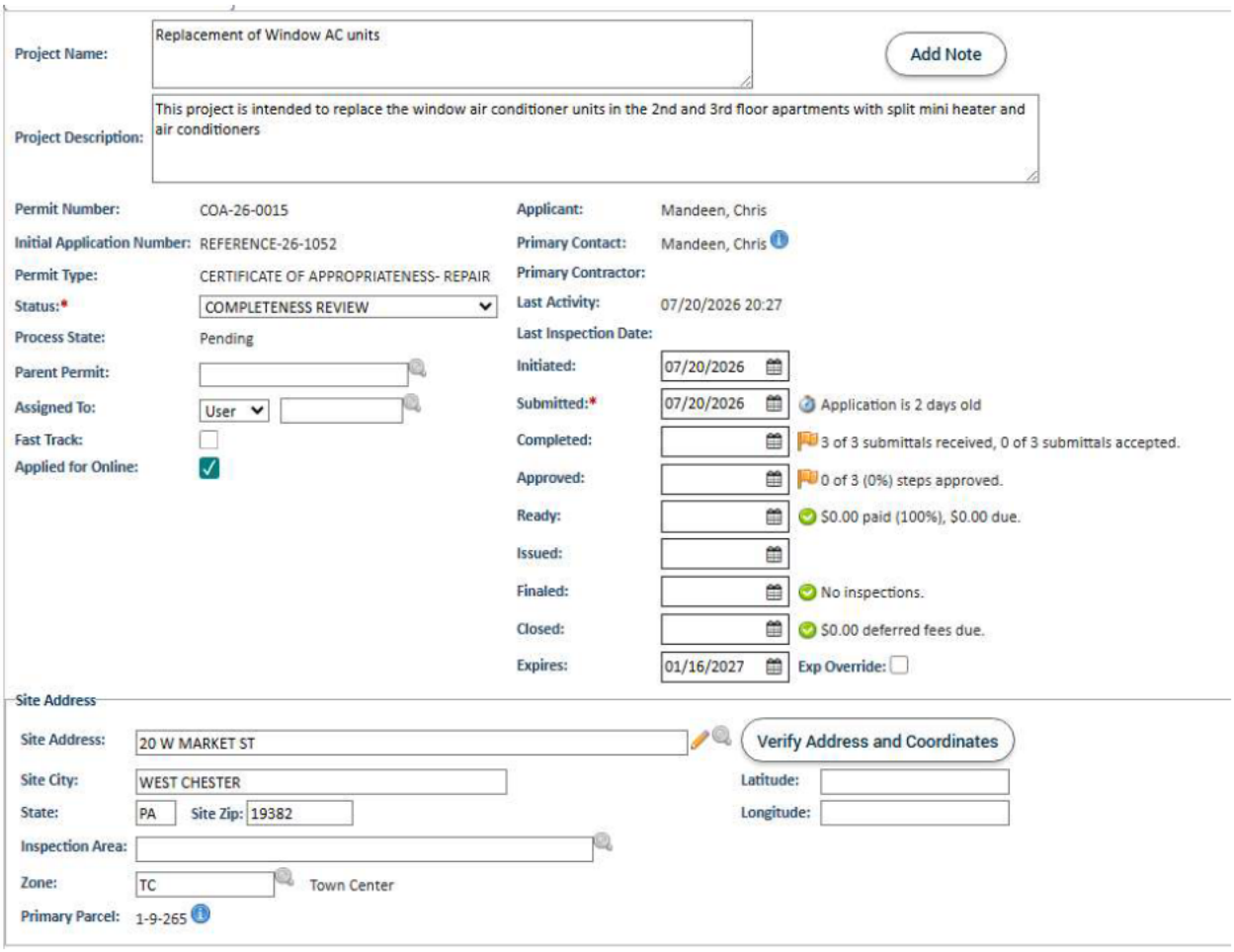
8) What were the old dimensions? Height: n/a x Width: n/a Depth: n/a

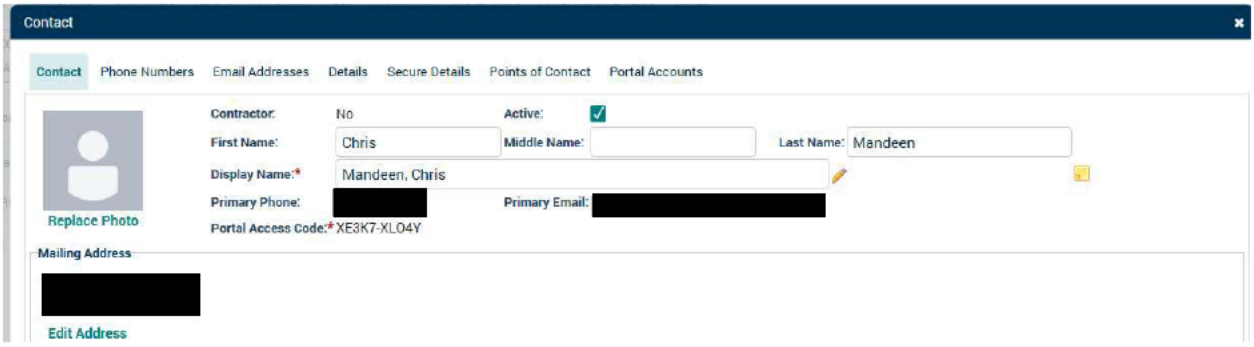
9) What are the new dimensions? Height: n/a x Width: n/a Depth: n/a

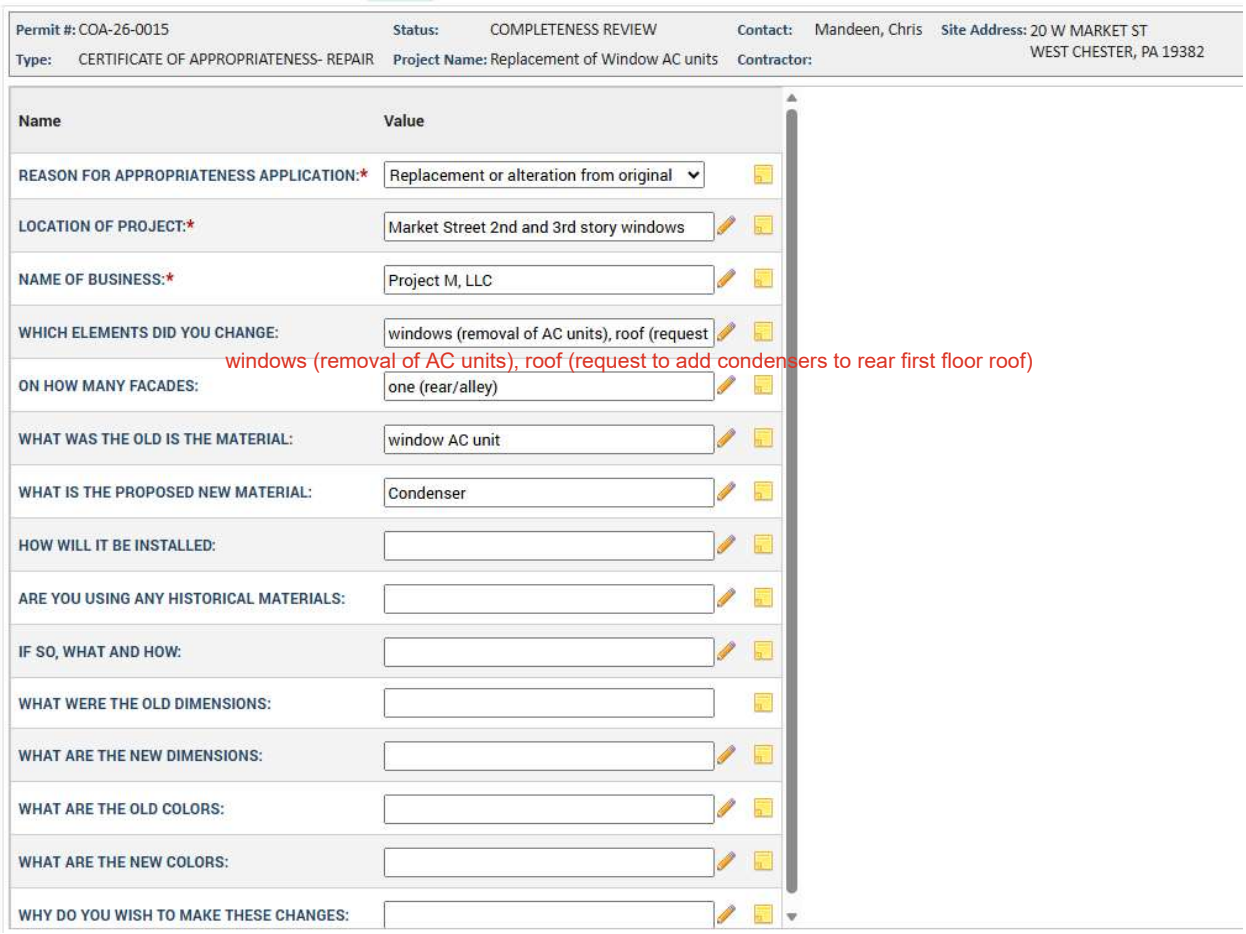
10) What were the old colors? n/a

11) What are the new colors? n/a

12) Why do you wish to make these changes? Improve quality of apartments, and remove window AC units


Project Name:
Replacement of Window AC units
Add Note
Project Description:
This project is intended to replace the window air conditioner units in the 2nd and 3rd floor apartments with split mini heater and air conditioners
Permit Number: COA-26-0015
Initial Application Number: REFERENCE-26-1052
Permit Type: CERTIFICATE OF APPROPRIATENESS- REPAIR
Status:* COMPLETENESS REVIEW
Process State: Pending
Parent Permit:
Assigned To: User
Fast Track:
Applied for Online:
Applicant: Mandeen, Chris
Primary Contact: Mandeen, Chris
Primary Contractor:
Last Activity: 07/20/2026 20:27
Last Inspection Date:
Initiated: 07/20/2026
Submitted:* 07/20/2026
Application is 2 days old
Completed:
3 of 3 submittals received, 0 of 3 submittals accepted.
Approved:
0 of 3 (0%) steps approved.
Ready:
$0.00 paid (100%), $0.00 due.
Issued:
Finaled:
No inspections.
Closed:
$0.00 deferred fees due.
Expires: 01/16/2027
Exp Override:
Site Address
Site Address: 20 W MARKET ST
Verify Address and Coordinates
Site City: WEST CHESTER
Latitude:
State: PA
Site Zip: 19382
Longitude:
Inspection Area:
Zone: TC
Town Center
Primary Parcel: 1-9-265


Contact
Contact
Phone Numbers
Email Addresses
Details
Secure Details
Points of Contact
Portal Accounts
Contractor: No
Active:
First Name: Chris
Middle Name:
Last Name: Mandeen
Display Name:* Mandeen, Chris
Primary Phone: [redacted]
Primary Email: [redacted]
Replace Photo
Portal Access Code:* XE3K7-XLO4Y
Mailing Address
[redacted]
Edit Address



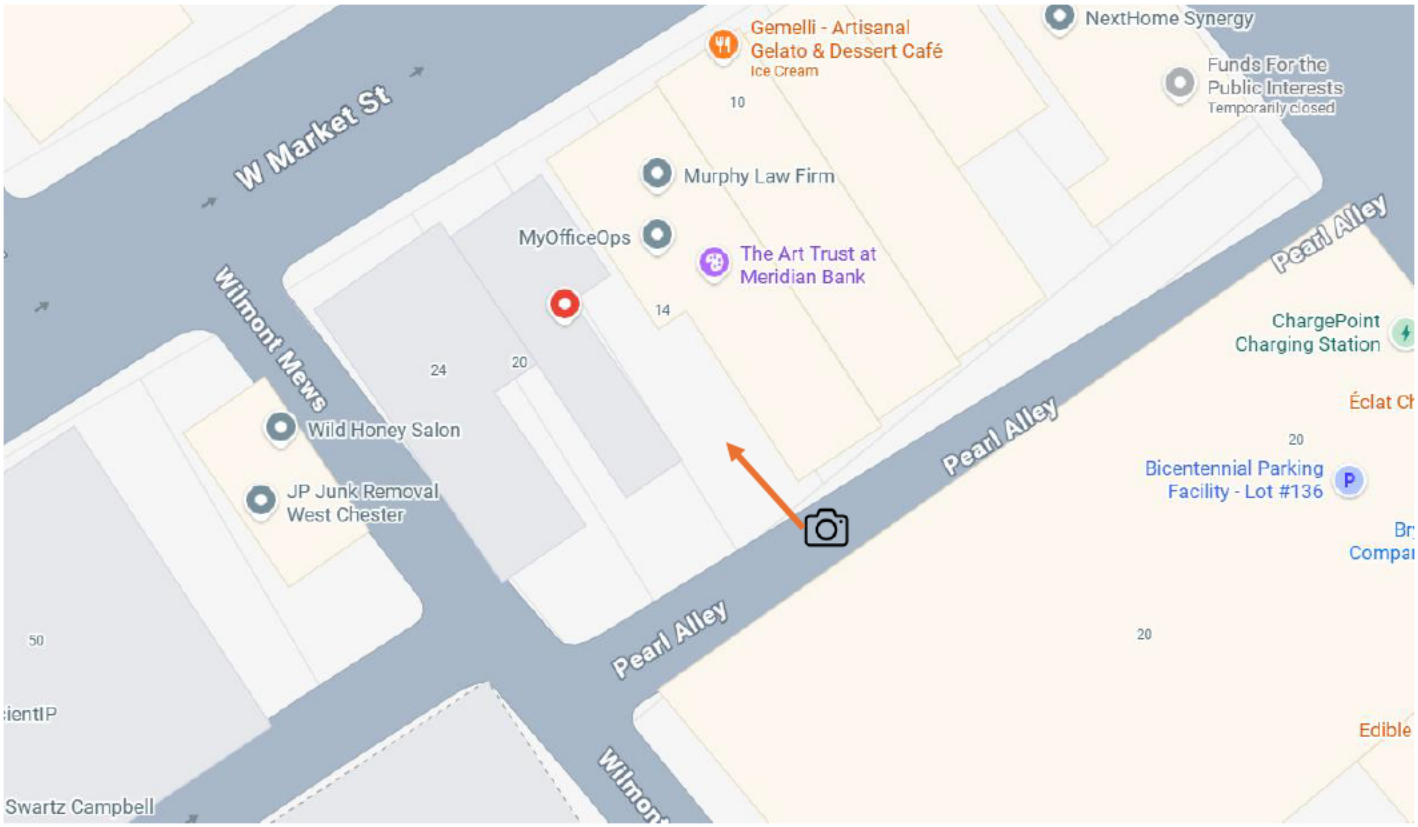
Permit #: COA-26-0015		**Status:**	COMPLETENESS REVIEW	**Contact:** Mandeen, Chris	**Site Address:** 20 W MARKET ST WEST CHESTER, PA 19382
Type:	CERTIFICATE OF APPROPRIATENESS- REPAIR	**Project Name:**	Replacement of Window AC units	**Contractor:**	

Name	Value
REASON FOR APPROPRIATENESS APPLICATION:*	Replacement or alteration from original
LOCATION OF PROJECT:*	Market Street 2nd and 3rd story windows
NAME OF BUSINESS:*	Project M, LLC
WHICH ELEMENTS DID YOU CHANGE:	windows (removal of AC units), roof (request
ON HOW MANY FACADES:	one (rear/alley)
WHAT WAS THE OLD IS THE MATERIAL:	window AC unit
WHAT IS THE PROPOSED NEW MATERIAL:	Condenser
HOW WILL IT BE INSTALLED:	
ARE YOU USING ANY HISTORICAL MATERIALS:	
IF SO, WHAT AND HOW:	
WHAT WERE THE OLD DIMENSIONS:	
WHAT ARE THE NEW DIMENSIONS:	
WHAT ARE THE OLD COLORS:	
WHAT ARE THE NEW COLORS:	
WHY DO YOU WISH TO MAKE THESE CHANGES:	

windows (removal of AC units), roof (request to add condensers to rear first floor roof)

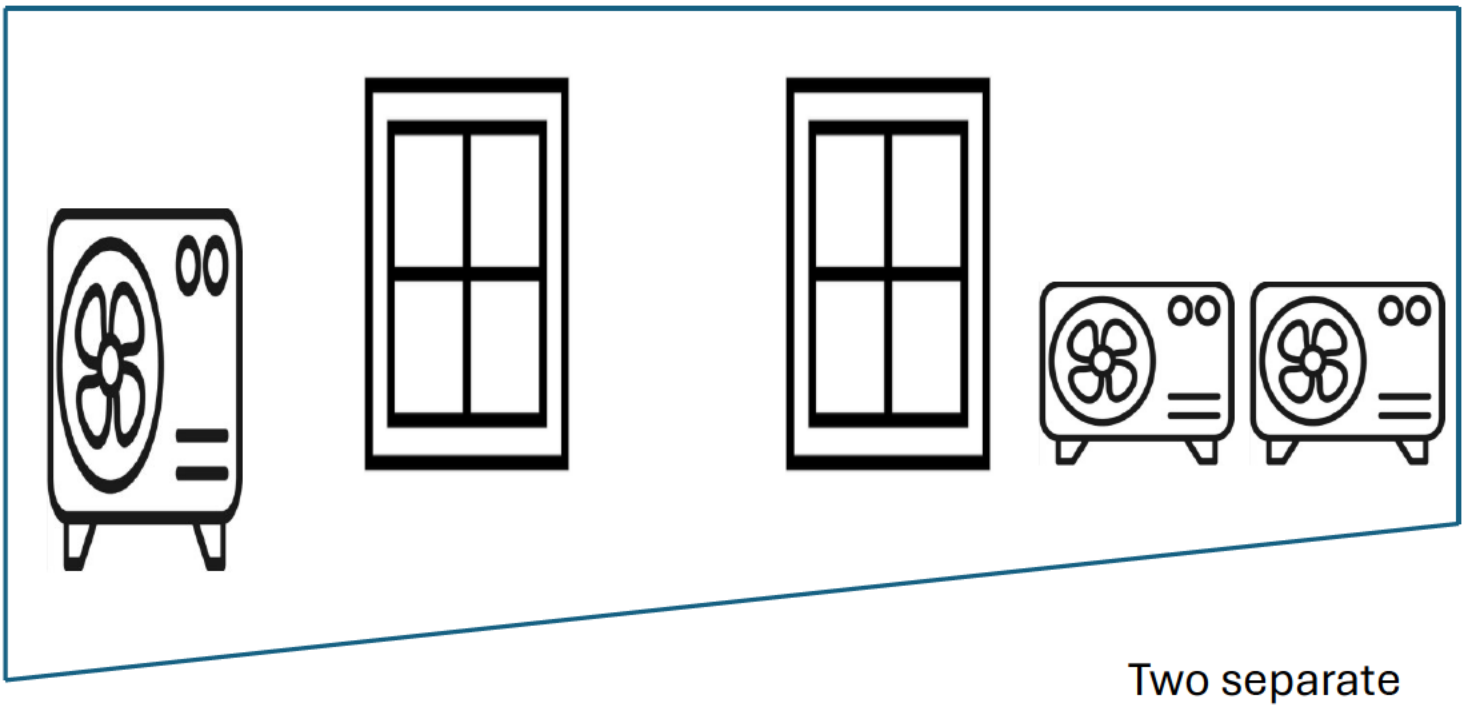
As is now:


18


W Market St
Wilmont Mews
Pearl Alley
Pearl Alley
Pearl Alley
Gemelli - Artisanal Gelato & Dessert Café
Ice Cream
NextHome Synergy
Funds For the Public Interests
Temporarily closed
Murphy Law Firm
MyOfficeOps
The Art Trust at Meridian Bank
ChargePoint Charging Station
Éclat Ch
Bicentennial Parking Facility - Lot #136
Wild Honey Salon
JP Junk Removal West Chester
Edible
Swartz Campbell
10
14
24
20
20
20
50

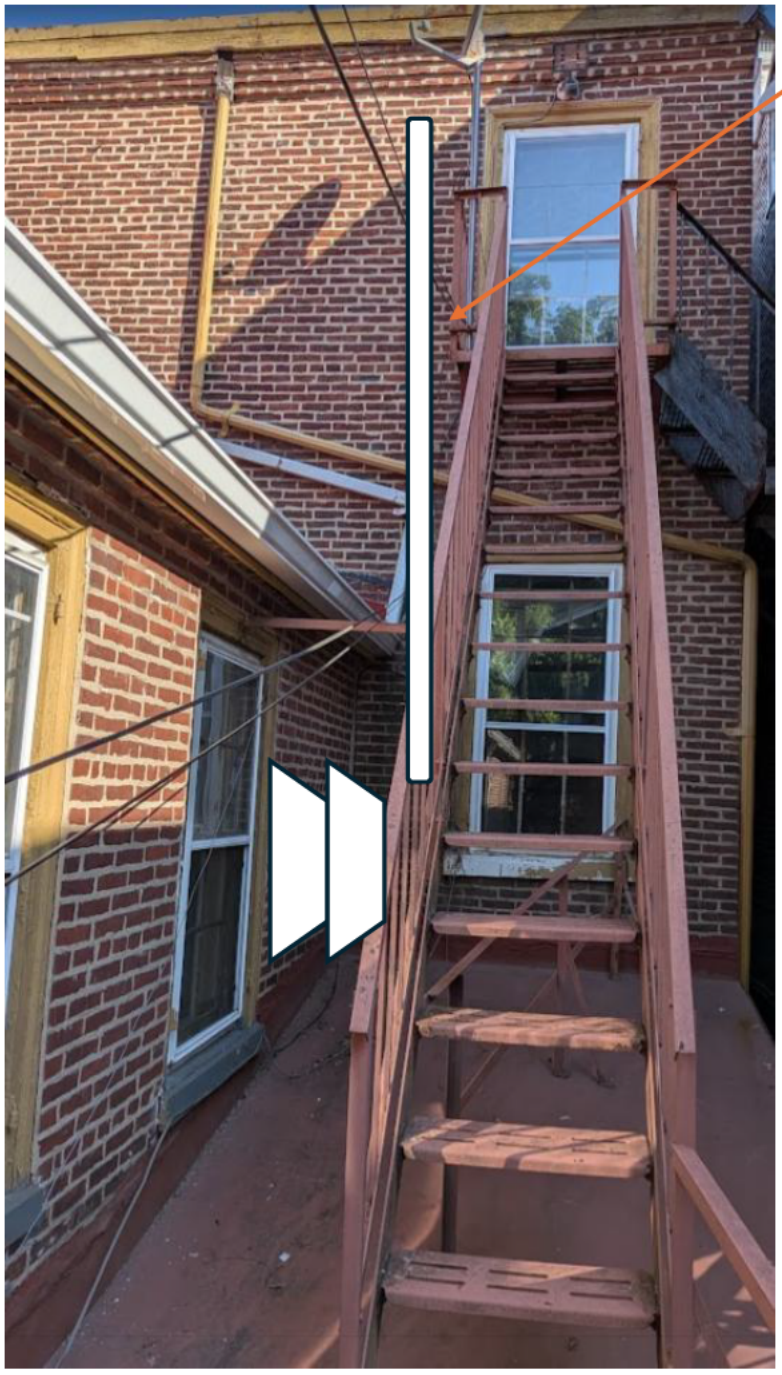
Proposed MiniSplit Placement:
First floor roof, against the side wall





18,000 BTU
For larger Apt. 1

Two separate
12,000 BTU
For Apt. 2 and 3



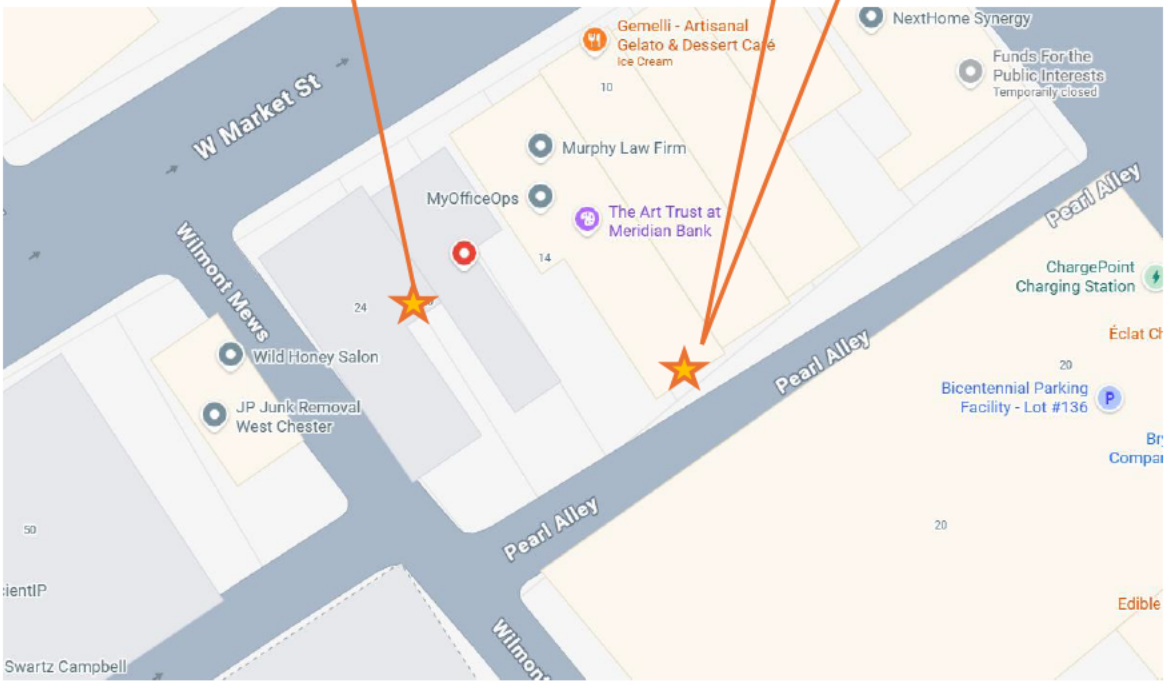
There would be 1 gutter like hose/electrical channel. Apt 2 and 3 would share to reduce footprint

22 West Market



16 West Market





Application Numbers: 2026-19

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
Borough of West Chester
Historical and Architectural Review Board

PROJECT ADDRESS: 16 E. Gay Street

1) ***Date of HARB Review:*** *July 30, 2026*

2) ***Applicant's Proposal:*** *Sign and Façade Painting*

3) ***Findings:***

The applicant's representatives, Mike Barnes and Mary Morits, were present and described the proposed sign and façade painting project as follows:

- *The proposal is to remove the existing round "Olaa" sign and cover the full width leaded-glass-type transom window above the storefront windows with plywood that would then be covered with pink painted vertical wood beadboard to create a sign panel. A sign of individual yellow pin-mounted letters would be installed on the panel. The message on the sign is "***Call Your Mother***".*
- *The existing storefront woodwork will be painted pink with black accents.*
- *The concrete threshold at the entrance door will be painted a teal color.*
- *No new illumination will be installed.*

The HARB reviewed the application as follows:

- *The HARB members concluded that covering the full width leaded-glass-type transom window above the storefront windows would not be appropriate.*
- *Mr. Yocum provided some background on the building's recent restoration, existing transom and signage, and the importance of the historical storefront details to the HARB district.*
- *The HARB is sensitive to the challenges of installing new signage on this building.*
- *A fabric awning with signage was discussed. Some members objected it would still conceal the transom which would interrupt the streetscape.*
- *Repainting is considered reversible and is generally not regulated by HARB.*

The applicant's representatives responded to the HARB comments as follows:

- *The applicant's anticipated the HARB's resistance to covering the existing transom window.*
- *At the meeting they provided an illustration of a circular sign and with "***Call Your Mother***" graphics. They proposed this design could be applied to the existing round sign panel on the building. They would also retain the existing black plywood mounting panel over the transom.*
- The HARB reacted positively to this proposal.

4) Recommendations from HARB:

The Board recommends Approval of a Certificate of Appropriateness for Application 2026-19 as submitted with the following clarifications:

1. *The new sign design will be modified to match the circular format and size of the existing "Oola" sign. Colors shall be pink with yellow letters. The black plywood sign mounting panel on the transom will be retained.*
2. *The existing building storefront woodwork may be painted pink and yellow as proposed.*
3. *The concrete entrance threshold may be painted teal as proposed.*

Application Numbers: 2026-19

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS
Borough of West Chester
Historical and Architectural Review Board

PROJECT ADDRESS: 16 E. Gay Street

5) Borough Council's Action and Date

- ❑ Approved per HARB recommendation:
- ❑ Denied for the following reasons:
- ❑ Approved with the following differences from HARB recommendation:

Date of Action Taken: _____ , 2026

Borough Manager's Signature:

DATE APPLICATION RECEIVED: 07/20/2026

APPLICATION NUMBER: 2026-19

PROPERTY ADDRESS: 16 E Gay Street, West Chester, PA 19380

APPLICANT'S EMAIL: [redacted]

Note: All projects must have the appropriate sections completed in its entirety and attached to this form. *Only attach the applicable sections*. The application number will be assigned by the Building & Housing Department.

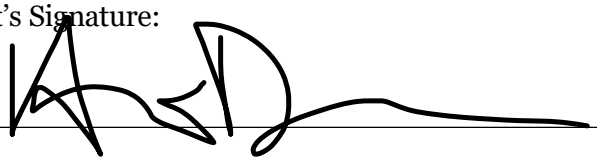
1) This application is for (check all appropriate boxes):
   - ☑ Section #1 – Sign
   - ☐ Section #2 – Canopy or Awning
   - ☑ Section #3 – Repair, replacement or alteration from original
   - ☐ *(please supply photos or elevations of original)*
   - ☐ *Section #4 – Addition*
   - ☐ *(supply architectural elevations and site drawings, as well as photos of the existing structure)*
   - ☐ *Section #5 – New Construction*
   - ☐ *(supply architectural elevations and site drawings, as well as photos of buildings next to and around the site)*
   - ☐ *Section #6 - Demolition*

2) Please indicate which items you are submitting with your application form. Do not submit originals, since they will be kept by the HARB for its official archives:
   - ☑ Color or B/W Sketches
   - ☐ Old or Historic Photographs
   - ☐ Plot or Site Plans
   - ☐ Architectural Elevations
   - ☑ Photographs of the current existing site showing where changes are to be made, location of buildings and streetscape.

All sketches, elevations, and plans must be signed by the preparer(s)

The owner of this property and the applicant agree to conform to all applicable findings of the Borough of West Chester Historical and Architectural Review Board.

Applicant's name (print): Andrew Dana, Call Your Mother Deli

Applicant's Signature:  Date: 07/03/2026

Owner's Name (print): Brock Snider

Owner's Signature: Brock Snider Date: 07/20/2026

Note: Check with the Building and Housing office of the Borough of West Chester to see if you need a building permit as well as a Certificate of Appropriateness ***before*** you begin your project

DATE APPLICATION RECEIVED: 07/20/2026

APPLICATION NUMBER: 2026-19

SECTION #1 – SIGNS

(Attach a separate Section #1 for each of the signs you want to install)

Instructions: Provide color or black and white sketches of each sign and its message. Also show the proposed location and proportion to building façade. Attach photos of the streetscape and adjacent buildings.

Location of project: 16 E Gay Street, West Chester, PA 19380

Name of business: Call Your Mother Deli

Applicant's name: _____

Applicant's address: [redacted]

Applicant's phone number: [redacted] Applicant's email: [redacted]

Owner's name: _____

Owner's address: [redacted]

Owner's telephone number: [redacted]

1) Are you replacing an existing sign? Yes

2) How many signs do you wish to install? 1

3) On how many facades? 1 ✓ Front ___ Side ___ Back

4) _____ Hanging Sign ✓ Building-mounted _____ Other

5) Give a thorough description of sign: Pink beadboard with yellow letters

6) Is there new illumination? No Fixture Type? _____
How will it be mounted? _____

7) Sign Dimensions: Height: Approx 36" x Width: Approx 173" x Depth: 5 1/2" (total depth including beadboard backer, spacers, & letter

8) If a hanging sign, what is the height from the sidewalk to the bottom of the sign? N/A
(Borough Code requires 8'-0 minimum to bottom of sign)

9) How will this sign be mounted? Mechanically fastened with aluminum angle mounthing brackets hidden behind beadboard backer, 1/4" hardware into wood facade and all holes sealed with clear silicone
(please note: any attachment to a masonry façade must be done through the mortar joints, NOT into the masonry).

10) If a hanging sign, describe the hanging bracket: N/A

11) If a hanging sign, is this an existing bracket: N/A

12) Colors: Pink and yellow

13) Message: CALL YOUR MOTHER

14) Lettering style: please note that the historic preference is for any "serif" type: Bold serif font (Cooper Black)

Please be sure to attach sample of sign wording in chosen lettering style

DATE APPLICATION RECEIVED: 07/20/2026

APPLICATION NUMBER: 2026-19

SECTION #3 – REPAIR, REPLACEMENT OR ALTERATION

(Attach a separate Section #3 for each of the repairs, replacements or alterations you wish to make)

Instructions: Provide clear photographs showing the location of each proposed improvement, including photos of streetscape and the adjacent buildings. Provide architectural elevations and/or photographs clearly showing the location of the proposed work. Provide material specifications and manufacturer's pamphlets on the replacement materials proposed.

Name of business: Call Your Mother Deli

Applicant's name: Andrew Dana

Applicant's address: [redacted]

Applicant's phone number: [redacted]

Owner's name: _____

Owner's address: [redacted]

Owner's telephone number: [redacted]

1) Which element do you wish to change: ____ Doors ____Windows ____Roofing ____Gutters
✓ Walls ____Steps ____Sidewalk ____Fence ✓ Trim ____Railing ____Porch or Balcony
____ Other (specify)_____

2) On how many facades? 1 _____Front _____Side _____Back

3) What was the old is the material? Paint

4) What is the proposed new material? Paint

5) How will it be installed? Paint

6) Are you using any historical materials? N/A

7) Is so, what and how? _____

8) What were the old dimensions? Height: _____ x Width:_____ Depth:_____

9) What are the new dimensions? Height: _____ x Width:_____ Depth:_____

10) What were the old colors? Cream and black

11) What are the new colors? Pink and light pink

12) Why do you wish to make these changes? Paint building facade light pink and trim pieces dark pink, refer to color sketch

Call Your Mother Deli Existing Facade
16 E Gay Street









Call Your Mother Deli Existing
16 E Gay Street



Call Your Mother Deli Proposed Facade
16 E Gay Street



Article IV Borough Council/Mayor

☐ § 3-10 General provisions.

The powers, composition, terms, election, eligibility, authority, prohibitions and other matters concerning the elected Borough Council are set forth in Article II of the Home Rule Charter for the Borough of West Chester.

☑ § 3-11 Compensation: Council and Mayor.

[Amended 12-19-2001 by Ord. No. 18-2001]

A. Salary of Council members. Each member of Council shall be paid an annual salary as compensation for the duties imposed by Act No. 581 of 1965, as amended, known as the Borough Code, as follows:

(1) Commencing January 1, 2006, each member of Council shall be paid the sum of $4,000, payable quarterly.

(2) Commencing January 1, 2008, each member of Council shall be paid the sum of $4,125, payable quarterly.

B. Salary of Mayor. The Mayor of the Borough of West Chester shall be paid an annual salary as compensation for the duties imposed by Act No. 581 of 1965, as amended, known as the Borough Code, as follows:

(1) Commencing January 1, 2006, the Mayor shall be paid the sum of $4,000, payable quarterly.

(2) Commencing January 1, 2008, the Mayor shall be paid the sum of $4,125, payable quarterly

☐ § 3-12 Indemnification and personal liability insurance.

To protect the Borough Council and the Mayor from personal liability in the performance of their duties, indemnification and personal liability insurance shall be provided by the Borough. The amounts and limits of said insurance will be determined by the Borough Council. Each Council person and the Mayor shall be indemnified against expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him/her in connection with any adverse action by reason of the fact that he/she is or was a Council member or Mayor, if they acted in good faith and in a manner he/she reasonably believed to be in the best interests of the Borough and, with respect to any criminal action or proceeding, had no reasonable cause to believe their conduct was unlawful.

A. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent shall not of itself create a presumption that the Council member or Mayor did not act in good faith and in a manner which he/she reasonably believed to be in the best interests of the Borough and, with respect to any criminal action or proceeding, had reasonable cause to believe that his/her conduct was unlawful.

B. To the extent that the Council member or Mayor has been successful on the merits or otherwise in defense of any adverse action, he/she shall be indemnified against expenses, including attorney's fees, actually and reasonably incurred by him/her in connection therewith as of right. In all other instances, indemnification should be made by the Borough only as authorized in a specific case upon a determination that the indemnification is proper in the circumstances because he/she has met the applicable standard of conduct set forth above. Such determination shall be made by the Borough Council by a majority vote of a quorum consisting

NOTICE

Bill to Increase Borough Compensation Maximums Signed into Law

November 4th, 2024

House Bill 2265 (https://www.legis.state.pa.us/cfdocs/billInfo/billInfo.cfm?sYear=2023&sInd=0&body=H&type=B&bn=2265), sponsored by Representative Kyle Donahue (D-Lackawanna), was signed by Governor Josh Shapiro after the bill was passed with a bipartisan vote of 49-1 by the Pennsylvania Senate on Tuesday October 22, 2024. Act 131 will increase the maximum allowable compensation for borough council members and mayors. The maximum allowable compensation for borough officials had not been updated since 1995.

Act 131 does not directly increase any official's compensation since boroughs must set compensation locally through ordinance. Commensurate with the Pennsylvania Constitution, any changes to a borough official's compensation cannot take effect until the beginning of the official's next term of office.

In addition to raising the compensation maximums, Act 131 allows boroughs to pay officials on a per meeting basis and provides for excused absences from meetings.

Act 131 also clarifies that if a future federal census pushes a borough below a certain population threshold, the borough would not be required to lower borough officials' compensation.

Listed below are the current compensation maximums for **council members** and the new increase under Act 131.

- Boroughs with a population of less than 5,000, are currently capped at a maximum of $1,875 per year. Act 131 sets the new maximum at $3,145 per year.
- Boroughs with a population of 5,000 or more but less than 10,000, are currently capped at a maximum of $2,500 per year. Act 131 sets the new maximum at $4,190 per year.
- Boroughs with a population of 10,000 or more but less than 15,000, are currently capped at a maximum of $3,250 per year. Act 131 sets the new maximum at $5,450 per year.
- Boroughs with a population of 15,000 or more but less than 25,000, are currently capped at a maximum of $4,125 per year. Act 131 sets the new maximum at $6,915 per year.

Listed below are the current compensation maximums for **mayors** and the new increase under Act 131.

- Boroughs with a population of less than 5,000, are currently capped at a maximum of $2,500. Act 131 sets the new maximum at $4,190 per year.
- Boroughs with a population of 5,000 or more but less than 10,000 are currently capped at a maximum of $5,000. Act 131 sets the new maximum at $8,385 per year.
- Boroughs with a population of 10,000 or more but less than 15,000 are currently capped at a maximum of $7,500. Act 131 sets the new maximum at $12,575 per year.
- Boroughs with a population in excess of 15,000 are currently capped at a maximum of $500 per year per 1,000 residents or fraction of 1,000. Act 131 sets the new maximum at $840 per year per 1,000 residents or fraction of 1,000.

Act 131 takes effect on December 30, 2024. New compensation will not take effect until a local ordinance is enacted, and the new compensation applies to the next term of office after the ordinance is enacted.

Select Language | ▼

Borough Planner / Calendar (calendar.php)

14 JUN — U.S. Army Birthday (calendar.php)

14 JUN — Flag Day (calendar.php)

15 JUN — Local Highway Finance Report (FHWA 536) Due to PennDOT (calendar.php)

Calendar - Print/Flip Version (/PSAB 2026 Calendar/index.html)

§ 10A04. *Salary* of *mayor*.

(a) General rule. The ***salary*** of the ***mayor*** shall be established by ordinance and shall not exceed the following:

(1) In a borough with a population of less than 5,000, a maximum of $4,190 per year.

(2) In a borough with a population of 5,000 or more but less than 10,000, a maximum of $8,385 per year.

(3) In a borough with a population of 10,000 or more but less than 15,000, a maximum of $12,575 per year.

(4) In a borough with a population in excess of 15,000, a maximum of $840 per year per 1,000 residents or fraction of 1,000, the population to be determined by the latest official census figures.

(a.1) Treatment of benefits. Benefits provided to the ***mayor*** under section 1202(26) (relating to specific powers) shall not be considered pay, ***salary*** or compensation, but payment for all or a part of the premiums or charges for the benefits shall be in accordance with section 1202(26).

(b) Change in salary. A change in ***salary***, compensation or emoluments of the elected office shall become effective at the beginning of the next term of the ***mayor***.

History

Act 2014-37 (H.B. 1719), , § 1, approved Apr. 18, 2014, eff. in 60 days; *Act 2024-131* (H.B. 2265), P.L. 1120, § 2, approved October 31, 2024, effective December 30, 2024.

Annotations

Notes

Amendment Notes

The 2024 amendment substituted “$4,190” for “$2,500” in (a)(1); substituted “$8,385” for “$5,000” in (a)(2); substituted “$12,575” for “$7,500” in (a)(3); and substituted “$840” for “$500” in (a)(4).

Research References & Practice Aids

Hierarchy Notes:

8 Pa.C.S.

Pennsylvania Statutes, Annotated by LexisNexis®
Copyright © 2026 All rights reserved.

End of Document

8 Pa.C.S. § 1001

Pa.C.S. documents are current through 2026 Regular Session Act 17; P.S. documents are current through 2026 Regular Session Act 17

Pennsylvania Statutes, Annotated by LexisNexis® > Pennsylvania Consolidated Statutes (§§ 101 — 9901) > Title 8. Boroughs and Incorporated Towns (Pt. I) > Part I. Boroughs (Chs. 1 — 35) > Chapter 10. Powers and Duties of Elected Officials. (Subchs. A — F) > Subchapter A. Council. (§§ 1001 — 1016)

Notice

This section has more than one version with varying effective dates.

§ 1001. Organization of council, quorum, participation by telecommunication device, voting, compensation and eligibility.

(a) Organization. The council shall organize on the first Monday of January of each even-numbered year by electing one member as president and one member as vice president, who shall hold the offices at the pleasure of the council. If the first Monday is a legal holiday, the meeting and organization shall take place the following day. Any action taken by any council at any time between 12:01 a.m. on January 1 of an even-numbered year and the organization of council in that year shall be subject to reconsideration by the new council at any time within ten days after organization. The council may, at the organizational meeting, appoint other officers as may be provided for by law or ordinance, or as may be deemed necessary for the conduct of affairs of the borough, and may transact any other business as may come before the meeting. The president, and, during the president's absence or incapacity, the vice president, shall preside over the meetings of council and perform other duties as are prescribed by this part or by ordinance.

(b) Quorum. A majority of the membership of council then in office shall constitute a quorum. Except as provided in subsection (c), only council members physically present at a meeting place within the borough shall be counted in establishing a quorum.

(c) Telecommunication. Council may provide for the participation of council members in council meetings by means of telecommunication devices, such as telephones or computer terminals, which permit, at a minimum, audio communication between locations, if the following apply:

(1) A majority of the membership of council then in office is physically present at the advertised meeting place within the borough and a quorum is established at the convening or reconvening of the meeting. If, after the convening or reconvening of a meeting, a member has been disqualified from voting as a matter of law, but is still physically present, council members participating by telecommunication device in accordance with this section shall be counted to maintain a quorum.

(2) The telecommunication device used permits the member or members of council not physically present at the meeting to:

(i) speak to and hear the comments and votes, if any, of the members of council who are physically present, as well as other members of council who may not be physically present and are also using a telecommunication device to participate in the meeting; and

(ii) speak to and hear the comments of the public who are physically present at the meeting.

(3) The telecommunication device used permits the members of council and the members of the public who are physically present at the meeting to speak to and hear the comments and the vote, if any, of the member or members of council who are not physically present at the meeting.

(4) Physical absence of a council member. Council may only authorize participation by telecommunication device for one or more of the following reasons:

(i) illness or disability of the member of council;

(ii) care for the ill or newborn in the member's immediate family;

(iii) emergency; and

(iv) family or business travel.

(5) Nothing in this subsection shall be construed to limit the protections and prohibitions contained in any law or regulation relating to the rights of the disabled.

(d) Voting. A member of the council shall not be disqualified from voting on any issue before the council solely because the member has previously expressed an opinion on the issue in either an official or unofficial capacity.

(e) Compensation. Members of council may receive compensation to be fixed by ordinance as follows:

(1) In boroughs with a population of less than 5,000, a maximum of $3,145 per year.

(2) In boroughs with a population of 5,000 or more but less than 10,000, a maximum of $4,190 per year.

(3) In boroughs with a population of 10,000 or more but less than 15,000, a maximum of $5,450 per year.

(4) In boroughs with a population of 15,000 or more but less than 25,000, a maximum of $6,915 per year.

(5) In boroughs with a population of 25,000 or more but less than 35,000, a maximum of $7,335 per year.

(6) In boroughs with a population of 35,000 or more, a maximum of $8,385 per year.

The salaries shall be payable monthly or quarterly for the duties imposed by this part. Benefits provided to members of council under section 1202(26) (relating to specific powers) shall not be considered pay, salary or compensation, but payment for all or a part of the premiums or charges for the benefits shall be in accordance with section 1202(26). Any change in salary, compensation or emoluments of the elected office shall become effective at the beginning of the next term of the member of council.

(e.1) Alternative compensation. Notwithstanding subsection (e), the council may provide that members of the council shall receive compensation on a per-meeting basis based on attendance of members of council. Total annual compensation may not exceed the amounts specified in subsection (e). Compensation shall only be payable for duly advertised public meetings in which a member of council participated, except compensation is not payable if a member of council is absent from a meeting and the absence is not excused. Excused absence from a meeting shall be determined by council and shall include, but not be limited to, an emergency or illness of the member of council or the member's immediate family, as well as family or business travel. Council may require documentation to support an excused absence.

(f) Eligibility for compensation. The population shall be determined by the latest available official census figures, except that a borough shall not be required to reduce the salary of a mayor or member of council as a result of a decrease in population. In no case shall the compensation for any member of council exceed that of the mayor in any given borough, but, if the mayor's compensation exceeds that authorized by this section for members of council, the president of council may receive compensation not to exceed that of the office of mayor.

History

Act 2014-37 (H.B. 1719), , § 1, approved Apr. 18, 2014, eff. in 60 days; *Act 2024-131* (H.B. 2265), P.L. 1120, § 1, approved October 31, 2024, effective December 30, 2024.

Annotations

Notes

Editor's Notes

Section 1 of *Act 2014-37* added new Chapter 10, "Powers and Duties of Elected Officials", including Subchapter A, "Council", on April 18, 2014, effective in 60 days.

Amendment Notes

The 2024 amendment substituted "$3,145" for "$1,875" in (e)(1); substituted "$4,190" for "$2,500" in (e)(2); substituted "$5,450" for "$3,250" in (e)(3); substituted "$6,915" for "$4,125" in (e)(4); substituted "$7,335" for "$4,375" in (e)(5); substituted "$8,385" for "$5,000" in (e)(6); added (e.1); and in (f), added "except that a borough shall not be required to reduce the salary of a mayor or member of council as a result of a decrease in population" at the end of the first sentence.

Research References & Practice Aids

Hierarchy Notes:

8 Pa.C.S.

Pennsylvania Statutes, Annotated by LexisNexis®
Copyright © 2026 All rights reserved.

End of Document

Borough of West Chester, PA
Wednesday, June 3, 2026

Chapter C. Home Rule Charter of the Borough of West Chester and Its Government

Article II. The Borough Council

8 Pa.C.S.A. 104

Section 207. Salaries.

A. Each Member of Council may receive compensation to be fixed by ordinance, which shall be enacted prior to the fifteenth day of February of any year in which Members of Council are normally elected, as prescribed in Section 204(B). Such compensation shall not exceed the maximum established by Section 1001 of the Borough Code. No ordinance shall change the salary of any Member of Council after his or her election or appointment.

B. Members of Council shall receive no other compensation from the Borough, direct or indirect. They may, however, receive reimbursement of expenses actually incurred in the performance of their duties. The Administrative Code shall prescribe the procedure for the authorization and approval of such expenses.

C. In no case shall the compensation for any Member of Council exceed that of the Mayor. However, wherever the Mayor's compensation exceeds that authorized by this section for Members of Council, the President of Council may receive compensation not to exceed that of the Mayor.

Borough of West Chester, PA
Wednesday, June 3, 2026

Chapter C. Home Rule Charter of the Borough of West Chester and Its Government

Article IV. Mayor

Section 405. Salary.

53 Pa CSA § 1025

A. The Mayor may receive compensation to be fixed by ordinance, which shall be enacted prior to the fifteenth day of February of any year in which the Mayor is normally elected, as prescribed in Section 402(B). Such compensation shall not exceed the maximum established by Section 1025 of the Borough Code. No ordinance shall change the salary of the Mayor after his or her election or appointment.

B. The Mayor shall receive no other compensation from the Borough, direct or indirect. He or she may, however, receive reimbursement of expenses actually incurred in the performance of his or her duties. The Administrative Code shall prescribe the procedure for the authorization and approval of such expenses.

Borough of West Chester, PA
Wednesday, June 3, 2026

Chapter 3. Administrative Code

Article IV. Borough Council/Mayor

§ 3-11. Compensation: Council and Mayor.

{Amended 12-19-2001 by Ord. No. 18-2001]

A. Salary of Council members. Each member of Council shall be paid an annual salary as compensation for the duties imposed by Act No. 581 of 1965, as amended, known as the Borough Code, as follows:

   (1) Commencing January 1, 2006, each member of Council shall be paid the sum of $4,000, payable quarterly.

   (2) Commencing January 1, 2008, each member of Council shall be paid the sum of $4,125, payable quarterly.

B. Salary of Mayor. The Mayor of the Borough of West Chester shall be paid an annual salary as compensation for the duties imposed by Act No. 581 of 1965, as amended, known as the Borough Code, as follows:

   (1) Commencing January 1, 2006, the Mayor shall be paid the sum of $4,000, payable quarterly.

   (2) Commencing January 1, 2008, the Mayor shall be paid the sum of $4,125, payable quarterly