

# WESTTOWN TOWNSHIP

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## **AGENDA** **Westtown Township Board of Supervisors** **Workshop Agenda**

**Westtown Township Municipal Building**  
**1039 Wilmington Pike, Westtown**

**Monday, October 21, 2024**

**Start time: 6:30 PM Workshop**

- 1. 5-year Plan for the Goose Creek Total Maximum Daily Load (TMDL) and Pollutant Reduction Plan (PRP) – 15 minutes**
- 2. West Chester Public Library 2025 Budget Request – 10 minutes**
- 3. Goshen Fire Company 2025 Budget Request – 10 minutes**
- 4. Good Fellowship 2025 Budget Request – 10 minutes**
- 5. Public Comment on Workshop Items\* - 15 minutes**

*Tonight's Workshop will be viewable on Zoom via the following link:*

<https://us02web.zoom.us/j/89939917814><https://us02web.zoom.us/j/89939917814>

*Or by phone at: 646-558-8656*

*\*The public comment period at the end of the Workshop will last approximately 10 minutes. The public will be asked to limit their remarks to two minutes each to allow others an opportunity to speak. To the extent that further public comment is required, speakers will be asked to save their remarks until the Public Comment - Non-Agenda Items portion of the Regular Board of Supervisors Meeting.*



# MEMORANDUM

To: Mila Carter, Township Manager, and Board of Supervisors, Westtown Township, Chester County

From: Jennifer Orr-Greene, Environmental Team Lead, Cedarville Engineering Group

Subject: Pollution Reduction Plan Summary of Changes for NPDES MS4 Municipal Stormwater Permit – October 2024

Date: October 17, 2024

As part of its NPDES MS4 Municipal Stormwater Permit, the Township was allocated a total load of nitrogen, phosphorus and sediment to meet as part of its compliance with permit conditions. These loads are contained in both a TMDL and the Pollution Reduction Plan (PRP) prepared for the Township in 2018 and updated yearly since that time. The Township was given 5 years to implement projects to reduce these loads. Pa. DEP required permittees during the fifth year of their permit term to report on progress toward meeting these load reduction goals and, if not fully implemented, to provide a plan and timeline of how they will be met. To date, Westtown Township has successfully implemented three (3) PRP projects, reducing their sediment load 22,501.42 lbs/yr or 18% of their 122,089 lbs/yr goal defined within their combined PRP. Due to complications with obtaining funding and delays with other PRP projects, the Township was unable to implement the PRP in its entirety by September 2024.

After review of the projects that were proposed in the existing PRP, the Township decided not to pursue projects on privately-owned (HOA or others) property but to implement the remaining projects on Township property. This requires an update to the Township PRP; this memo serves as a summary of the remaining actions to be taken to meet the remaining reductions.

The remaining loads to be reduced (99,581.58 lbs/yr or 82%) will be addressed by the following three actions:

- 1) Land Use Conversion Crediting Crebilly Farm

The Crebilly Farm is in the process of being purchased by the Township using, at least in part, funds from the Land and Water Conservation Fund, and will be used by the Township as open space. Farming activities will no longer be conducted; lands currently in agricultural use will be harvested in the



spring of 2025, then planted with meadow species. Over time, 75% of the property will be converted to forested land. The property will be protected as open space with no future agricultural activities via a deed restriction.

The Township is able to take a credit from the total load required to be reduced for the conversion of agricultural land to pasture/meadow/fallow field land. Land use loading rates for wheat/grain agriculture without manure were compared to those for pasture using the average sediment loading rates in *Table 2-16. Average Sediment Load By Phase 6 Land Use* contained in *Chesapeake Bay Program Phase 6 Watershed Model - Section 2 - Average Loads Final Model Documentation for the Midpoint Assessment - 5/11/2018*. The current loading rate for the management practice “Land Retirement to Pasture (landretpas)” was applied to the 136 acres of current agricultural land that will be retired to pasture. The current load for these 136 acres is 25,176.32 pounds; the retired load will be 2,312 pounds. Thus, the land use change produced as a result of the protection of the former Crebilly Farm will result in a reduction in total load required by the municipality of 22,864.32 pounds of sediment.

		TSS lbs/acre/yr	Acres	Load
Current	grain agriculture	185.12	136	25176.32
Future	pasture	17	136	2312
	Reduction in load required			22864.32

## 2) Pleasant Grove Stream Restoration

An approximately 1,600 linear foot section of East Branch Chester Creek is being proposed for floodplain restoration within the Pleasant Grove Development; which includes wetland pockets. This section of East Branch Chester Creek flows through a large, open space property owned by the Township in an easterly direction. Chester Creek is the receiving stream for this area, which lies within the Chester Creek Hydrologic Unit Code (HUC) 12.

A feasibility study was completed in December 2018 by LandStudies, Inc. The recommended length and location of restoration includes two sections of East Branch Chester Creek totaling approximately 1,450 linear feet from Tower Course Road to Blenheim Road and from Blenheim Road to South Concord Road. An additional 150 linear feet of restoration on the tributary from the existing pond is recommended for an overall total restoration length of 1,600 linear feet. The feasibility study indicates that this reach demonstrates



an excellent opportunity for floodplain restoration because of the following factors:

- 1) High degree of channel instability and overall need for restoration.
- 2) Adequate amount of available space (width) for use as floodplain exists on-site.
- 3) High potential for significant measurable ecological uplift.
- 4) Limited existing tree cover (mostly all invasive/undesirable); and well-defined tie-in locations (bridges).

The 1,600 linear feet of stream restoration implemented with a sediment reduction rate of 44.88/lbs/ft/yr and the wetland pockets associated with the restoration will yield an estimated removal of 77,408.39 lbs/yr of sediment within the Chester Creek PRP Planning Area.

The Pleasant Grove Stream Restoration is currently under negotiation regarding the design and construction administration for the project; CEG anticipates the project being implemented in spring 2026. The current estimated cost for design, permitting and construction oversight is \$108,471. The current estimated construction cost for the project is \$480,273. The minimal match most granting programs will accept is 15%; therefore, it is recommended that the Township allocate at minimum \$16,270.65 in its FY2025 budget for design/permitting/oversight and at minimum \$72,040.95 in its FY2026 budget for construction. *PLEASE NOTE THESE COSTS ARE PRELIMINARY AND PROVIDED FOR PLANNING PURPOSES ONLY. THEY ARE SUBJECT TO CHANGE AS MORE DETAILED PROJECT INFORMATION IS PROVIDED.*

### 3) Radley Run Stream Restoration

The section of Radley Run proposed for restoration is located on the west side of S. New Street between W. Pleasant Grove Road and W. Street Road on private property. This reach has been identified for restoration based on the presence of bank erosion and the lack of tree removal required. Radley Run is the receiving stream for this area, which lies within the Upper Brandywine Creek Hydrologic Unit Code (HUC) 12.

For the purposes of this plan, it has been assumed that approximately 260 linear feet of restoration along with wetland pockets being formed as part of the restoration. The stream restoration will be completed at a sediment reduction rate of 44.88/lbs/ft/yr. Between the stream restoration and the wetland pockets, this project will provide an estimated removal of 11,984.36



lbs/yr of sediment within the Middle Brandywine Creek/Upper Brandywine Creek PRP Planning Area.

Radley Run has received full funding and construction is expected to begin spring 2025. The Township has allocated \$50,000 in matching funds for this project in the FY2024 budget.

With the implementation of these two projects and the crediting for the land conversion of Crebilly Farm, the Township will meet its remaining pollutant load reductions required via its MS4 permit by the end of 2026.

*Respectfully Submitted – Jennifer Orr-Greene, Environmental Team Lead*

*Jennifer Orr-Greene*



October 4, 2024

# Goose Creek TMDL and Pollutant Reduction Plan for Plum Run, Radley Run, Brandywine Creek, Chester Creek, East Branch Chester Creek, Hunters Run, Ridley Creek

August 11, 2017  
Updated March 2019  
Updated June 2019  
Updated September 2023  
Updated September 2024

## Prepared For:

**Westtown Township**  
1039 Wilmington Pike  
West Chester, PA 19382



## Prepared By:



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## EXECUTIVE SUMMARY

The Westtown Township Goose Creek TMDL and Pollutant Reduction Plan for Plum Run, Radley Run, Brandywine Creek, Chester Creek, East Branch Chester Creek, Hunters Run, and Ridley Creek has been updated (September 2024) to reflect changes in planned projects to remediate issues that have arose with private landowners, funding, and feasibility. Alternative projects have been evaluated and chosen to replace removed projects within their respective plan areas. The TMDL/Pollutant Reduction Plan is a requirement of the Township's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit to reduce pollution to impaired streams within Westtown Township, Chester County, PA.

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## 1.0 Purpose and Scope

Westtown Township is required to develop and implement a Total Maximum Daily Load (TMDL) Plan for phosphorous for Municipal Separate Storm Sewer System (MS4) discharges to Goose Creek and a Pollutant Reduction Plan (PRP) for sediment for MS4 discharges to Plum Run, Radley Run, Brandywine Creek, Chester Creek, East Branch Chester Creek, Hunters Run, and Ridley Creek. These plans are required as part of the 2018 National Pollutant Discharge Elimination System (NPDES) MS4 Individual Permit application to the Pennsylvania Department of Environmental Protection (PA DEP).

This document will serve as the single plan for both the TMDL and PRP. This plan has been prepared based on the best and most current guidance made available by PA DEP. Definitions of relevant regulatory terms are provided in Section 6.0.

## 2.0 Permit Requirements

To develop the Township’s TMDL and Pollutant Reduction Plans, it is important to understand the Township’s requirements. These are summarized in the following paragraphs.

### Goose Creek TMDL

Goose Creek has a TMDL established by the United States Environmental Protection Agency (EPA) for total phosphorous (TP), documented in a report entitled “Nutrient Total Maximum Daily Load in Goose Creek Watershed, Pennsylvania”, dated June 30, 2008. The report cites Westtown Township’s existing TP load as 1.40 lb/day and allocates a TP load of 0.64 lb/day, which is a required reduction of 53.9 percent. Table 1 below lists each MS4 in the Goose Creek watershed and the corresponding TMDL requirements, taken from Table 3-3 of the Goose Creek TMDL report entitled “Land Based Non-Point TP Load in the Goose Creek Watershed by MS4 Area.” This TMDL was developed based on the 2001 National Land Cover Dataset but does not cite pollutant loading rates by land cover.

**Table 1: Goose Creek TMDL MS4 Allocations and Required Reductions**

MS4 Permit Holder	Area by MS4 (acres)	Existing TP Load (lb/day)	Allocated TP Load (lb/day)	Required Reduction
West Goshen Township	1,488	1.16	0.54	53.9%
West Chester Borough	310	0.24	0.11	53.9%
Westtown Township	1,791	1.40	0.64	53.9%
Thornbury Township (Chester County)	772	0.60	0.28	53.9%
Thornbury Township (Delaware County)	113	0.09	0.04	53.9%
<b>TOTAL:</b>	<b>4,474</b>	<b>3.49</b>	<b>1.61</b>	<b>53.9%</b>

The Township’s Goose Creek TMDL Plan must illustrate how the following two (2) objectives will be achieved through the implementation of projects or Best Management Practices (BMPs):

### **1) Short-term TP reduction**

Per the PA DEP TMDL Plan Instructions (3800-PM-BCW0200d Rev. 3/2017), “short-term reduction” is defined as a plan for reducing TP by five (5) percent over the five (5) year permit term (March 16, 2018 to March 15, 2023), if the wasteload allocations (WLAs) or overall required percent reduction of 53.9 percent cannot be achieved during this timeframe.

### **2) Long-term TP reduction**

“Long-term reduction” is defined by the PA DEP TMDL Plan Instructions as a general plan describing how WLAs or overall required percent reductions will ultimately be achieved.

Goose Creek drains to Chester Creek, which is listed as impaired for sediment. By complying with the Goose Creek TMDL requirements, the Township will simultaneously work towards achieving the required sediment reduction for Chester Creek, which is further described below.

### *PRP for Discharges to Waters Impaired for Sediment*

Westtown has MS4 discharges or “outfalls” to Plum Run, Radley Run, Brandywine Creek, Chester Creek, East Branch Chester Creek, Hunters Run, and Ridley Creek, which are all listed by the 2014 Pennsylvania Integrated Water Quality Monitoring and Assessment Report (Integrated Report) as impaired for siltation (i.e. sediment) and highlighted in Table 2 below. Therefore, in addition to the Goose Creek TMDL requirement, Westtown Township is required by the PA DEP and Environmental Protection Agency (EPA) to reduce the sediment loading to Plum Run, Radley Run, Brandywine Creek, Chester Creek, East Branch Chester Creek, Hunters Run, and Ridley Creek by ten (10) percent within five (5) years of permit approval by implementing projects or Best Management Practices (BMPs).

Westtown has no outfalls that discharge directly to Brandywine Creek. Brandywine Creek is listed because the Township has outfalls that discharge to Plum Run and Radley Run, which ultimately flow into Brandywine Creek, and the main stem of the Brandywine Creek is listed as impaired for sediment within five (5) miles downstream of the Township’s most downstream outfall.

**Table 2: PA DEP MS4 Requirements Table (Municipal) Excerpt (last revised May 9, 2017)**

MS4 Name	NPDES ID	Individual Permit Required?	Reason	Impaired Downstream Waters or Applicable TMDL Name	Requirement(s)	Other Cause(s) of Impairment
Westtown Twp, Chester County	PAI130528	Yes	TMDL Plan, SP, IP	Ridley Creek	Appendix E-Siltation (5)	Cause Unknown (5), Water/Flow Variability (4c)
				Radley Run	Appendix E-Siltation (4a)	Water Flow Variability (4c)
				Brandywine Creek	Appendix E-Siltation (4a)	
				Hunters Run	Appendix E-Siltation (5)	Cause Unknown (5), Water/Flow Variability (4c)
				Chester Creek	Appendix B-Pathogens (5), Appendix E-Siltation (5)	Cause Unknown (5), Flow Alterations, Other Habitat Alterations, Water Flow Variability (4c)
				East Branch Chester Creek	Appendix E-Siltation (5)	Cause Unknown (5), Other Habitat Alterations, Water/Flow Variability (4c)
				Goose Creek TMDL	TMDL Plan-Nutrients (4a)	Cause Unknown (4a)
				Plum Run	Appendix E-Siltation (4a)	Water/Flow Variability (4c)

### 3.0 Background/Setting

Westtown Township comprises approximately 8.8 square miles located near the eastern boundary of Chester County, in southeast Pennsylvania (Figure 1). The 2010 Urbanized Area (U.S. Census Bureau) covers the entire land area of the Township.

**Figure 1: Westtown Township Location Map**

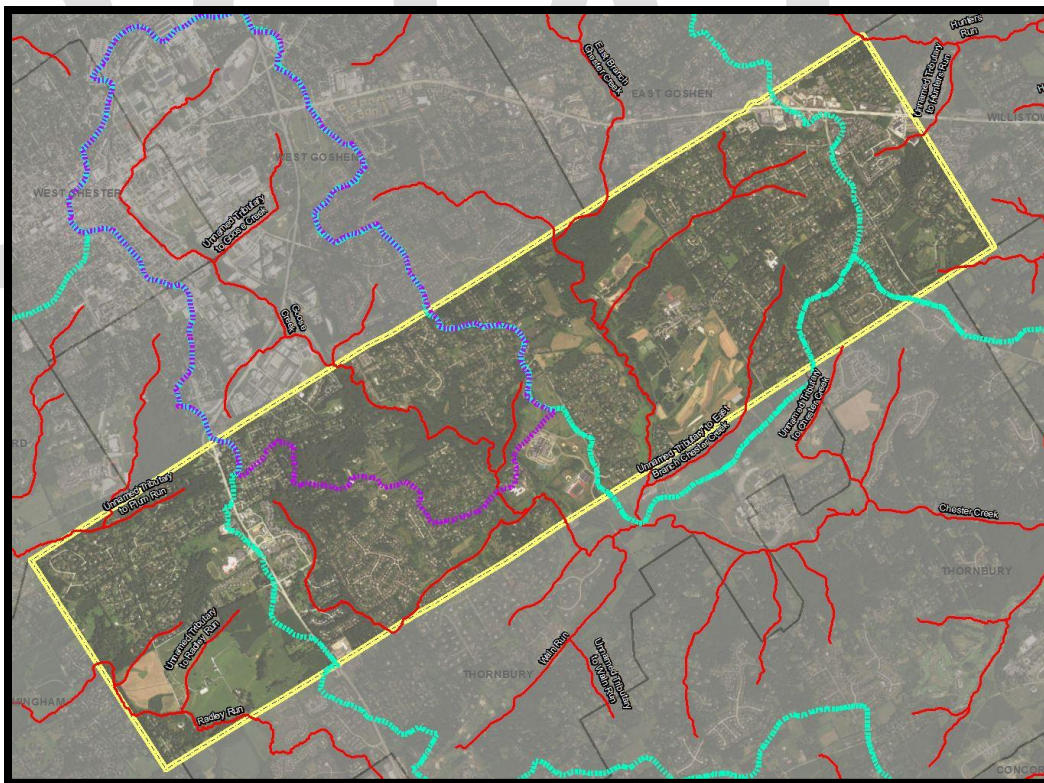


Figure 2 below displays a map of the streams that cross Westtown Township. Stream segments displayed in red indicate impaired streams. All streams mapped in Westtown and the surrounding communities are listed as impaired. The purple dashed line delineates the Goose Creek watershed and the turquoise dashed lines delineate U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) Hydrologic Unit Code (HUC)-12 boundaries. From southwest to northeast, HUC-12s within Westtown include the following:

- Upper Brandywine Creek (contains Plum Run, Radley Run, and Brandywine Creek)
- Chester Creek (contains Goose Creek TMDL and Chester Creek)
- East Branch Chester Creek
- Ridley Creek (contains Hunters Run and Ridley Creek)

Westtown Township has 210 MS4 outfalls. These MS4 outfalls discharge to the sediment-impaired Plum Run, Radley Run, Brandywine Creek, Chester Creek (includes 45 outfalls that discharge to Goose Creek), East Branch Chester Creek, Hunters Run, and Ridley Creek. A total of forty-five (45) of these 210 MS4 outfalls discharge to Goose Creek.

**Figure 2: Westtown Township Impaired Streams**





### 3.1 Plum Run

An unnamed tributary (UNT) to Plum Run originates in the western portion of Westtown Township and flows in a southwesterly direction where it meets another tributary that enters the main stem of Plum Run west of the Township boundary in East Bradford Township. The UNT tributaries are listed as impaired for sediment and water flow variability. Table 3 below lists the impairment information for the UNTs from the 2014 Integrated Report.

There are fourteen (14) MS4 outfalls that discharge to the UNTs to Plum Run. Plum Run discharges to Brandywine Creek and is part of the Upper Brandywine Creek HUC12. Refer to Appendices for MS4 mapping.

**Table 3: 2014 Integrated Report – Plum Run**

Impairment Cause	Impairment Source	Category	Assessed Use	Date Listed
Water/Flow Variability	Urban Runoff/Storm Sewers	4c	Aquatic Life	1998
Siltation	Urban Runoff/Storm Sewers	4a	Aquatic Life	1998
Siltation	Agriculture	4a	Aquatic Life	1998

### 3.2 Radley Run

Radley Run flows in a northwesterly direction through the southwestern corner of Westtown Township. Two (2) UNTs originate in the west-central portion of the Township and flow in a southwesterly direction into Radley Run within the boundaries of the Township. Both Radley Run and its tributaries are listed as impaired for sediment and water/flow variability. Table 4 below lists the impairment information from the 2014 Integrated Report.

There are twenty-four (24) MS4 outfalls that discharge to Radley Run and its UNTs. Radley Run discharges to Brandywine Creek and is part of the Upper Brandywine Creek HUC12. Refer to Appendices for MS4 mapping.

**Table 4: 2014 Integrated Report – Radley Run**

Impairment Cause	Impairment Source	Category	Assessed Use	Date Listed
Water/Flow Variability	Urban Runoff/Storm Sewers	4c	Aquatic Life	2010
Siltation	Agriculture, Urban Runoff/Storm Sewers	4a	Aquatic Life	1998

### 3.3 Brandywine Creek

Brandywine Creek lies outside of the township to the west. Radley Run and UNTs to Plum Run flow through Westtown Township into Brandywine Creek, which is listed as impaired for sediment. Table 5 below lists the impairment information for Brandywine Creek from the 2014 Integrated Report.

No MS4 outfalls discharge directly to the Brandywine Creek; however, Radley Run and Plum Run both flow into the Brandywine Creek. Brandywine Creek is listed as impaired for sediment. Refer to Appendices for MS4 mapping.

**Table 5: 2014 Integrated Report – Brandywine Creek**

Impairment Cause	Impairment Source	Category	Assessed Use	Date Listed
Siltation (sediment)	Agriculture, Urban Runoff/Storm Sewers	4a	Aquatic Life	2010

### 3.4 Chester Creek

Chester Creek originates in the western portion of the Township where it flows in a south-southeasterly direction to the southern boundary of the Township, where it turns and begins flowing in a northeasterly direction. Goose Creek flows into Chester Creek before it turns south-southeast again and continues to flow out of the Township in a south-southeasterly direction. There are outfalls that drain to Chester Creek in the south-eastern half of the Township. Chester Creek is listed as impaired for sediment, other habitat alterations, water/flow variability and cause unknown. Table 6 below lists the impairment information from the 2014 Integrated Report.

There are ninety-four (94) MS4 outfalls that discharge to Chester Creek listed as impaired for sediment. Refer to Appendices for MS4 mapping.

**Table 6: 2014 Integrated Report – Chester Creek**

Impairment Cause	Impairment Source	Category	Assessed Use	Date Listed
Cause Unknown	Urban Runoff/Storm Sewers	4a	Aquatic Life	2014
Siltation	Urban Runoff/Storm Sewers	5	Aquatic Life	2014
Other Habitat Alterations	Habitat Modifications	4c	Aquatic Life	2014
Water/Flow Variability	Urban Runoff/Storm Sewers	4c	Aquatic Life	2014

### 3.5 Goose Creek (TMDL)

Goose Creek flows through the center of the Township in a southeasterly direction until it meets Chester Creek at the southern boundary of the Township. Goose Creek roughly parallels the railroad that transects the Township. Table 7 below lists the impairment information from the 2014 Integrated Report.

There are forty-five (45) MS4 outfalls that discharge to Goose Creek. Goose Creek has a TMDL for phosphorous as referenced in Section 2.0. It is also listed as impaired for sediment. Refer to Appendices for MS4 mapping.

**Table 7: 2014 Integrated Report – East Branch Chester Creek**

Impairment Cause	Impairment Source	Category	Assessed Use	Date Listed
Water/Flow Variability	Urban Runoff/Storm Sewers	4c	Aquatic Life	2014
Other Habitat Alterations	Habitat Modification	4c	Aquatic Life	2014
Cause Unknown	Urban Runoff/Storm Sewers	5	Aquatic Life	2014
Siltation	Urban Runoff/Storm Sewers	5	Aquatic Life	2014

### 3.6 *East Branch Chester Creek*

The East Branch Chester Creek flows through the center of the Township (east of Goose Creek), roughly paralleling the western side of Westtown Road. There are multiple unnamed tributaries to East Branch Chester Creek within the Township, all of which are listed as impaired for sediment, water/flow variability, other habitat alterations, and cause unknown. Table 8 below lists the impairment information from the 2014 Integrated Report.

There are one-hundred fifty-nine (159) MS4 outfalls that discharge to East Branch Chester Creek and its UNTs that are listed as impaired for sediment. Refer to Appendices for MS4 mapping.

**Table 8: 2014 Integrated Report – East Branch Chester Creek**

Impairment Cause	Impairment Source	Category	Assessed Use	Date Listed
Cause Unknown	Urban Runoff/Storm Sewers	5	Aquatic Life	2014
Other Habitat Alterations	Habitat Modification	4c	Aquatic Life	2014
Siltation	Urban Runoff/Storm Sewers	5	Aquatic Life	2014
Water/Flow Variability	Urban Runoff/Storm Sewers	4c	Aquatic Life	2014

### 3.7 *Hunters Run*

Hunters Run flows across the northeastern corner of the Township in a southeasterly direction. An unnamed tributary to Hunters Run originates in the eastern portion of the Township and flows in an east-northeasterly direction, eventually into Hunters Run outside of the Township boundary to the east. Hunters Run and its tributary are listed as impaired for sediment. This stream was listed as impaired for other water/flow variability, siltation and cause unknown in 2012. Table 9 below lists the impairment information from the 2014 Integrated Report.

There are ten (10) MS4 outfalls that discharge to Hunters Run and its UNT. Refer to Appendices for MS4 mapping.



**Table 9: 2014 Integrated Report – Hunters Run**

Impairment Cause	Impairment Source	Category	Assessed Use	Date Listed
Cause Unknown	Urban Runoff/Storm Sewers	5	Aquatic Life	2012
Water/Flow Variability	Urban Runoff/Storm Sewers	4c	Aquatic Life	2012
Siltation	Urban Runoff/Storm Sewers	5	Aquatic Life	2012

### 3.8 *Ridley Creek*

An unnamed tributary to Ridley Creek originates in the southeastern corner of the Township and flows in an easterly direction out of the Township eventually into Ridley Creek. This tributary is listed as impaired for sediment, water/flow variability, and cause unknown. Table 10 below lists the impairment information for the UNT from the 2014 Integrated Report.

There are three (3) MS4 outfalls that discharges to the UNT to Ridley Creek listed as impaired for sediment. Refer to Appendices for MS4 mapping.

**Table 10: 2014 Integrated Report – Ridley Creek**

Impairment Cause	Impairment Source	Category	Assessed Use	Date Listed
Cause Unknown	Urban Runoff/Storm Sewers	5	Aquatic Life	2012
Water/Flow Variability	Urban Runoff/Storm Sewers	4c	Aquatic Life	2012
Siltation	Urban Runoff/Storm Sewers	5	Aquatic Life	2012

## 4.0 **Pollutant Reduction**

Per the MS4 permit and PRP Instructions document (3800-PM-BCW0100k Rev. 3/2017), the following sections are addressed below: Public Participation, Storm Sewersheds, Pollutants of Concern, Existing Sediment Loading, Proposed Best Management Practices (BMPs), Funding Mechanisms, and Operations and Maintenance.

### 4.1 *Public Participation*

The TMDL-PRP was updated to address comments received from the PA DEP in a letter dated January 30, 2018. The Township completed the required public comment period. A copy of the affidavit of publication in the Daily Local News is included in Appendix A. No comments were received. The PRP was presented at a regular Board of Supervisors meeting on March 18, 2019, and comments were accepted from any interested members of the public.

The TMDL-PRP was updated again in 2023 to reflect a change in the proposed stormwater Best Management Practice (BMP) for the Thorne Drive Basin Retrofit project. The Township completed the required public review period, and a copy of the affidavit of publication in

the Daily Local News on August 4, 2023, is included in Appendix A. The PRP was announced at a regular Board of Supervisors meeting on August 7, 2023, and public comments were accepted at a subsequent meeting on August 21, 2023. One comment was received and summarized in Appendix A. Once the 30-day public review period ended, the PRP update was officially accepted on September 5, 2023.

#### 4.2 *Storm Sewersheds/Planning Area*

Storm sewersheds, the areas which drain to each of the 210 outfalls, were manually delineated in ArcMap 10.6 using two (2) foot topographic contours from the 2006-2008 PAMAP Program data published by the Pennsylvania Department of Conservation and Natural Resources (DCNR), while referencing Google Street View and multiple sources of aerial imagery.

“Parsing” is defined by the PRP Instructions Attachment A, entitled “Parsing Guidelines for MS4s in Pollutant Reduction Plans”, as a “process in which land area is removed from a Planning Area in order to calculate the actual or target pollutant loads that are applicable to an MS4.” The examples cited include:

- 1) The land area associated with non-municipal stormwater NPDES permit coverage that exists within the urbanized area of a municipality;
- 2) Land area associated with PennDOT roadways and the Pennsylvania Turnpike (roads and right of ways);
- 3) Lands associated with the production area of a Concentrated Animal Feeding Operation that is covered by an NPDES permit;
- 4) Land areas in which stormwater runoff does not enter the MS4. If an accurate storm sewershed map is developed, these lands may be parsed or excluded as part of that process.

Land areas that have been parsed from the Planning Area during the development of this PRP fall under category #2 and #4 as described above. These parsed areas have been further categorized and identified on the Storm Sewershed/Planning Area Map in Appendix D.

Storm sewersheds that extend outside of the municipal boundary are not included in the overall planning area. The drainage areas to existing, and/or proposed, BMPs located outside of the storm sewersheds were added to the overall planning area.

Per the “Pollutant Aggregation Suggestions for MS4 Requirements Table Instructions” (dated April 4, 2017) and the “Pollutant Aggregation Suggestions for MS4 Requirements Table (Municipal)” (revised May 9, 2017), Westtown Township may achieve the ten (10) percent sediment pollutant reduction in the following aggregated Planning Areas, as opposed to a 10 percent reduction in the Planning Areas for each receiving impaired surface water.

**Table 11: Pollutant Aggregation Suggestions for MS4 Requirements Table (Municipal) Excerpt**

MS4 Name	NPDES ID	HUC-12	Impaired Downstream Waters or Applicable TMDL Name	Requirement(s)
Westtown Twp, Chester County	PA1130528	Middle Brandywine Creek, Upper Brandywine Creek	Brandywine Creek, Plum Run, Radley Run	Appendix E-Siltation
		Chester Creek	Chester Creek, Goose Creek TMDL	Appendix B-Pathogens, TMDL Plan-Nutrients
		Chester Creek, East Branch Chester Creek, Ridley Creek	Chester Creek, East Branch Chester Creek, Hunters Run, Ridley Creek	Appendix E-Siltation

To simplify planning and reporting efforts, from this point forward the report will reference the Middle Brandywine Creek/ Upper Brandywine Creek PRP Planning Area, the Chester Creek/East Branch Chester Creek/Ridley Creek PRP Planning Area, and the Goose Creek TMDL Planning Area (which is also contained within the Chester Creek/East Branch Chester Creek/Ridley Creek PRP Planning Area, since Goose Creek drains to Chester Creek).

#### 4.3 *Pollutants of Concern*

Westtown Township is required to reduce total phosphorous loading for MS4 outfalls that discharge to Goose Creek per the TMDL. Additionally, for the PRPs, Westtown Township is required to reduce sediment loading for MS4 outfalls that discharge to waters impaired by sediment, which includes all receiving streams within the Township.

To meet the PRP requirements, a minimum of ten (10) percent sediment reduction within five (5) years of permit approval has been demonstrated in this plan. Though not required, existing loading and BMP reduction calculations were also provided for phosphorous and nitrogen in Appendix C.

To meet the short- and long-term Goose Creek TMDL reduction objectives, the entire 53.9 percent total phosphorous reduction required has been demonstrated as being implemented within five (5) years of permit approval in this plan.

#### 4.4 *Existing Pollutant Loading*

To determine existing sediment loading to Plum Run, Radley Run, Brandywine Creek, Chester Creek, East Branch Chester Creek, Hunters Run, and Ridley Creek, the general methodology described in the DEP guidance document entitled “Pollution Reduction Plan: A Methodology” was used. To provide a consistent calculation methodology across the Goose Creek TMDL and the PRP requirements, the total phosphorous allocation for Goose Creek was recalculated for the Goose Creek Planning Area per the same methodology. The short and long-term reduction objectives of the TMDL were then applied to the recalculated load. Utilizing ArcGIS 10.6, 2011 National Land Cover Dataset (NLCD) data, the acreage of each land cover classification type within the Planning Area was calculated.

The aggregate National Land Cover Data (NLCD) statistics within the Planning Areas for each aggregation group is compiled in Table 12 below with a breakdown of the area by land cover classification type. Refer to Appendix F for the Land Cover Map.

**Table 12: NLCD 2011 Land Cover by PRP Planning Area**

PRP Planning Area/Aggregated HUC-12s	Aggregated Receiving Sediment-Impaired Surface Waters	NLCD 2011 Land Cover Classification within Planning Area	Area (acres)	Percent Impervious	Impervious Area (acres)	Pervious Area (acres)
Middle Brandywine Creek/ Upper Brandywine Creek	Brandywine Creek, Plum Run, Radley Run	Developed, Open Space	306.80	19	58.29	248.51
		Developed, Low Intensity	14.12	49	6.92	7.20
		Developed, Medium Intensity	8.52	79	6.73	1.79
		Developed, High Intensity	3.16	100	3.16	0
		Deciduous Forest	70.04	0	0	70.04
		Evergreen Forest	2.03	0	0	2.03
		Mixed Forest	13.27	0	0	13.27
		Shrub/Scrub	33.76	0	0	33.76
		Hay/Pasture	45.87	0	0	45.87
		Cultivated Crop	10.03	0	0	10.03
		Woody Wetlands	1.36	0	0	1.36
		Grassland/Herbaceous	1.33	0	0	1.33
<b>TOTAL:</b>			<b>510.29</b>		<b>75.10</b>	<b>435.19</b>
Chester Creek/East Branch Chester Creek/Ridley Creek	Chester Creek, East Branch Chester Creek, Hunters Run, Ridley Creek, Goose Creek	Developed, Open Space	1494.95	19	284.04	1210.91
		Developed, Low Intensity	206.13	49	101.00	105.13
		Developed, Medium Intensity	77.20	79	60.99	16.21
		Developed, High Intensity	10.44	100	10.44	0
		Deciduous Forest	421.95	0	0	421.95
		Evergreen Forest	16.01	0	0	16.01
		Mixed Forest	38.24	0	0	38.24
		Shrub/Scrub	109.74	0	0	109.74
		Hay/Pasture	67.97	0	0	67.97
		Cultivated Crop	11.97	0	0	11.97
		Woody Wetlands	37.12	0	0	37.12
				Emergent Herbaceous Wetland	0.72	0
		Grassland/Herbaceous	1.56	0	0	1.56
<b>TOTAL:</b>			<b>2494.00</b>		<b>456.47</b>	<b>2037.53</b>

The Goose Creek TMDL Planning Area is located within and included in the Chester Creek/East Branch Chester Creek/Ridley Creek PRP Planning Area. However, because Goose Creek has a separate TMDL requirement, this information is also provided separately in Table 13 below.

**Table 13: NLCD 2011 Land Cover within Goose Creek TMDL Planning Area**

TMDL Planning Area	NLCD 2011 Land Cover Classification within Planning Area	Area (acres)	Percent Impervious	Impervious Area (acres)	Pervious Area (acres)
Goose Creek	Developed, Open Space	332.55	19	63.18	269.37
	Developed, Low Intensity	28.73	49	14.08	14.65
	Developed, Medium Intensity	5.66	79	4.47	1.19
	Developed, High Intensity	0.67	100	0.67	0
	Deciduous Forest	154.02	0	0	154.02
	Evergreen Forest	2.65	0	0	2.65
	Mixed Forest	8.35	0	0	8.35
	Shrub/Scrub	35.28	0	0	35.28
	Hay/Pasture	17.35	0	0	17.35
	Woody Wetlands	6.64	0	0	6.64
	Grassland/Herbaceous	1.56	0	0	1.56
	Cultivated Crops	3.78	0	0	3.78
	<b>TOTAL:</b>	<b>597.24</b>		<b>82.40</b>	<b>514.84</b>

“Developed” land cover classifications were then converted to percent impervious coverage based on the NLCD 2011 definitions. The impervious percentages used are as follows:

- Developed, Open Space - 19% impervious
- Developed, Low Intensity - 49% impervious
- Developed, Medium Intensity - 79% impervious
- Developed, High Intensity - 100% impervious

All other land cover classifications were assumed to be 100 percent pervious. The “Developed Land Loading Rates for PA Counties” (Attachment B of the PRP Instructions) for Chester County were then applied for impervious developed and pervious developed land categories. This table is attached as Appendix B.

The existing PRP sediment loading is in Table 14 below. Please refer to Appendix C for supporting calculations. Calculations for phosphorous and nitrogen loading have also been provided, though not required. The recalculated total phosphorous loading for Goose Creek is in Table 15 below.

Using the pollutant removal efficiency rates specified in the PA DEP NPDES Stormwater Discharges from Small MS4s BMP Effectiveness Values Table (Revised 6/2018), BMPs were credited to reduce the existing sediment loading. The existing sediment loading quantified from the Middle Brandywine Creek/Upper Brandywine Creek PRP Planning Area is 193,571.35 lbs/yr. The existing sediment loading quantified from the Chester Creek/East Branch Chester Creek/Ridley Creek PRP Planning Area is 1,064,074.48 lbs/yr. A more detailed breakdown is in the table below. Please refer to Appendix C for supporting calculations.

**Table 14: Existing Sediment Loading for PRP Planning Areas**

PRP Planning Area	Category	Area (ac)	TSS [Sediment] (lbs/yr)
Middle Brandywine Creek/ Upper Brandywine Creek	Impervious, Developed	75.10	113,008.98
	Pervious, Developed	435.19	80,562.37
<b>SUBTOTAL:</b>		<b>510.29</b>	<b>193,571.35</b>
Existing BMP Reduction:			5,803.23
<b>TOTAL:</b>			<b>187,768.12</b>
<b>Required 10% Sediment Reduction</b>			<b>18,776.81</b>
Chester Creek/East Branch Chester Creek/Ridley Creek/Goose Creek	Impervious, Developed	456.47	686,886.93
	Pervious, Developed	2,037.53	377,187.55
<b>SUBTOTAL:</b>		<b>2,494.00</b>	<b>1,064,074.48</b>
Existing BMP Reduction:			30,944.78
<b>TOTAL:</b>			<b>1,033,129.70</b>
<b>Required 10% Sediment Reduction</b>			<b>103,312.97</b>

The existing (recalculated) total phosphorous loading for the Goose Creek TMDL is 305.65 lbs/yr and is provided separately in Table 15 below. Please refer to Appendix C for supporting calculations.

**Table 15: Existing Phosphorous Loading for Goose Creek TMDL Planning Area**

TMDL Planning Area	Category	Area (ac)	TP [Phosphorous] (lbs/yr)
Goose Creek	Impervious, Developed	82.40	120.30
	Pervious, Developed	514.84	185.34
<b>TOTAL:</b>		<b>597.24</b>	<b>305.65</b>
<b>Required Short-Term 5% Phosphorous Reduction</b>			<b>15.28</b>
<b>Required Long-Term 53.9% Phosphorous Reduction</b>			<b>164.75</b>

Thirteen (13) existing BMPs were credited to reduce the existing loading to 187,768.12 lbs/yr for the Middle Brandywine Creek/Upper Brandywine Creek and 1,033,129.70 lbs/yr for the Chester Creek/East Branch Chester Creek/Ridley Creek, which resulted in a required 10 percent reduction of 18,776.81 lbs/yr for the Middle Brandywine Creek/Upper Brandywine Creek and 103,312.97 lbs/yr for the Chester Creek/East Branch Chester Creek/Ridley Creek. Each existing BMP is described below and summarized in Table 16. Please refer to Appendix C for supporting calculations and the Storm Sewershed Map in Appendix E for BMP locations. Individual maps of the existing BMPs and their drainage areas are located in Appendix D.

*Westtown Reserve Dry Extended Detention Basin*

This dry extended detention basin is located at the corner of Pleasant Grove Road and Skiles Boulevard. The basin is associated with Outfall #76. The basin is functioning and is operated and maintained by Westtown Apartments Property Owner, LLC. The total drainage area is 17.27 acres; it provides a total sediment pollutant load reduction of 10,810.08 lbs./yr.



**Figure 3: Overall View of Westtown Reserve Dry Extended Detention Basin**



*Simon and Jude Dry Extended Detention Basin*

This dry extended detention basin is located near the corner of Cavanaugh Court and Chester Road. The basin is associated with Outfall #45. The basin is functioning and is operated and maintained by Archdiocese of Philadelphia. The total drainage area is 6.00 acres; it provides a total sediment pollutant load reduction of 2,440.06 lbs./yr.

**Figure 4: Overall View of Simon and Jude Dry Extended Detention Basin**



*Kolbe Lane Dry Extended Detention Basin*

This dry extended detention basin is located off of Kolbe Lane behind house #1128. The basin is associated with Outfall #161. The basin is functioning and is operated and maintained by John Zabilowicz and Maryann Rock-Zabilowicz. The total drainage area is 12.35 acres; it provides a total sediment pollutant load reduction of 3,231.51 lbs./yr.

**Figure 5: Overall View of Kolbe Lane Dry Extended Detention Basin**



*West Glen Dry Extended Detention Basin*

This dry extended detention basin is located near the corner of Piedmont Road and Dalmally Drive. The basin is associated with Outfall #77. The basin is functioning and is operated and maintained by West Glen Community Association. The total drainage area is 14.93 acres; it provides a total sediment pollutant load reduction of 5,134.29 lbs./yr.

**Figure 6: Overall View of West Glen Dry Extended Detention Basin**



*Kilduff Circle Dry Extended Detention Basin*

This dry extended detention basin is located behind 940 Kilduff Circle. The basin is associated with Outfall #24. The basin is functioning and is operated and maintained by Russell Hatton and Shirley Leclerc. The total drainage area is 35.39 acres; it provides a total sediment pollutant load reduction of 7,548.24 lbs./yr.



**Figure 7: Overall View of Kilduff Circle Dry Extended Detention Basin**



*Arborview Wet Pond*

This wet pond is located near the corner of Wilmington Pike and Pleasant Grove Road. The basin is associated with Outfall #58. The basin is functioning and is operated and maintained by Arborview HOA. The total drainage area is 13.42 acres; it provides a total sediment pollutant load reduction of 2,820.80 lbs./yr.

**Figure 8: Overall View of Arborview Wet Pond**



*Arborview Infiltration Trench*

This filtering practice is located between Hidden Pond Way and West Pleasant Grove Road. The basin is associated with Outfall #58. The basin is functioning and is operated and maintained by Arborview HOA. The total drainage area is 5.32 acres; it provides a total sediment pollutant load reduction of 938.10lbs./yr.

**Figure 9: Overall View of Arborview Infiltration Trench**



*Stetson Middle School Dry Extended Detention Basin*

This dry extended detention basin is located on Stetson Middle School grounds; 1060 Wilmington Pike. The basin is associated with Outfall #20. The basin is functioning and is operated and maintained by West Chester Area School District. The total drainage area is 4.88 acres; it provides a total sediment pollutant load reduction of 1,009.19 lbs./yr.

**Figure 10: Overall View of Stetson Middle School Dry Extended Detention Basin**



**Table 16: Existing BMP Sediment Reduction**

BMP Name	Drainage Area (ac)	TSS [Sediment] Reduction
<b>Chester Creek/East Branch Chester Creek/Ridley Creek</b>		
Westtown Reserve Basin	17.27	10,810.08
Simon and Jude Basin	6.00	2,440.06
Kolbe Lane Basin	12.35	3,231.51
West Glen Basin	14.93	5,134.29
Kilduff Circle Basin	35.39	7,548.24
Thorne Drive Basin	19.86	887.22
Sage Road Basin	20.59	893.38
SUBTOTAL:	126.39	30,944.78
<b>Middle Brandywine Creek/Upper Brandywine Creek</b>		
Arborview Wet Pond	13.42	2,820.80
Arborview Infiltration Trench	5.32	938.10
Stetson Middle School Basin	4.88	1,009.19
Dunvegan Road Basin	9.90	408.68
General Greene Basin B	12.38	534.90
General Greene Basin A	9.76	437.17
SUBTOTAL:	55.66	6,148.84
<b>TOTAL:</b>	<b>182.05</b>	<b>37,093.62</b>

#### 4.5 Proposed Best Management Practices (BMPs)

Proposed BMP locations were identified in coordination with the Township by analyzing the most fiscally responsible solutions that will provide a water quality improvement and real-world benefit, while meeting the mandated pollutant reduction requirements. This analysis was performed in ArcMap 10.6 using aerial imagery, two (2)-foot topographic contours, and hydrologic data. Site visits were conducted to verify project viability and to collect information and measurements of existing BMPs.

Where possible, BMPs that treat a larger drainage area were selected to reduce the number of BMPs to be implemented. Existing BMPs on Township-owned property within the Planning Areas were assessed for retrofit.

Pollutant reductions resulting from the proposed BMPs were quantified using the same methodology described above for existing sediment loading within the drainage area for each BMP, then applying reduction rates. Reductions from new BMPs (infiltration trenches and bioretention swale) were calculated using the efficiency rates specified in the NPDES Stormwater Discharges from Small MS4s BMP Effectiveness Values table (May 2016). Reductions from retrofits of existing BMPs were calculated using the methodology in the “Recommendations of the Expert Panel to Define Removal Rates for Urban Stormwater Retrofit Projects” (revised January 20, 2015). Please refer to Appendix C for supporting calculations.

#### TMDL and PRP Objectives

Westtown Township proposes to meet the entire Goose Creek TMDL total phosphorous reduction requirement of 53.9 percent through an existing BMP, and two (2) basin retrofit

projects within five (5) years of permit approval and approximately 2,150 linear feet of stream restoration (>5 years) for the Goose Creek TMDL Planning Area. The location(s) of the 2,150 linear feet of stream restoration are planned to be installed within a township owned parcel adjacent to the pleasant grove neighborhood.

Because Goose Creek drains to Chester Creek, these BMPs will also satisfy a portion of the ten (10) percent sediment load reduction requirements within the Chester Creek/East Branch Chester Creek/Ridley Creek PRP Planning Area. A stream restoration project along a reach of East Branch Chester Creek, referred to as Pleasant Grove Stream Restoration, will satisfy the remainder of these requirements.

The Township will meet its ten (10) percent sediment load reduction requirements within the Middle Brandywine Creek/Upper Brandywine Creek PRP Planning Area through the implementation of a stream restoration project along Radley Run along with three (3) basin retrofit projects.

Maps of the proposed BMPs and the land cover within their drainage areas are in Appendix D. The BMP locations are also illustrated on the Storm Sewershed/Planning Area Map in Appendix E and the Land Cover Map in Appendix F.

#### *Pollutant Load Reductions through Proposed BMP Implementation*

Phosphorous load reductions achieved through the implementation of the proposed BMPs in the Goose Creek TMDL Planning area are documented in Table 17.

**Table 18: PRP Planning Areas: Sediment Load Reductions from Proposed BMPs**

PRP Planning Area	BMP Name	Drainage Area (ac)	TSS Reduction		
			lbs/yr	% Reduction	% of Required Reduction
Chester Creek/ East Branch Chester Creek/ Ridley Creek (contains Goose Creek TMDL Planning Area)	Tyson Park	41.4	13,595.28	1.32	13.16
	Thorne Drive Basin Retrofit	19.86	4,436.12	0.43	4.29
	Sage Road Basin Retrofit	20.59	4,466.88	0.43	4.32
	Pleasant Grove Stream Restoration	21.36	71,808.00	7.49	74.93
<b>TOTAL:</b>		<b>118.37</b>	<b>94,306.28</b>	<b>5.8</b>	<b>91.28</b>
Middle Brandywine Creek/Upper Brandywine Creek	Crebilly Meadow Conversion	135	22,864.32	13	121.61
	Radley Run Stream Restoration	1.92	11,984.36	6.39	63.95
<b>TOTAL:</b>		<b>33.96</b>	<b>34,848.68</b>	<b>18</b>	<b>185.56</b>

**Table 17: Goose Creek TMDL Planning Area: Total Phosphorous Load Reductions from Proposed BMPs**

Timeline	BMP Name	Drainage Area (ac)	TP Reduction		
			lbs/yr	% Reduction	% of Required Reduction to meet 53.9%
2019-2024	Tyson Park Bioswale (installed 2015)	41.4	17.01	5.57	10.33
	Thorne Drive Basin Retrofit	19.86	1.15	0.38	0.70
	Sage Road Basin Retrofit	20.59	1.17	0.38	0.71
<b>SUB-TOTAL:</b>		<b>97.01</b>	<b>19.33</b>	<b>7.08</b>	<b>13.14</b>
>2024	Stream Restorations (Pleasant Grove & Radley Run)	3,250 LF	142.80	47.83	88.74
	Crebilly Farm Meadow Conversion				
<b>SUB-TOTAL:</b>			<b>142.80</b>	<b>47.83</b>	<b>88.74</b>
<b>TOTAL:</b>		<b>97.01</b>	<b>162.13</b>		<b>99.8</b>

Sediment load reductions achieved through the implementation of the proposed BMPs in each PRP Planning Area are in Table 18 below. Because the Goose Creek TMDL Planning Area is contained within the Chester Creek/ East Branch Chester Creek/ Ridley Creek PRP Planning Area, these BMPs were also counted towards the PRP sediment reduction requirements.

*Detailed BMP Descriptions - Short-Term (2019 - 2024)*

Each of the BMPs proposed to meet short-term objectives are described in more detail below.

*Tyson Park Bioswale (Existing)*

A bioswale was designed and constructed in Tyson Park, a Township-owned park property, in 2015, in anticipation of the TMDL Plan requirements. The drainage area to the bioswale is 41.4 acres. This existing BMP has been properly maintained by the Township as illustrated in the photograph below. The Township has also installed educational signage as a component of the project.

It is being credited as reducing the existing sediment loading for the Chester Creek/East Branch Chester Creek/Ridley Creek PRP Planning Area and towards achieving the long-term total phosphorous reduction of 53.9 percent in the Goose Creek TMDL Planning Area, reducing total phosphorous loading by 17.01 lbs/year (5.57 percent).



**Figure 11: Tyson Park Bioswale and Signage**



#### *Thorne Drive Basin Retrofit*

This existing basin is located in the southwest quadrant of the intersection of Thorne Drive and Little Shiloh Road in the west-central portion of the Township on a Township-owned property. The basin has a drainage area of 19.86 acres. The existing basin is located outside of the Planning Area as the outfall is located to the north in West Goshen Township. Therefore, the drainage area has been added to the Goose Creek TMDL Planning Area and the Chester Creek/East Branch Chester Creek/Ridley Creek PRP Planning Area and accounted for in the existing loading.

The basin is overgrown and has reduced volume capacity. In addition, a defined channel has eroded through it causing the basin to short-circuit. The existing outlet of the basin is an open pipe that is the same elevation as the basin bottom. The basin effectively holds no water during smaller storm events, providing no water quality benefit.

The scope of the proposed retrofit includes removing the trees, vegetation, and sediment accumulation, regrading/removing the defined channel, and installing a new outlet structure to convert the basin to a wet bond Best Management Practice. This project will provide an estimated removal of 4,436.12 lbs/yr of sediment (0.43 percent) within the Chester Creek/East Branch Chester Creek/Ridley Creek PRP Planning Area and an estimated removal of 1.15 lbs/yr of total phosphorous (0.38 percent) within the Goose Creek TMDL Planning Area.

#### *Sage Road Basin Retrofit*

This existing basin is located at the southern end of a cul-de-sac off Sage Road on a Township-owned property. It has been proposed to retrofit this existing basin. The basin has a drainage area of 20.59 acres. Goose Creek is the receiving stream for this area, which lies within the Chester Creek Hydrologic Unit Code (HUC) 12.

The basin is overgrown and has accumulated mounds of sediment in some areas. The scope of the proposed retrofit includes removing trees and shrubs, accumulated sediment, as well as modifying the outlet structure orifice to increase volume treated through infiltration and extended detention. Assumptions for the preliminary calculations included reducing the orifice from 12 inches to 6 inches through the installation of a steel plate and coring 6-inch orifice 2 feet above the basin bottom. This project will provide an estimated removal of 4,466.88 lbs/yr of sediment (0.43 percent) within the Chester Creek/East Branch Chester Creek/Ridley Creek PRP Planning Area and an estimated removal of 1.17 lbs/yr of total phosphorus (0.38 percent) within the Goose Creek TMDL Planning Area.

#### *Radley Run Stream Restoration*

The section of Radley Run proposed for restoration is located on the west side of S. New Street between W. Pleasant Grove Road and W. Street Road on private property. This reach has been identified for restoration based on the presence of bank erosion and the lack of tree removal required. Radley Run is the receiving stream for this area, which lies within the Upper Brandywine Creek Hydrologic Unit Code (HUC) 12.

For the purposes of this plan, it has been assumed that approximately 260 linear feet of restoration along with wetland pockets being formed as part of the restoration. The stream restoration will be completed at a sediment reduction rate of 44.88/lbs/ft/yr. Between the stream restoration and the wetland pockets, this project will provide an estimated removal of 11,984.36 lbs/yr of sediment (6.38 percent) within the Middle Brandywine Creek/Upper Brandywine Creek PRP Planning Area.

#### *Pleasant Grove Stream Restoration*

An approximately 1,600 linear foot section of East Branch Chester Creek is being proposed for floodplain restoration within the Pleasant Grove Development; which includes wetland pockets. This section of East Branch Chester Creek flows through a large, open space property owned by the Township in an easterly direction. Chester Creek is the receiving stream for this area, which lies within the Chester Creek Hydrologic Unit Code (HUC) 12.

A feasibility study was completed in December 2018 by LandStudies, Inc. The recommended length and location of restoration includes two sections of East Branch Chester Creek totaling approximately 1,450 linear feet from Tower Course Road to Blenheim Road and from Blenheim Road to South Concord Road. An additional 150 linear feet of restoration on the tributary from the existing pond is recommended for an overall total restoration length of 1,600 linear feet. The feasibility study indicates that this reach demonstrates an excellent opportunity for floodplain restoration because of the following factors:

- 1) High degree of channel instability and overall need for restoration.
- 2) Adequate amount of available space (width) for use as floodplain exists on-site.
- 3) High potential for significant measurable ecological uplift.



- 4) Limited existing tree cover (mostly all invasive/undesirable); and well-defined tie-in locations (bridges).

The 1,600 linear feet of stream restoration implemented with a sediment reduction rate of 44.88/lbs/ft/yr and the wetland pockets associated with the restoration will yield an estimated removal of 77,408.39 lbs/yr of sediment (7.49 percent) within the Chester Creek PRP Planning Area.

### *Crebilly Farm Meadow Conversion*

Located in the southwest corner of Westtown Township, Crebilly Farm is a historic 300-acre property. The farm has been operated as a working farm tending fields of grain crops. Through the last few years an interest from a real estate developer to develop the land was made public and resulted in public outcry. The property is being purchased by the township via open space funds to prevent the privatized development of the parcel. In turn 206 acres will be utilized as a passive use park.

For the purposes of this plan 135 acres of active grain agriculture will be converted to natural meadow. Meadow TSS loading reduces the converted area from 185.12 lbs/ac/yr to 17 lbs/ac/yr. thus this conversion is expected to contribute an annual reduction of 22,864.32 lbs/yr to the municipalities goal.

### *Detailed BMP Descriptions – Long-Term (> 2024)*

The BMP proposed to meet long-term objectives is described in more detail below.

#### *Stream Restoration (Goose Creek Watershed)*

Approximately 2,100 linear feet of stream restoration is proposed within the Goose Creek watershed to meet long-term TMDL objectives (>5 years). Location(s) of the stream restoration will be determined at a later date, as the next permit term approaches. These project(s) will provide an estimated removal of 96,492 lbs/yr of sediment and 146.20 lbs/yr of total phosphorus (47.83 percent) within the Goose Creek TMDL Planning Area for the long-term reduction.

#### *4.6 Funding Mechanisms*

The funding mechanisms and estimated costs for the implementation of each proposed BMP to be implemented within five (5) years of permit approval are included in Table 19. Note that the 1,700 linear feet of proposed stream restoration to meet the long-term (>5 years) objectives of the Goose Creek TMDL is not included. The costs provided are conceptual, to be utilized for preliminary planning purposes only, and subject to change.

**Table 19: Proposed BMP Funding Mechanisms**

Proposed BMP	Property Owner	Funding Mechanism	Total Estimated Cost (Low)	Total Estimated Cost (High)	Total Estimated Cost (Median)
Tyson Park Bioswale	Westtown Township	Existing BMP	n/a	n/a	n/a
Thorne Drive Basin Retrofit	Westtown Township	Westtown Township	\$146,831	\$220,247	\$183,539
Sage Road Basin Retrofit	Westtown Township	Westtown Township	\$47,625	\$71,438	\$59,532
Crebilly Meadow Conversion	Westtown Township	Open Space Funding			
Pleasant Grove Stream Restoration	Westtown Township	Westtown Township	\$438,811	\$658,217	\$548,514
Radley Run Stream Restoration	Brent & Celeste Celek	Westtown Township	\$79,672	\$119,508	\$99,590
<b>TOTAL:</b>			<b>\$975,361</b>	<b>\$1,463,044</b>	<b>\$1,219,203</b>

\*Estimated Cost includes survey, design, engineering, any anticipated permitting, bid administration, construction inspection, construction, materials, and as-built survey. Thorne Drive Basin Retrofit cost estimate is based on the 2023 costs/rates; all other BMPs developed based on 2019 costs/rates. It does NOT include costs associated with operations and maintenance (O&M).

#### *4.7 Operations and Maintenance*

To ensure the long-term effectiveness of these proposed BMPs, operation and maintenance (O&M) is crucial. Table 20 below outlines the responsible party and the necessary O&M practices required for each proposed BMP (Pennsylvania Stormwater BMP Manual, December 30, 2006).

**Table 20: Proposed BMP O&M Responsibilities**

BMP	Current Owner	Responsible Party for O&M	O&M Responsibilities
Tyson Park Bioswale (Installed in 2015)	Westtown Township	Westtown Township	<ul style="list-style-type: none"> <li>• Inspect at least 2x per year</li> <li>• Pruning, weeding, watering</li> <li>• Re-spread mulch every 2-3 years</li> <li>• Remove sediment buildup</li> <li>• Repair and re-stabilize areas of erosion</li> <li>• Maintain vegetation</li> </ul>
Pleasant Grove Stream Restoration	Westtown Township	Westtown Township	<ul style="list-style-type: none"> <li>• Inspect at least 2x per year</li> <li>• Avoid excess use of fertilizers, pesticides, or other chemicals</li> <li>• Mow surrounding area as appropriate (remove clippings)</li> <li>• Remove invasive species</li> <li>• Remove debris</li> </ul>
Thorne Drive Basin Retrofit	Westtown Township	Westtown Township	<ul style="list-style-type: none"> <li>• Inspect at least 2x per year</li> <li>• Clean inlets at least 2x per year</li> <li>• Maintain vegetation</li> <li>• Remove invasive species</li> <li>• Mow as appropriate (remove clippings)</li> <li>• Remove accumulated sediment</li> </ul>
Sage Road Basin Retrofit	Westtown Township	Westtown Township	<ul style="list-style-type: none"> <li>• Inspect at least 2x per year</li> <li>• Clean inlets at least 2x per year</li> <li>• Maintain vegetation</li> <li>• Remove invasive species</li> <li>• Prohibit vehicular access</li> <li>• Avoid excessive compaction by mowers</li> <li>• Drain-down time &lt; 72 hours</li> <li>• Mow as appropriate (remove clippings)</li> <li>• Remove accumulated sediment</li> </ul>
Radley Run Stream Restoration	Brent & Celeste Celek	Brent & Celeste Celek	<ul style="list-style-type: none"> <li>• Inspect at least 2x per year</li> <li>• Avoid excess use of fertilizers, pesticides, or other chemicals</li> <li>• Mow surrounding area as appropriate (remove clippings)</li> <li>• Remove invasive species</li> <li>• Remove debris</li> </ul>
Crebilly Farm Meadow Conversion	Westtown Township	Westtown Township	<ul style="list-style-type: none"> <li>• Survey Meadows 2x per year for invasive species.</li> <li>• Mow or prescribed burn annually</li> <li>• Administer spot treatment for invasive species.</li> </ul>

**Table 20: Proposed BMP O&M Responsibilities**

BMP	Current Owner	Responsible Party for O&M	O&M Responsibilities
Pleasant Grove Stream Restoration	Westtown Township	Westtown Township	<ul style="list-style-type: none"> <li>• Inspect at least 2x per year</li> <li>• Avoid excess use of fertilizers, pesticides, or other chemicals</li> <li>• Mow surrounding area as appropriate (remove clippings)</li> <li>• Remove invasive species</li> <li>• Remove debris</li> </ul>

## 5.0 Conclusion

The required ten (10) percent sediment reduction for the PRP Planning Areas and the short-term objectives of the Goose Creek TMDL have been demonstrated through the existing bioswale and proposed implementation of two (2) stream restoration projects two (2) basin retrofits, and one (1) meadow conversion . BMPs will be implemented within 5 years of PA DEP approval of this plan. An additional 2,100 linear feet of stream restoration is proposed within the Goose Creek watershed to meet the long-term objectives of the TMDL, which is a total phosphorous reduction of 53.9 percent.

## 6.0 Definitions

**Best Management Practices (BMPs):** Schedules of activities, prohibitions of practices, structural controls (e.g., infiltration trenches), design criteria, maintenance procedures, and other management practices to prevent or reduce pollution to the waters of the Commonwealth. BMPs include Erosion and Sedimentation Control Plans, Post Construction Stormwater Management Plans, MS4 TMDL Plans, Stormwater Management Act Plans, and other treatment requirements, operating procedures and practices to control runoff, spillage or leaks, sludge or waste disposal, drainage from raw material storage, and methods to reduce pollution, to recharge groundwater, to enhance stream base flow and to reduce the threat of flooding and stream bank erosion. [NPDES Stormwater Discharges from Small MS4s General Permit 5/2016 (PAG-13)]

**Municipal Separate Storm Sewer System (MS4):** All separate storm sewers that are defined as “large” or “medium” or “small” municipal separate storm sewer systems pursuant to 40 CFR §§ 122.26(b)(18), or designated as regulated under 40 CFR § 122.26(a)(1)(v). [PAG-13]

**National Pollutant Discharge Elimination System (NPDES):** A permit issued under 25 Pa. Code Chapter 92a (relating to National Pollutant Discharge Elimination System permitting, monitoring and compliance) for the discharge or potential discharge of pollutants from a point source to surface waters. [PAG-13]

**Outfall:** A “Point Source” as defined by 40 CFR § 122.2 is the point where an MS4 discharges stormwater to other surface waters of this Commonwealth. This does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other

conveyances which connect segments of the same stream and are used to convey waters of the Commonwealth (40 CFR § 122.26 (b) (9)). [PAG-13]

**Owner or operator:** The owner or operator of any “facility” or “activity” subject to regulation under the NPDES program. [PAG-13]

**Parsing:** A process in which land area is removed from a Planning Area in order to calculate the actual or target pollutant loads that are applicable to an MS4. [NPDES from Small MS4 PRP Instructions- Attachment A]

**Planning Area:** All of the storm sewersheds that an MS4 must calculate existing loads and plan load reductions for. [NPDES from Small MS4 PRP Instructions]

**Pollutant:** Any contaminant or other alteration of the physical, chemical, biological, or radiological integrity of surface water which causes or has the potential to cause pollution as defined in section 1 of The Clean Streams Law, 35 P.S. § 691.1. [PAG-13]

**Storm Sewershed:** The catchment area that drains into the storm sewer system based on the surface topography in the area served by the storm sewer. (Source: NPDES Stormwater Discharges from Small MS4s General Permit [PAG-13])

**Stormwater:** Runoff from precipitation, snow melt runoff and surface runoff and drainage. “Stormwater” has the same meaning as “Storm Water.” (Source: NPDES Stormwater Discharges from Small MS4s General Permit [PAG-13])

**Urbanized Area (UA):** Land area comprising one or more places (central place(s)) and the adjacent densely settled surrounding area (urban fringe) that together have a residential population of at least 50,000 and an overall population density of at least 1,000 people per square mile, as defined by the United States Bureau of the Census and as determined by the latest available decennial census. The UA outlines the extent of automatically regulated areas. UA maps are available at: <http://www.epa.gov/npdes/stormwater/urbanmaps>, or at: <http://www.epa.gov/enviro/html/em/index.html>. [PAG-13]

DRAFT

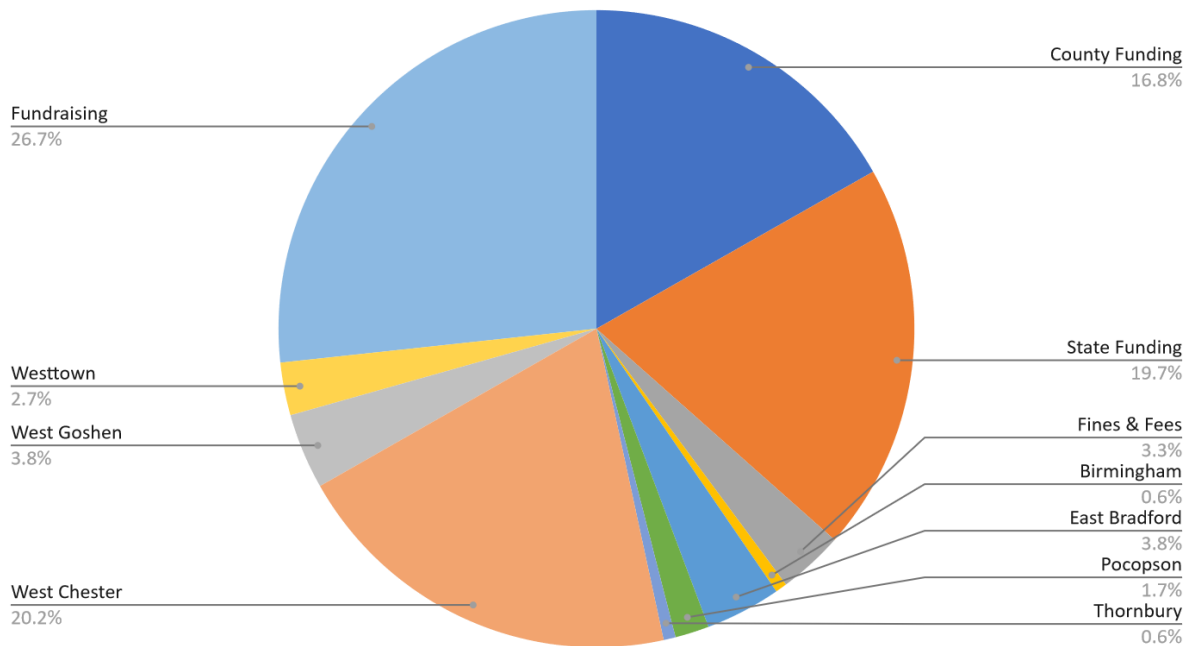
## West Chester Library Funding Request for 2025

West Chester Library has been a cornerstone in this community for over 150 years. While we have changed from an organization that once only housed books, we now provide access to computers, services, programs, and many other resources to meet the needs and wants of our community. We provide access to hotspots and computers to keep people connected both inside and outside the library. From our Library of Things, patrons can check out museum passes and cake pans to enjoy with their family and friends while creating lasting memories. Programs and events are now offered in person and virtually. Lastly, we provide proctoring services for students, a Chess Club for kids, and, on September 26, an evening with Nita Prose, author of *The Maid* and *The Mystery Guest*. As we move forward, we hope to offer new services and programs to engage our community and further promote growth and learning.

However, access to these services and programs would not be possible if the library is not funded to the fullest extent possible by our service area municipalities. We are always grateful for the funding we receive. Still, like all businesses, the changing economy increases our operational costs, requiring us to push every dollar that much farther or adjust by doing less for our community.

Our main revenue sources are the County and State, as shown in the chart below, accounting for 36.5% of revenue. These government entities distribute funds to each library in the Chester County Library System according to our system agreement. In 2023, we received \$87,449 from the County and \$102,707 from the State. Our next largest source of revenue comes from the seven municipalities in our service area, making those allocations vital to the library's operation. Finally, note that the library staff and Board raise close to 30% of the library's revenue through various fundraising efforts.

2023 West Chester Library Revenue



2024 Funding by Municipality in ascending order:

Thornbury: \$3,177

Birmingham: \$4,082

Pocopson: \$9,000

Westtown: \$16,731

East Bradford: \$20,000

West Goshen: \$25,000

West Chester: \$105,000

Total Municipal Funding: \$182,990

2024 Per Capita Rates in ascending order:

Birmingham: \$1.00

Thornbury: \$1.00

West Goshen: \$1.00

Westtown: \$1.50

East Bradford: \$1.94

Pocopson: \$2.02

West Chester: \$5.62

Average Per Capita: \$2.01

2023 West Chester Public Library Cardholders in ascending order:

Pocopson: 175 or 2%

Birmingham: 389 or 4%

Thornbury: 420 or 4%

Westtown: 1,108 or 12%

East Bradford: 1,272 or 13%

West Goshen: 2,484 or 26%

West Chester: 3,733 or 39%

Checkouts at West Chester Public Library by municipality in 2023 by local contributing municipalities not including e-materials in ascending order:

Pocopson: 2,050 or 2.7%

Thornbury: 3,312 or 4.3%

Birmingham: 4,382 or 5.7%

East Bradford: 10,284 or 13.5%

Westtown: 14,136 or 18.5%

West Goshen: 19,374 or 25.4%

West Chester: 22,794 or 29.9%

As the West Chester Public Library grows, we need to do more for our community. Increased funding ensures the continuity of our services and enables us to expand our newer offerings, such as our collection of board games, museum pass offerings, and e-materials. Therefore, West Chester Public Library respectfully requests .25 cents per capita increase for library funding from \$16,731 to \$19,516 for the 2025 budget year, changing the per capita from \$1.50 to \$1.75.



# WESTTOWN FUNDING

2025 Request



# WEST CHESTER LIBRARY STATISTICS

- Population Served: 76,005
- Total 2023 Cardholders: 11,673
- Total 2023 Checkouts: 149,484
- Total 2023 Visits: 76,005
- 2023 Programs: 243 Programs, 4,824 attendees
- Total Collection: Over 47,000 physical materials. This does not include access to databases including the video stream service Kanopy, digital magazines through the Flipster app, or e-materials through the Libby App

# MATERIAL SERVICES

- Books, Magazines, & Newspapers
- E-materials on Libby and Flipster apps
- Video Streaming on Kanopy
- Databases – Ancestry: Library Edition, New York Times, Driver's Education, Mango Languages, etc.
- DVDs, CDs, & Video Games

# PROGRAMMING SERVICES

- Children's Storytimes, including dance classes
- Youth/Teen volunteer opportunities
- Adult lectures on a variety of subjects from local history to author events
- Summer Reading events and programming
- Test Proctoring

# TECHNOLOGY SERVICES

- Computers & Printers
- Hot spots for borrowing
- Outdoor seating to access WiFi when library is opened or closed

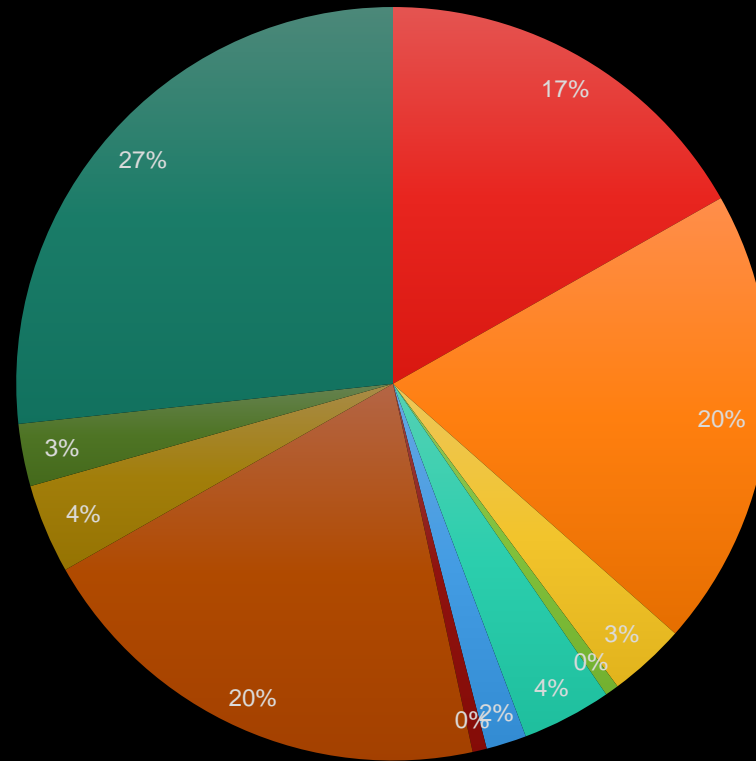
# LIBRARY OF THINGS

- Board games & puzzle exchange
- Museum passes to Elmwood Zoo, Longwood Gardens, and more!
- Specialty cakepans



# WEST CHESTER PUBLIC LIBRARY REVENUE

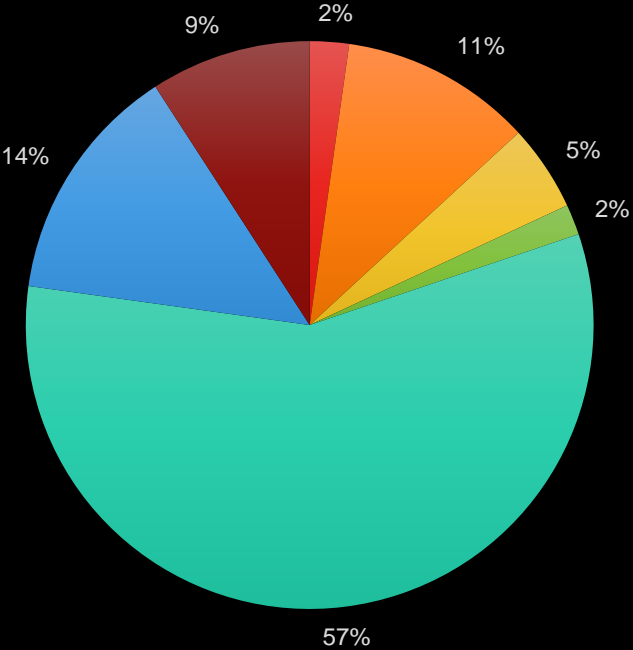
2023 Total Revenue (TOTAL: \$558,310)



- County Funding
- State Funding
- Fines & Fees
- Birmingham
- East Bradford
- Pocopson
- Thornbury
- West Chester
- West Goshen
- Westtown
- Fundraising

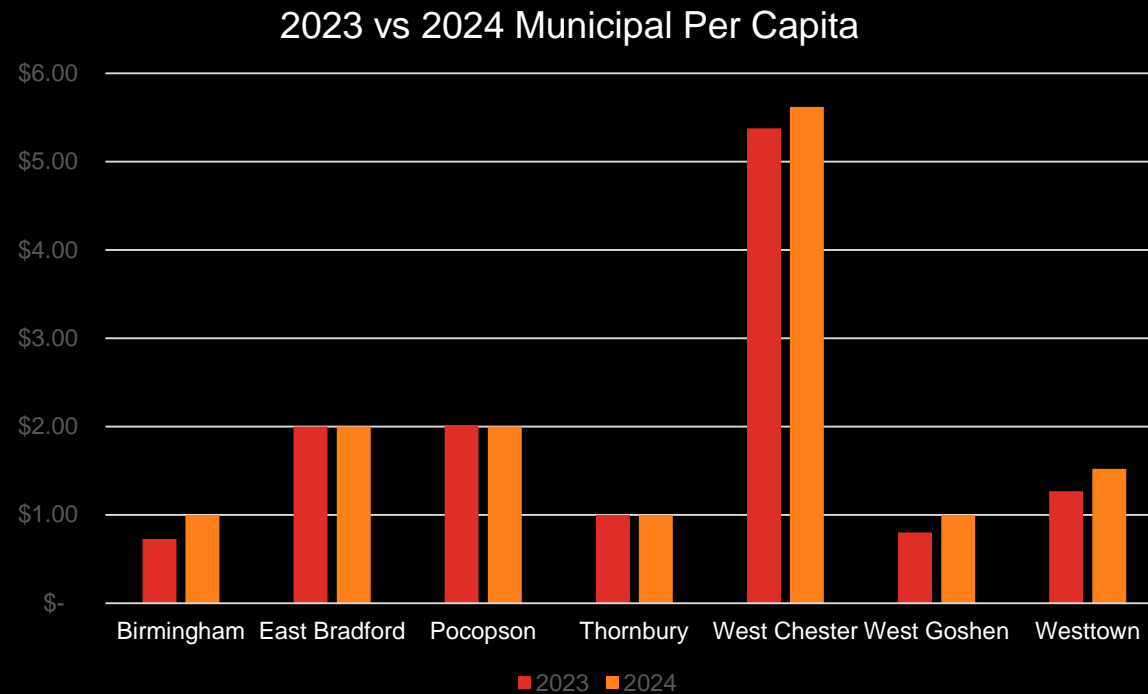
# SERVICE AREA FUNDING

2023 Service Area Funding



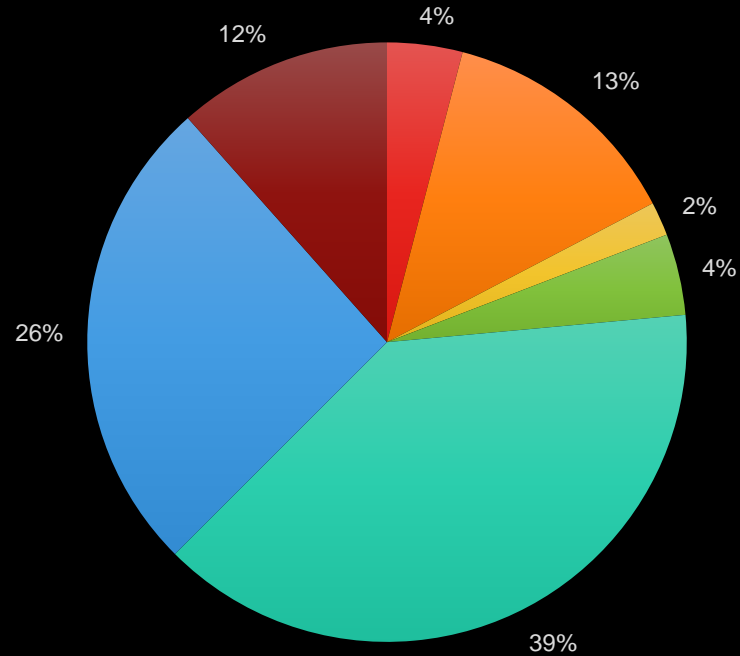
■ Birmingham ■ East Bradford ■ Pocopson ■ Thornbury ■ West Chester ■ West Goshen ■ Westtown

# MUNICIPAL PER CAPITA RATES 2023 vs 2024



# 2023 SERVICE AREA WCPL CARDHOLDERS

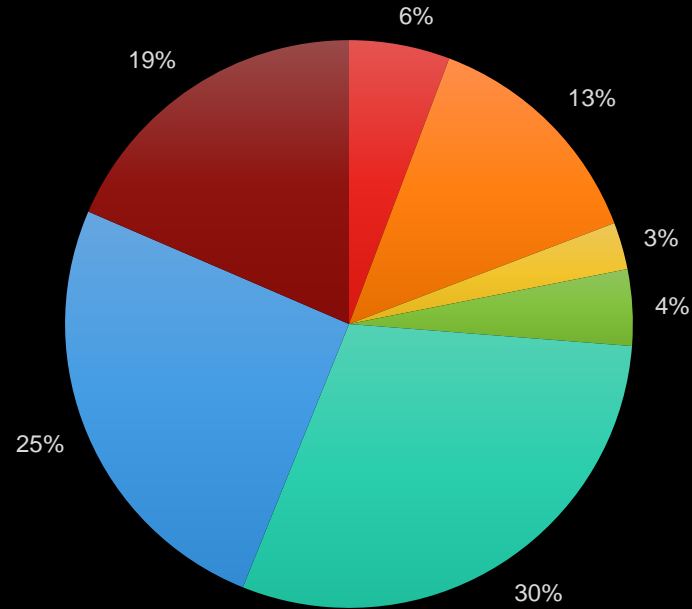
Service Area Card Holders



■ Birmingham ■ East Bradford ■ Pocopson ■ Thornbury ■ West Chester ■ West Goshen ■ Westtown

# 2023 SERVICE AREA CHECKOUTS

Service Area Circulation



■ Birmingham ■ East Bradford ■ Pocopson ■ Thornbury ■ West Chester ■ West Goshen ■ Westtown

# INCREASE REQUEST

- Increase 2025 per capita from \$1.50 to \$1.75 from \$16,731 to \$19,516 representing an increase of \$2,792.



# CONTACT INFORMATION

Maggie Stanton

West Chester Public Library Director

610-696-1721

[mstanton@ccls.org](mailto:mstanton@ccls.org)

[www.wcpubliclibrary.org](http://www.wcpubliclibrary.org)



**GOSHEN FIRE COMPANY**  
**FY 2025 Contribution Request**  
**Westtown Township**  
**September 18, 2024**

## FY 2025 Overview

The Goshen Fire Company has prepared an income and expense forecast for Fiscal Year 2025. This forecast is based on year-to-date performance for FY 2024.

### Notable Items:

- EMS Billing and EMS Subscriptions represent 52% of our budget (\$1,886,910)
- Fundraising and Donations represent 12% of our budget (\$434,579)
- Requested Township contributions represent 30% of our budget (\$1,098,714)
- Operating expenses include annual wage increases for 12 full-time firefighter/EMT's (and part-time staff) and anticipated increases in healthcare and workers comp costs; increasing the Apparatus Replacement Reserve funding from \$256,708 per year to \$276,000

### Notes

1. *The forecast shows Total Budget and includes an estimated breakdown for Fire and EMS income and expenses.*
2. *Fire Police income and expenses are included in the "Fire" portion.*

# BUDGET COMPARISON FY24 VS FY25 WITH FIRE/EMS BREAKDOWN

Income	2024 Budget	2024 Projected	2024 Variance		2025 Budget	Variance to 2024 Budget		Variance to 2024 Projected		2025 Fire	2025 EMS
			To Budget	Variance %		Variance %	Variance %				
EMS Billing Income	\$1,491,610	\$1,457,053	-\$34,557	-2%	\$1,541,710	\$50,100	3%	\$84,657	6%	\$0	\$1,541,710
Fire Billing Income	\$20,000	\$32,626	\$12,626	63%	\$20,000	\$0	0%	-\$12,626	-39%	\$20,000	\$0
Fire Alarm Fees	\$18,000	\$18,500	\$500	3%	\$14,000	-\$4,000	-22%	-\$4,500	-24%	\$14,000	\$0
Fundraising	\$309,000	\$197,277	-\$111,723	-36%	\$303,550	-\$5,450	-2%	\$106,273	54%	\$151,775	\$151,775
Donations	\$139,000	\$122,825	-\$16,175	-12%	\$121,269	-\$17,731	-13%	-\$1,556	-1%	\$80,037	\$41,231
Donations for Services	\$9,393	\$8,859	-\$534	-6%	\$9,760	\$367	4%	\$901	10%	\$6,442	\$3,318
EMS Subscriptions	\$390,572	\$343,364	-\$47,208	-12%	\$345,200	-\$45,372	-12%	\$1,836	1%	\$0	\$345,200
Grants	\$41,600	\$81,556	\$39,956	96%	\$35,000	-\$6,600	-16%	-\$46,556	-57%	\$24,500	\$10,500
Grounds Rental	\$32,000	\$32,210	\$210	1%	\$35,200	\$3,200	10%	\$2,990	9%	\$21,120	\$14,080
Hall Rental	\$13,419	\$10,818	-\$2,601	-19%	\$17,075	\$3,656	27%	\$6,257	58%	\$10,245	\$6,830
Miscellaneous Income	\$2,902	\$13,068	\$10,166	350%	\$10,084	\$7,182	248%	-\$2,983	-23%	\$6,051	\$4,034
<b>Total w/o Township Contributions</b>	<b>\$2,467,496</b>	<b>\$2,318,155</b>	<b>-\$149,341</b>	<b>-6%</b>	<b>\$2,452,848</b>	<b>-\$14,648</b>	<b>-1%</b>	<b>\$134,693</b>	<b>6%</b>	<b>\$334,170</b>	<b>\$2,118,679</b>

Expenses	2024 Budget	2024 Projected	2024 Variance		2025 Budget	Variance to 2024 Budget		Variance to 2024 Projected		2025 Fire	2025 EMS
			To Budget	Variance %		Variance %	Variance %				
Staffing	\$2,572,723	\$2,664,405	\$91,682	4%	\$2,739,614	\$166,891	6%	\$75,208	3%	\$684,903	\$2,054,710
Fleet Operations	\$178,325	\$209,633	\$31,308	18%	\$208,784	\$30,459	17%	-\$849	0%	\$123,182	\$85,601
Operations - EMS	\$83,975	\$55,900	-\$28,075	-33%	\$63,012	-\$20,963	-25%	\$7,112	13%	\$0	\$63,012
Operations - Fire	\$27,741	\$18,974	-\$8,767	-32%	\$14,150	-\$13,591	-49%	-\$4,824	-25%	\$14,150	\$0
Operations - Fire Police	\$7,543	\$6,943	-\$600	-8%	\$7,000	-\$543	-7%	\$57	1%	\$7,000	\$0
Building & Grounds	\$135,339	\$137,480	\$2,141	2%	\$132,184	-\$3,155	-2%	-\$5,295	-4%	\$72,701	\$59,483
Administration	\$164,292	\$136,491	-\$27,801	-17%	\$116,601	-\$47,691	-29%	-\$19,890	-15%	\$39,644	\$76,957
Fire Prevention	\$2,015	\$2,030	\$15	1%	\$2,200	\$185	9%	\$170	8%	\$2,200	\$0
Volunteer Recruiting & Retention	\$48,023	\$48,244	\$221	0%	\$57,034	\$9,011	19%	\$8,790	18%	\$38,783	\$18,251
<b>Total Operating Expenses</b>	<b>\$3,219,976</b>	<b>\$3,280,099</b>	<b>\$60,123</b>	<b>2%</b>	<b>\$3,340,578</b>	<b>\$120,602</b>	<b>4%</b>	<b>\$60,479</b>	<b>2%</b>	<b>\$982,565</b>	<b>\$2,358,013</b>

Capital Reserve Funding - Apparatus	\$256,708	\$256,708	\$0	0%	\$276,000	\$19,292	8%	\$19,292	8%	\$176,640	\$99,360
Capital Reserve Funding - Building	\$6,925	\$6,925	\$0	0%	\$0	-\$6,925	-100%	-\$6,925	-100%	\$0	\$0
General Reserve Replenishment	\$0	\$0	\$0	0%	\$0	\$0	0%	\$0	0%	\$0	\$0

<b>Operating Expense &amp; Reserve Funding</b>	<b>\$3,483,609</b>	<b>\$3,543,732</b>	<b>\$60,123</b>	<b>2%</b>	<b>\$3,616,578</b>	<b>\$132,969</b>	<b>4%</b>	<b>\$72,846</b>	<b>2%</b>	<b>\$1,159,205</b>	<b>\$2,457,373</b>
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<b>Net Revenue</b>	<b>-\$1,016,113</b>	<b>-\$1,225,577</b>	<b>-\$209,464</b>	<b>21%</b>	<b>-\$1,163,730</b>	<b>-\$147,617</b>	<b>-5%</b>	<b>\$61,847</b>	<b>2%</b>	<b>-\$825,035</b>	<b>-\$338,695</b>
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<b>Township Contributions</b>	<b>\$1,016,113</b>	<b>\$1,017,651</b>	<b>\$1,538</b>	<b>0%</b>	<b>\$1,102,519</b>	<b>\$86,406</b>	<b>9%</b>	<b>\$84,868</b>	<b>8%</b>	<b>\$782,788</b>	<b>\$319,730</b>
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<b>Deficit (Pull from General Reserve)</b>	<b>\$0</b>	<b>\$207,926</b>	<b>\$207,926</b>		<b>\$61,211</b>	<b>\$61,211</b>		<b>-\$146,715</b>		<b>\$42,247</b>	<b>\$18,964</b>
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# Municipal Contribution Request

	2024 Funding Formula	2024 Contribution	2025 Funding Formula	2025 Contribution Request	2025 Contribution Increase	2025 Contribution Increase %	Fire	EMS	Actual Share
East Goshen:	47%	476918	48%	\$519,841	\$42,923	9.0%	\$369,087	\$150,754	47%
West Goshen:	36%	314563	32%	\$342,874	\$28,311	9.0%	\$243,440	\$99,433	31%
Westtown:	10%	152208	15%	\$163,624	\$11,416	7.5%	\$116,173	\$47,451	15%
Willistown:	7%	73962	5%	\$76,181	\$2,219	3.0%	\$54,088	\$22,092	7%
<b>Total</b>	100%	1017651		\$1,102,519	\$84,868	8.3%	\$782,788	\$319,730	100%

The following cuts were made to achieve this request:

- Building Capital Reserve Funding (\$120,000)
- Volunteer Firefighter Incentive Program (\$50,000)

Also, we reduced Municipal Contribution Request by approximately 42%. We will have to reduce our General Reserve by \$61K to balance the budget.

# Municipal Contribution “Fair Share” Model

## Based on Assessed Property Valuation & Call Volume

	Assessed Valuation				2023 Fire & EMS Responses						Averaged Basis for Funding Formula
	2022 Assessed Valuation	% Coverage of Township	Assessed Valuation Covered	% of Total	Fire		EMS		Total		
East Goshen	\$1,596,621,120	98%	\$1,564,688,698	47%	283	46%	2204	49%	2487	49%	48%
West Goshen	\$2,212,748,964	40%	\$885,099,586	27%	211	35%	1695	38%	1906	38%	32%
Westtown	\$1,062,514,559	61%	\$648,133,881	20%	75	12%	407	9%	482	9%	15%
Willistown	\$1,408,940,331	16%	\$225,430,453	7%	41	7%	161	4%	202	4%	5%
Total	\$6,280,824,974		\$3,323,352,617	100%	610	100%	4467	100%	5077	100%	100%



# Apparatus Fleet

The Apparatus Reserve Fund is currently \$850K short of target to meet sustainability.

Station 54 (Park Ave)	Purchase Year	Replacement Year
Engine 541	2010	2026
Engine 542	2009	2026
Tower 54	2015	2035
Rescue 54	2009	Retired
Traffic 54	2009	2029
Ambulance 541	2016	2025
Ambulance 542	2014	2026

Station 56 (Boot Rd)	Purchase Year	Replacement Year
Engine 56	2010	2026
Ladder 56	2015	2030
Brush 56	1996	
Ambulance 561	2015	2025
Ambulance 562	2019	2027

Support Vehicles	Purchase Year	Replacement Year
Chief	2022	2032
Deputy Chief	2019	2029
Assistant Chief	2012	2024
Utility 54	2013	2033



# Westtown Township 2025 Budget

Charles Brogan, Interim Executive Director / EMS Chief



## 2024 Mission: Lifeline® EMS Recognition

The American Heart Association proudly recognizes

# Good Fellowship Ambulance & EMS Institute West Chester, Pennsylvania

**Mission: Lifeline®-EMS - GOLD with Target: Heart Attack Honor Roll  
Achievement Award**

The American Heart Association/American Stroke Association recognizes this prehospital provider organization for demonstrating continued success in using the **Mission Lifeline®** program.

Thank you for applying the most up-to-date evidence-based treatment guidelines to improve patient care and outcomes in the community you serve.\*

Nancy Brown  
Chief Executive Officer  
American Heart Association

Joseph C. Wu, MD, PhD, FAHA  
President  
American Heart Association



\*For more information, please visit [Heart.org/MissionLifeline](https://Heart.org/MissionLifeline)

# 2024 Highlights



- Continued evidence-based care
  - Implemented Tranexamic acid (TXA) protocol
  - Multisystem Trauma/Traumatic Shock Hypothermia Prevention initiative
- Delivery of 2 new ambulances
  - 1 fully funded (\$350,000) by an anonymous donor
- Continued leadership development
  - 2 Supervisors completed the 13-week Command & Leadership Academy
  - Promoted 1 Captain and 2 Lieutenants
- Partnered with WCFD to reduce EMS dispatches to low-risk fire calls
- Soon to receive a new Rehab vehicle (purchased and equipped with federal funds)
- Partnered with Haven Behavioral Hospital on several initiatives
  - Implementation of behavioral health patient transport by SUV

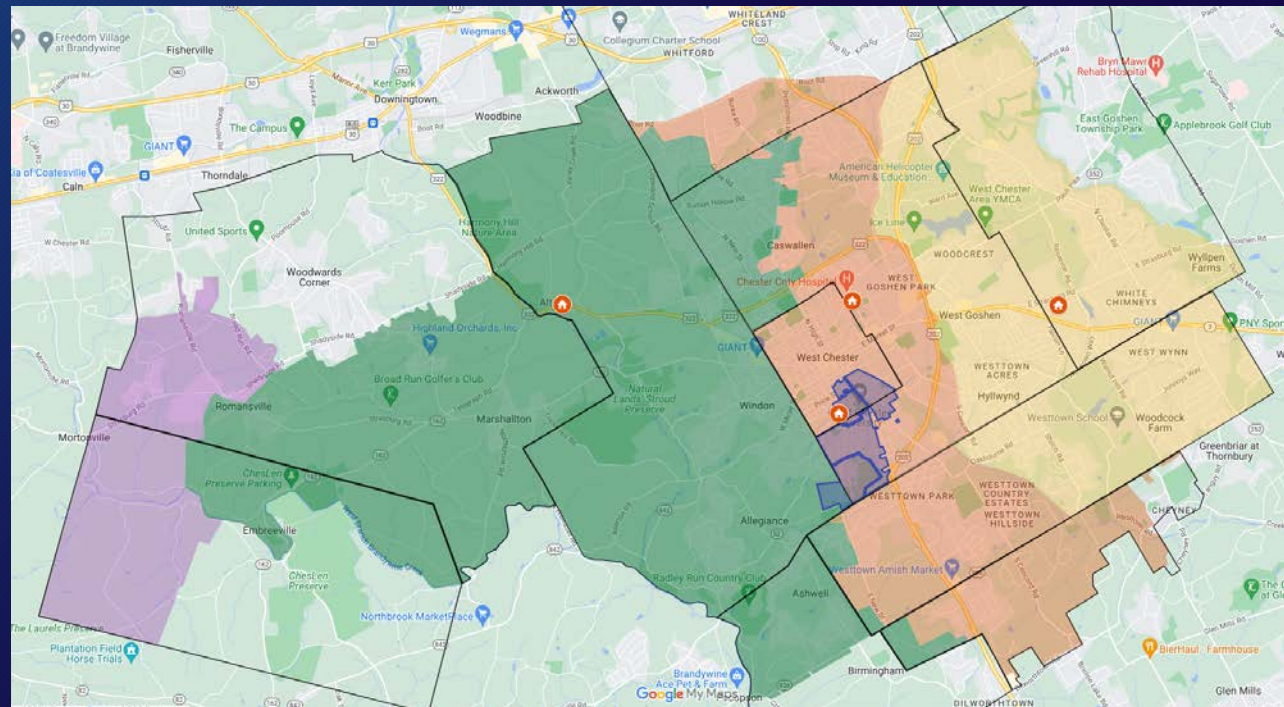


# Service Area



7,500+ Emergency  
Calls in 10 Municipalities:

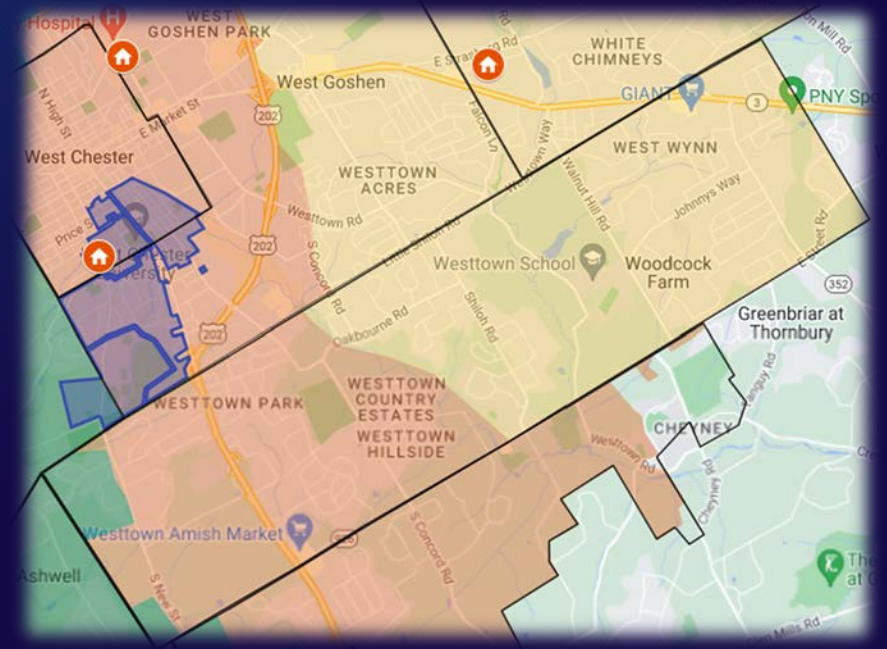
- Birmingham Township
- East Bradford Township
- East Goshen Township
- Newlin Township
- Thornbury Township
- West Chester Borough
- West Bradford Township
- West Goshen Township
- West Whiteland Township
- Westtown Township



# Westtown Service Areas

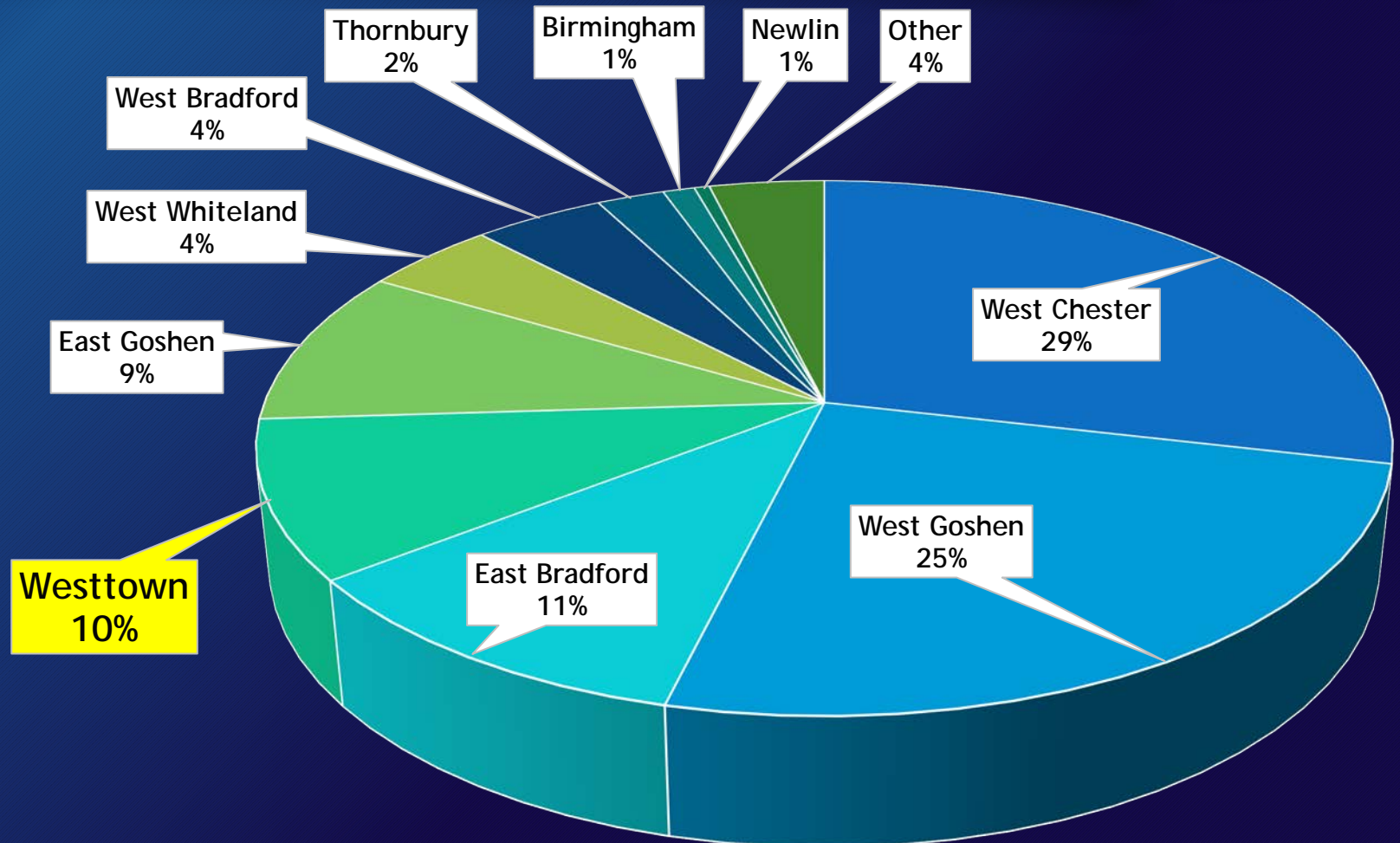


- BLS & ALS:
  - Western side
  - 3.76 Square Miles / 43% of WT
- ALS Only:
  - Eastern side
  - 4.98 Square Miles / 57% of WT
- About 700 Total Calls Annually





# Service Area Call Volume



# 2025 Deficit Breakdown

Projected Revenue: \$3,140,849 (Slowly increasing YOY)

Projected Expense: \$4,217,011 (Quickly increasing YOY)

Operating Deficit: (\$1,076,162)

Average Capital Need: \$357,529

**\$1,433,691 FULL DEFICIT W/ CAPITAL NEEDS**

How do you overcome a 1.43-million-dollar deficit??

Attempt to with municipal funding, donations, grants & training institute revenue. These typically do not cover the full deficit.

Municipal funding need will continue to increase annually

# 2025 Budget



- Working on 2025 draft budget now
- Projecting 11% increase in operating costs
  - Staff salaries
    - Retention / market increases
    - Continual volunteer decline
  - Facilities
  - Vehicle expenses
  - Medical supplies
  - Insurance costs

# BLS & ALS Funding Formula

## BLS & ALS

	Calls	%	Population	%		Calls (50%)	Population (50%)	
Birmingham	84	1.51%	1289	2.08%	Birmingham	\$ 3,773.55	\$ 5,202.17	\$ 8,975.72
East Bradford	942	16.95%	10339	16.71%	East Bradford	\$ 42,317.64	\$ 41,735.46	\$ 84,053.10
Newlin	51	0.92%	379	0.61%	Newlin	\$ 2,291.08	\$ 1,528.76	\$ 3,819.85
Thornbury	148	2.66%	2725	4.41%	Thornbury	\$ 6,648.63	\$ 11,001.98	\$ 17,650.61
West Bradford	327	5.88%	6642	10.74%	West Bradford	\$ 14,689.88	\$ 26,813.05	\$ 41,502.93
West Chester	2185	39.31%	18671	30.18%	West Chester	\$ 98,157.16	\$ 75,369.25	\$ 173,526.42
West Goshen	1019	18.33%	13997	22.62%	West Goshen	\$ 45,776.73	\$ 56,500.90	\$ 102,277.63
West Whiteland	316	5.68%	3024	4.89%	West Whiteland	\$ 14,195.73	\$ 12,206.24	\$ 26,401.96
<b>Westtown</b>	<b>487</b>	<b>8.76%</b>	<b>4799</b>	<b>7.76%</b>	<b>Westtown</b>	<b>\$ 21,877.59</b>	<b>\$ 19,370.18</b>	<b>\$ 41,247.77</b>
	<b>5,559</b>	<b>100%</b>	<b>61,864</b>	<b>100%</b>		<b>\$ 249,728.00</b>	<b>\$ 249,728.00</b>	<b>\$ 499,456.00</b>

## Eastern ALS Area

	Calls	%	Population	%		Calls (50%)	Population (50%)	
East Goshen	592	37.92%	12358	44.52%	East Goshen	\$ 20,278.18	\$ 23,806.13	\$ 44,084.31
West Goshen	777	49.78%	9043	32.58%	West Goshen	\$ 26,615.11	\$ 17,420.73	\$ 44,035.84
<b>Westtown</b>	<b>192</b>	<b>12.30%</b>	<b>6355</b>	<b>22.90%</b>	<b>Westtown</b>	<b>\$ 6,576.71</b>	<b>\$ 12,243.14</b>	<b>\$ 18,819.85</b>
	<b>1,561</b>	<b>100%</b>	<b>27,757</b>	<b>100%</b>		<b>\$ 53,470.00</b>	<b>\$ 53,470.00</b>	<b>\$ 106,940.00</b>

## Western ALS Area

	Calls	%	Population	%		Calls (50%)	Population (50%)	
West Bradford	19	73.08%	1847	80.83%	West Bradford	\$ 755.62	\$ 835.78	\$ 1,591.40
Newlin	7	26.92%	438	19.17%	Newlin	\$ 278.38	\$ 198.22	\$ 476.60
	<b>26</b>	<b>100%</b>	<b>2,285</b>	<b>100%</b>		<b>\$ 1,034.00</b>	<b>\$ 1,034.00</b>	<b>\$ 2,068.00</b>



<b>Birmingham</b>	\$8,975.72
<b>East Bradford</b>	\$84,053.10
<b>East Goshen</b>	\$44,084.31
<b>Newlin</b>	\$4,296.45
<b>Thornbury</b>	\$17,650.61
<b>West Bradford</b>	\$43,094.33
<b>West Chester</b>	\$173,526.42
<b>West Goshen</b>	\$146,313.48
<b>West Whiteland</b>	\$26,401.96
<b>Westtown</b>	\$60,067.62
<b>TOTAL:</b>	<b>\$608,464.00</b>



# 2025 Capital Request



## EMS-Capable ATV



# Purpose



- Emergency Responses:
  - Access to trails / parks / open space
  - Inclement weather / limited access





# Purpose



- Planned Events
  - Allows EMS providers to access patients in crowded areas closed to vehicle traffic and safely transport a patient via stretcher to a waiting ambulance



# 2025 Budget Request



- The total cost of an EMS-capable ATV including upfitting and a trailer is \$46,056
- We have applied for state grant funding to cover the full cost
- Should grant funding not come to fruition, Good Fellowship is requesting that the Board consider splitting the cost evenly with 4 other municipalities:

**Total 2025 capital request: \$9,211**

West Chester Borough | West Goshen Township | East Bradford Township  
Westtown Township | Thornbury Township



# Questions?

