

DAUPHIN COUNTY

WATER RESOURCE ENHANCEMENT PROGRAM (WREP)



TOGETHER, EACH MUNICIPALITY'S STORMWATER COSTS COULD BE CUT IN HALF

Regional stormwater management provides opportunities for streamlined regulations, economies of scale, strategic partnerships, and an overall cost reduction for municipalities (estimated 45-95%). Lowering stormwater management costs enables municipalities to shift municipal revenues and staff time to other services that property owners need most.

Aging stormwater infrastructure, increased flooding and evolving regulatory obligations continue to place an increased burden on municipalities throughout Dauphin County. This has come at a time where the unprecedented COVID-19 pandemic has stalled the economy, impacting property owners and likely reducing municipal tax revenue and stormwater fee revenue for the foreseeable future. Hardships are not new to this region that has weathered Hurricane Agnes and Tropical Storm Lee as well as previous recessions. In each of those instances, resilience was realized in partnering together to weather the storm and develop collaborative solutions to revive and sustain the Harrisburg region.

COUNTY STORMWATER SOLUTIONS

In 2022, Dauphin County is soliciting municipal interest in participating in the new Water Resource Enhancement Program (WREP). Municipalities who sign up will convene the WREP Advisory Committee, who will be responsible for providing input on WREP's service offerings and commensurate annual fee.

This program is meant to enhance, not replicate or replace, stormwater management programs already in place at the municipal level. It is not designed to implement a County stormwater fee on top of any existing municipal stormwater fees.

This program is designed to help meet the varying needs of Dauphin County municipalities by augmenting technical assistance for MS4s and enhancing the level of stormwater service that non-MS4s provide for their residents. Enhanced services will aid in complying with the increased water quality requirements of MS4 permits and will position the County to successfully implement a [Countywide Action Plan](#) that will support our farmers, MS4s, and non-MS4 communities alike. These programs are intended to make real differences with respect to local groundwater and surface water quality, while simultaneously meeting Chesapeake Bay Phase III Watershed Implementation Plan goals.

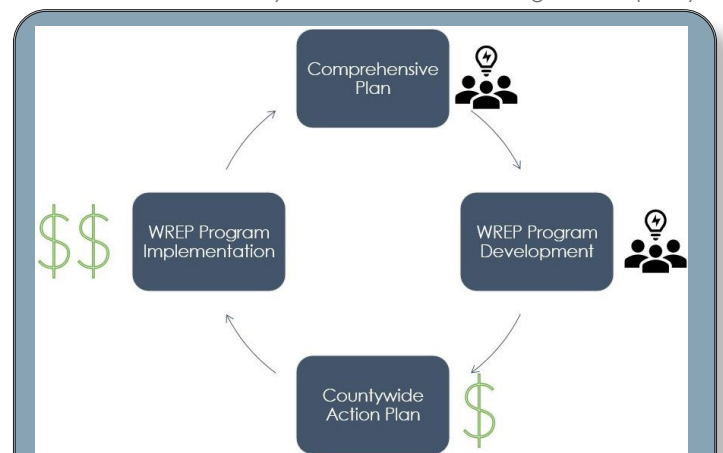
Further, with recognition that localized flooding issues

persist in our communities, watershed-level stormwater management may address persistent flooding, too. Collaboration at the County scale yields cost savings through additional staff assistance, economies of scale, and shifting expenses to later years in the program, while improving stormwater management (runoff quality, runoff quantity, and flood hazard mitigation).

This program is designed to be a flexible, voluntary program for interested municipalities in Dauphin County. This includes both MS4 and non-MS4 municipalities. A menu of service levels will be developed by the WREP Advisory Committee and, periodically, municipalities will be able to select the service of value to them. Savings, though, is reliant on participation, so the more municipalities that participate, the more municipalities will save and the more success realized by the regional approach. While Dauphin County is not regulated to the same MS4 level as its municipalities, we are here to provide support.



Typically, urban runoff carries pollution and garbage into street inlets, which makes its way to streams without being treated (HRG).



The Comprehensive Plan identified water quality as a priority. As WREP was being developed, the Countywide Action Plan (CAP) was created. The CAP results in block grant dollars that we can invest in WREP. Those investments create the opportunity to leverage those dollars even further in WREP.

WHY THIS APPROACH?

Water quality is linked to the unique characteristics of each watershed; however, watershed boundaries and municipal boundaries rarely align. Regulatory programs, like the MS4 Permit program, are administered on a municipal basis. Although they contain a myriad of components, the goal is to fix water quality problems. It makes sense at an administrative level to operate the permit at a municipal level, but it creates friction between meeting the needs of a permit (that includes only the area of the municipality) and meeting the needs of the watershed (that extends beyond the municipal borders). The MS4 permit program does not prohibit municipal cooperation between permittees, which can be achieved through regional leadership and resources. Similarly, many portions of the County are plagued by flooding events.

The purpose of the WREP Program is to provide a central and consistent framework to better facilitate addressing our watershed-scale issues while

simultaneously meeting our regulatory requirements. It allows municipalities to build upon whatever steps they take locally, ensuring that today's data can be used to make tomorrow's decisions. It also allows for the watershed to benefit from all the small steps taken across the individual municipalities, that eventually evolve into shovel-ready projects that are based on consistent, reliable, and well-planned data-driven decisions.

By moving outside of municipal boundaries and addressing flood reduction on a regional level, more holistic solutions can be implemented to achieve more meaningful flood reduction at a reduced cost.

GOALS AND BENEFITS

GOALS	BENEFITS
Cheaper MS4 Permit compliance	More local funding to cover other municipal operational/capital expenses
Enhanced grant funding cooperation	More competitive grant applications and pooled cash matches to increase grant funding levels for the region.
Reduce localized flooding frequency/intensity	Reduce flooding by siting regional water quality BMPs in locations which help solve flooding issues; coordinate efforts between upper and lower watershed municipalities for more effective flood reduction solutions.
Preparedness for next MS4 permit term and other Chesapeake Bay goals for Dauphin County	Lessen the burden of new/expanded requirements and associated costs
Have a better educated public on stormwater issues and opportunities	Create opportunities for community collaboration to lessen stormwater management cost. Increase public's value of stormwater infrastructure. Increased public understanding of stormwater charging mechanisms (fees, taxes).
Provide more resources to farmers to update plans and install BMPs	Increased BMP implementation in County, local water quality improvement (streams and groundwater), reduced cost of regulatory compliance throughout county.
Integrate MS4 and farming water quality goals	Cheaper and better-located BMPs, improved local water quality (streams and groundwater), goal for cost of compliance to be reduced throughout County.
County-wide data integration	Provides a central resource repository that allows for the sharing of data across the County for the shared benefit of permittees, decision makers, and regional planning efforts.



MUNICIPAL SURVEY

In a survey completed in June 2019, 27 of the 40 municipalities responded, including all but one of the municipalities holding an MS4 permit. Based on the input from all the municipalities, **only 1/3 currently cooperate or share in water resource-related activities** including floodplain or stormwater management. However, nearly **90% of respondents identified a need to increase future spending to address stormwater-related needs** and **82% responded that they have interest in participating in a regional approach** to address the costs associated with water resource management through grants, loans, and/or fees.

Based on the positive survey responses, direct outreach meetings were held with the County's municipalities to refine the issues and areas of interest for regional cooperation. During the third outreach meeting, which was held in March 2020, polling software was used to document responses to several key questions about a possible regional approach. Of the municipalities currently charging their residents a fee for stormwater management expenses, all but one of the municipalities felt that regionalized services would provide a clear benefit to their municipality.

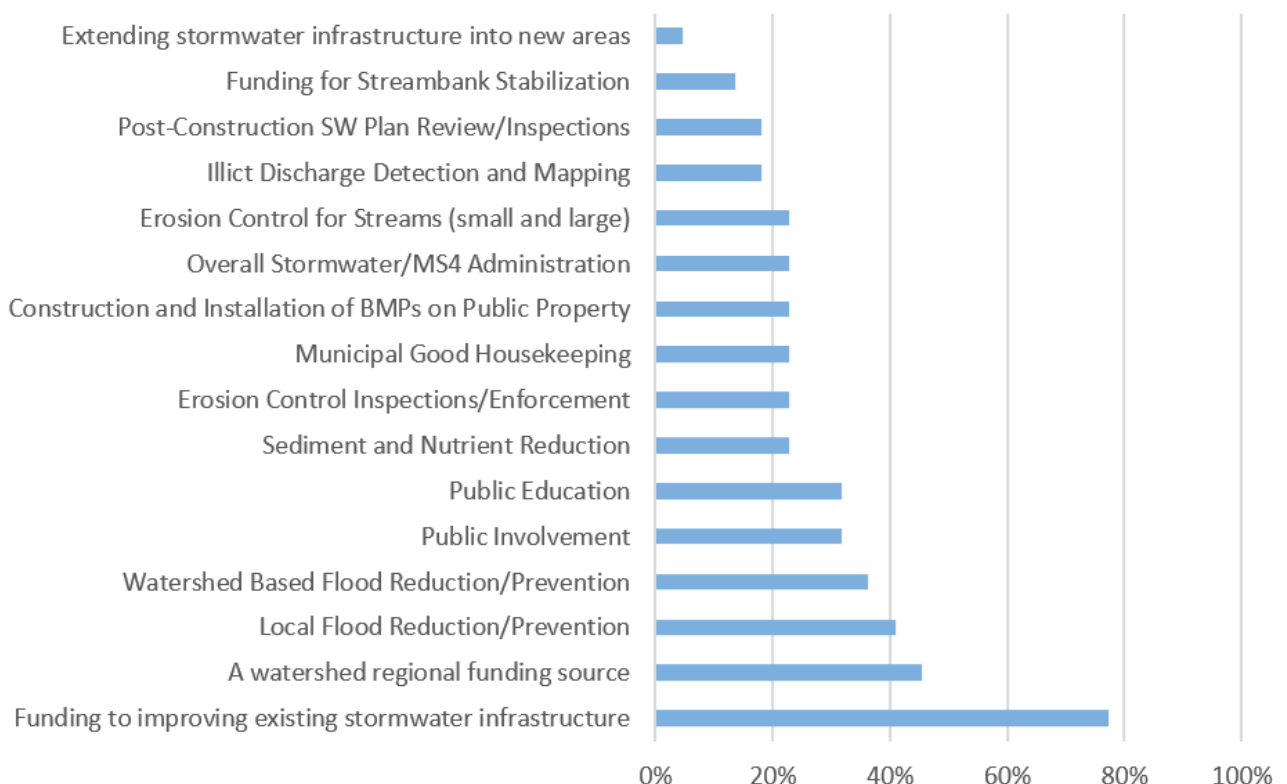


1/3 of municipalities currently cooperate or share in water resource-related activities



90% of respondents identified a need to increase future spending to address stormwater-related needs

In which areas could your municipality use more support for water resources needs or goals?



Photos from left to right

Fisherman in Millersburg area (TCRPC)

Volunteers planting live stakes (baby shrubs) in stream bank of Lynch Run to assist with streambank restoration issues (DCCD, 2018)

Wildwood Lake is fed by Paxton Creek and stormwater runoff from surrounding areas. The lake, park, and nature center are enjoyed by walkers, bikers, birders, picnickers, and fishermen (TCRPC)

THE WREP ADVISORY COMMITTEE

Participating municipalities, the Dauphin County Conservation District, the County Commissioners, and the Dauphin County Planning Commission will designate representatives to serve on the WREP Advisory Committee. The Advisory Committee will provide input to Dauphin County staff, consultants, and consulting engineers on potential service offerings and cost shares as well as the selection of Best Management Projects and Regional Flood Mitigation Projects that could be implemented through the WREP program.

The Advisory Committee will be integral to not only setting the stage for the initial service offerings but also identifying the direction and funding of the program on the long-term. The goal of this program is to be forward-looking regarding MS4 permit preparedness and pre-disaster flood mitigation, while leveraging local buy-in for funding.

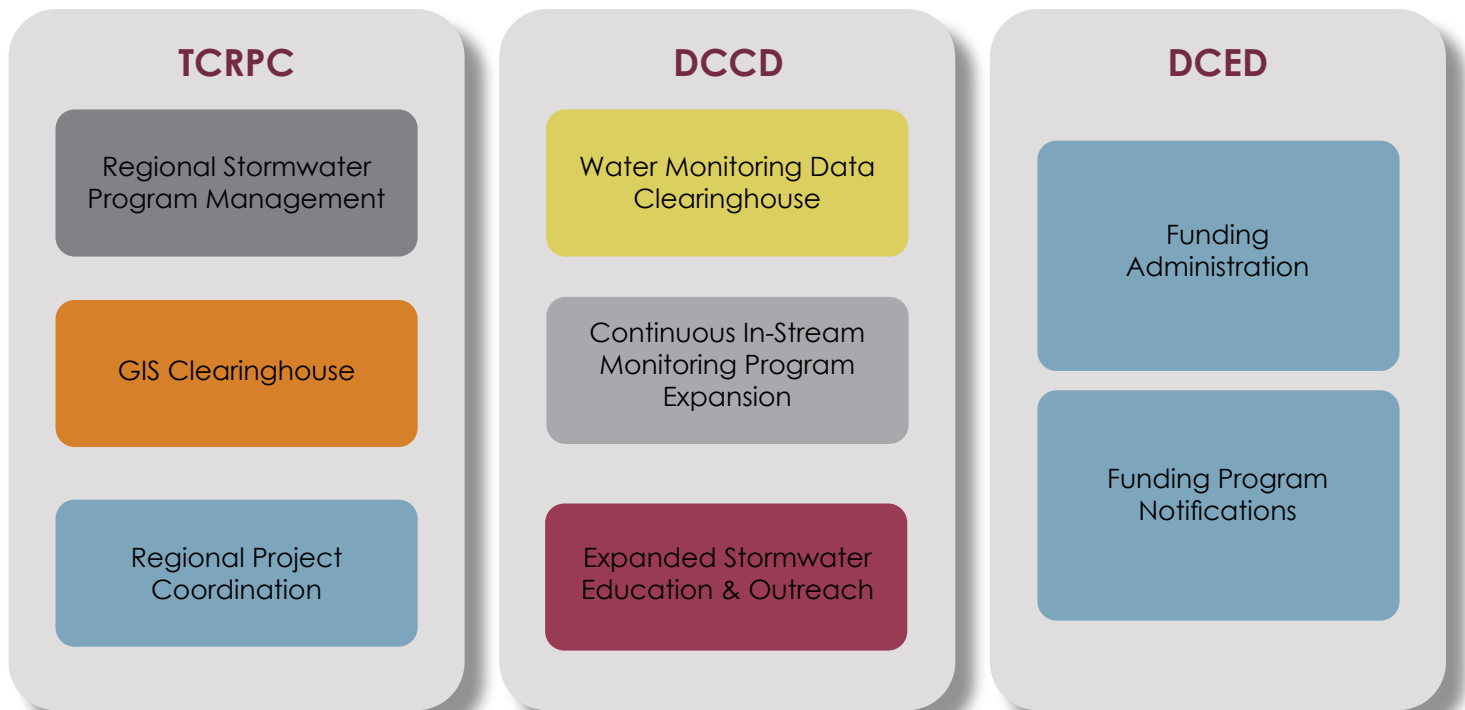


DeHart Reservoir receives stormwater runoff from surrounding forests and Clarks Creek, and it provides potable water for over 60,000 Harrisburg area residents (HRG, 2013).

COUNTY REGIONAL ROLES

Regional stormwater management requires a joint partnership between the County, local government, utilities, and the community. With this program, municipalities would continue to perform local stormwater ordinance enforcement and overall MS4 compliance, including MCM implementation, with additional assistance from the County. The intent is to make it easier for municipal staff to focus more on local issues and less on overall programmatic stormwater needs, which can be addressed through partnerships.

Tri-County Regional Planning Commission (TCRPC), Dauphin County Conservation District (DCCD), and Dauphin County Office of Community and Economic Development (DCED) have roles to play to deliver regional services and make it easier for communities to leverage funding for stormwater issues (see below).



WREP VISION

WREP offers a tier of services that municipalities can help refine and select from for their greatest benefit.

1A

MS4 REQUIREMENT FOCUS

Review MS4 permit requirements remaining for the permit term to see if assistance could be scaled.

Enhanced non-technical public education materials for targeted audiences – include County Communications in the development of the material

1B

PHASE 3 WIP COUNTYWIDE ACTION PLAN IMPLEMENTATION (2021-2025)

Ag partnership expansion

- > Clean water education
- > Nutrient management and conservation planning
- > BMP information collection and cost share/incentives

Wildwood Lake Nutrient Reduction Capacity Study

Swatara Creek Watershed background monitoring – before/after BMP installation

2A

2023 MS4 PERMIT REQUIREMENTS PREPARATION (2022-2023)

Known: no “notice of intent” forms

Unknown: Future pollutant reduction planning goal. The vision is to consider implementation of regional BMPs that will lower the cost to the municipality while also addressing flooding, failed infrastructure, local water quality issues, and urban-rural relationships, as appropriate.

2B

REGIONAL CAPITAL PROJECTS

Clearinghouse for municipal projects to enhance opportunity for bundling, grant applications, etc.

Little Wiconisco Flood Mitigation/Stormwater Park – benefits Upper Paxton Township and Millersburg Borough, flood/recreation park/water quality benefits

Steelton/Swatara Flood Mitigation Project – target FEMA or EPA funding

Elizabethville Borough/Washington Township stream water quality improvement

Wildwood Lake Restoration – flood mitigation, wetland enhancement, recreational enhancement

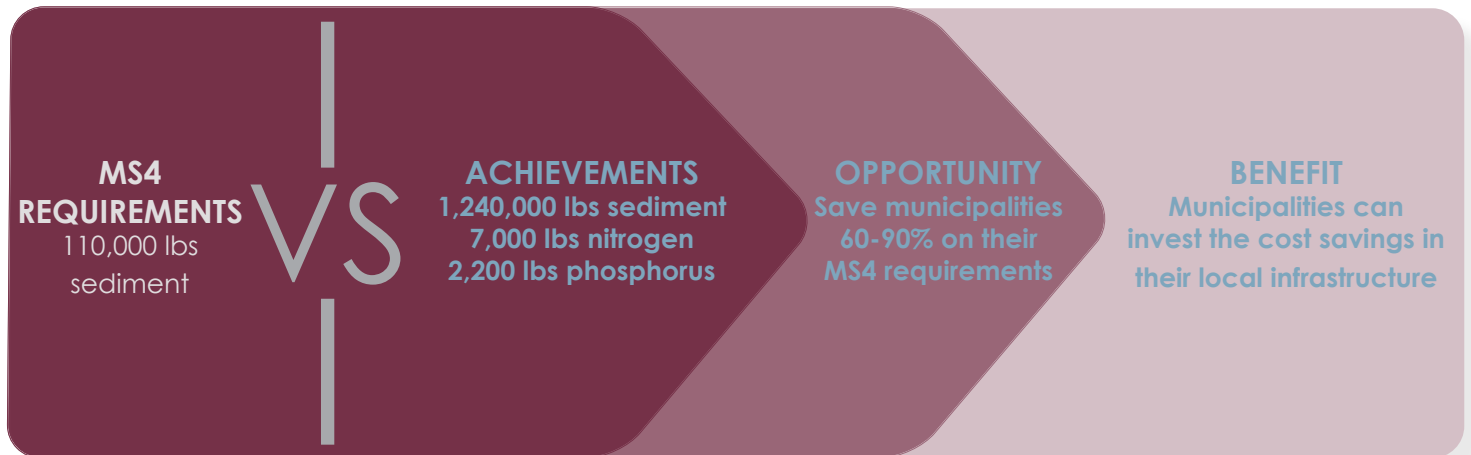
Stream restoration/wetland mitigation bank – dependent on forthcoming PADEP guidelines

US Army Corps of Engineers CAP Program Funding – 10 year timeline

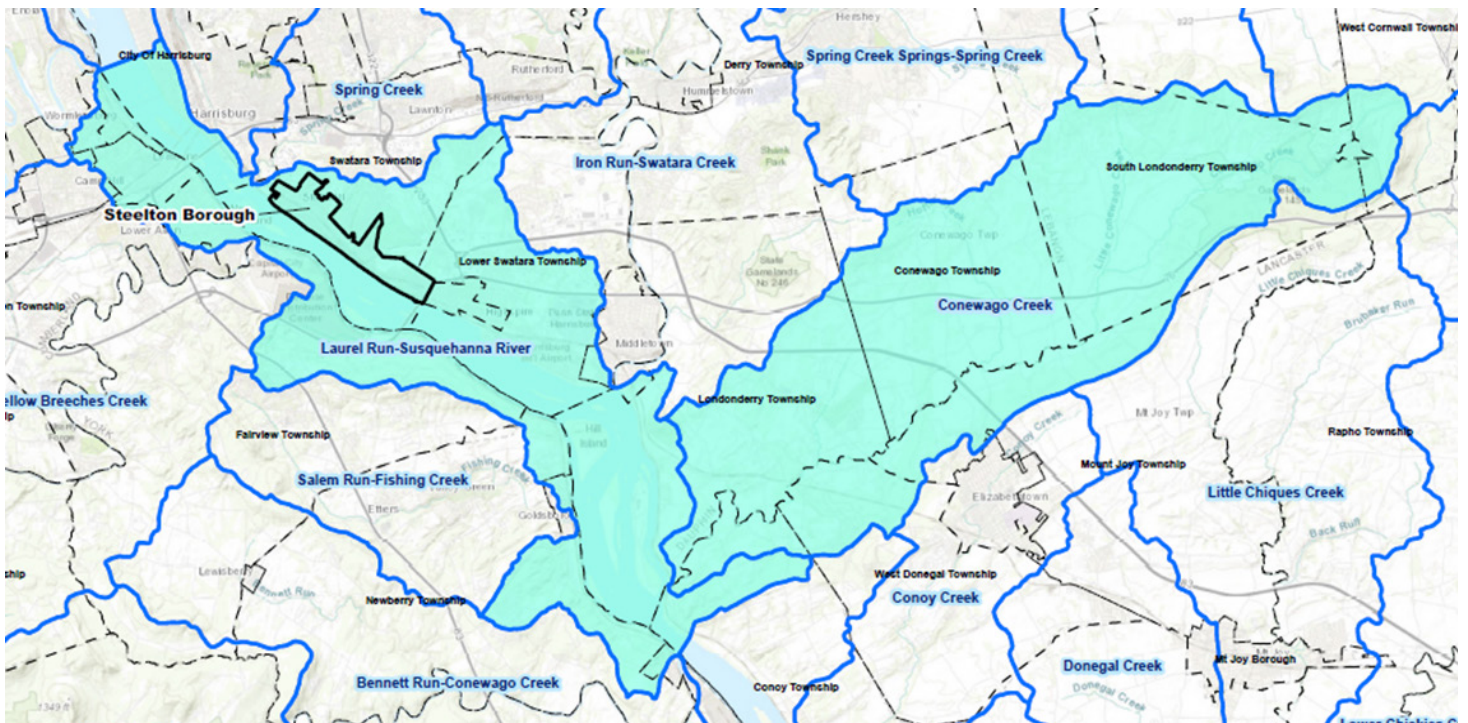
A FLAGSHIP PROJECT

MS4 municipalities have a difficult time meeting their sediment reduction requirements within their boundaries by 2023 (space constraints, cost constraints). To kickoff WREP, a regional project was identified that will be started in 2022 and demonstrate Dauphin County's role in assisting municipalities with stormwater management can result in cost savings and other co-benefits. Londonderry Township has a large-scale stream restoration BMP (Conewago Creek project) that is anticipated to result in more sediment reduction credits than the Township, and its partner Mount Joy Township, need to satisfy their MS4 requirements.

Since the shovel ready project was submitted to Dauphin County for funding and it is an MS4 project that yields significant nitrogen reduction, it was selected to be Project 1 of WREP. Eligible municipalities will be able to buy-in as one lump sum, financed through a DCIB-G loan (anticipated 1.5-1.75% interest rate, 10 year term), or other mutually agreed upon terms.



ELIGIBLE MUNICIPALITIES



Candidate MS4 municipalities who may have interest in participating in WREP in return for sediment reduction credits may include Steelton Borough, Middletown Borough, Lower Swatara Township, Highspire Borough, Swatara Township, and New Cumberland Borough (Cumberland County). Those townships are located in the cyan colored watersheds above.

These two blue watersheds highlight the MS4 municipalities that, according to DEP criteria, are eligible to invest in Project 1 and receive MS4 sediment reduction credit. WREP membership is the mechanism to participate for the eligible Dauphin County MS4s.

RESTORATION AS INFRASTRUCTURE

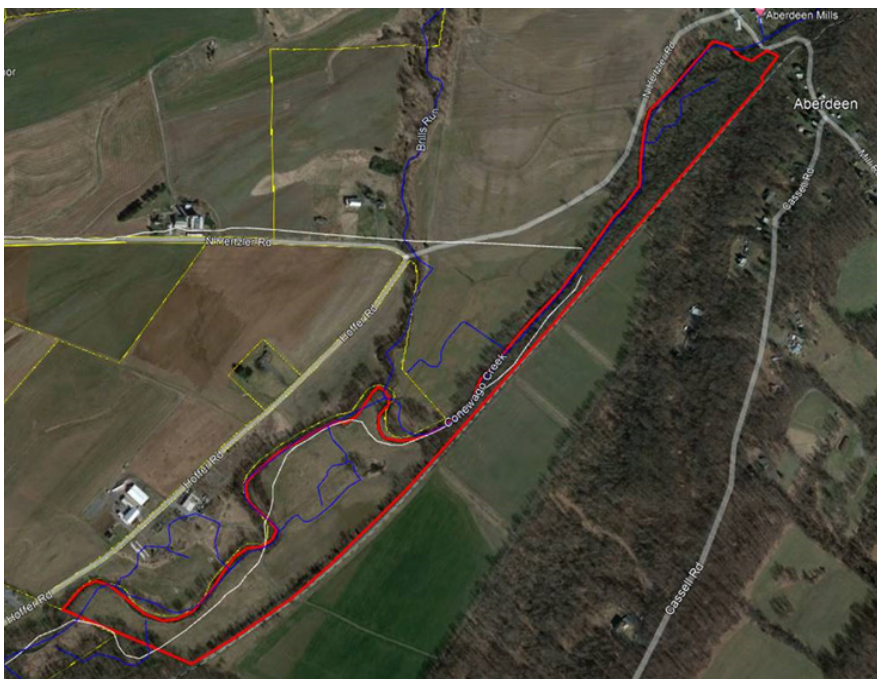


The [Conewago Creek project](#) will be a new, key part of the Londonderry Township's infrastructure. Stream restoration is a way to protect adjacent properties and public infrastructure by reducing stream bank erosion, minimizing the cutting of the stream channel, and restoring natural habitat. Restoring streams to a more natural state allows for the streams more naturally hold floodwaters, reducing their destructive force and allowing for more natural infiltration.

Project Outcomes

- 4,877 linear feet stream restoration
- 125,000 cubic yards of legacy sediment removal
- 2,988 linear feet stream creation credit
- 1,018,000 pounds of sediment reduction
- 15.2 acre floodplain restored

OPPORTUNITY FOR FUTURE REDUCTIONS



Londonderry has budgeted through the WREP program to buy the land found in the red polygon to the right.

This land will host another stream restoration that will lead to future sediment reduction and the removal of additional legacy sediments.

FREQUENTLY ASKED QUESTIONS

1. Does this program add a level of bureaucracy to our existing MS4 program?

No. WREP will help connect efforts under one umbrella, build efficiency into multiple programs, streamline resources, and clarify who are key players in different jurisdictions doing specific work to reach specific goals.

2. What's the long-term benefit other than short-term cost savings?

We have started outreach to eligible communities in the watershed who might have interest in being an investor in Project 1, which we estimate will save municipalities 60-90% on their MS4 requirements. For projects of this scale, we're talking about real dollars. For one Township, we're expecting they'll save \$720,000, which they were planning on funding through their stormwater fee. Now, those dollars will be invested back into the roadway drainage that is critical from a safety standpoint. Another community indicated that they expect to save about \$250,000 of their American Rescue Plan allocation with this approach. Similarly, they'll invest those dollars in another stormwater infrastructure project.

3. How might this program be funded by the County?

The WREP Advisory Committee will determine the long-term funding strategy for the program. Initially, the program will be funded through grants on a regional project by project basis.

4. What is the cost of WREP?

The WREP Advisory Committee will determine the long-term cost of WREP but the initial buy-in during this development phase of the program is \$500. There is no obligation to continue investing in the program if a municipality doesn't see value in the offers that are developed through the WREP Advisory Committee.

5. If my municipality participates in this program, does that mean projects will be completed in my jurisdiction?

Municipal participation in the WREP Advisory Committee will increase the chance of a project occurring directly in their municipality because the local needs will be heard. There is no guarantee of a project occurring in each municipality because of the regional spirit of the program. Projects that advance through WREP will be voted on by each Advisory Committee member resulting in a recommendation to the County Commissioners for consideration.

6. Who is pushing this effort?

This effort was prompted by the outcome of the [Dauphin County Comprehensive Plan](#) and [Countywide Action Plan \(Initiative 1.1\)](#). Tri-County Regional Planning Commission has been leading the initial effort with support from the Commissioners, Conservation District, and Office of Community and Economic Development.

7. Why convene this program before the next round of MS4 requirements is released by PADEP?

Cooperative efforts take time to develop and should be completed before new regulatory requirements are released, so this is the region's opportunity to identify those things that are important but not urgent (flood mitigation, infrastructure upgrades, etc.). Once new MS4 requirements are released, municipal focus will shift again from important goals to the urgent, unfunded regulatory requirements. While Dauphin County expects to continue to receive annual funding from PADEP for water quality improvement projects (nitrogen focus) through 2025, municipalities have an opportunity to identify the next projects that are funded.

8. If we don't join WREP now, but choose to later, how would that work?

While we all await the next round of MS4 permit requirements and deadlines, we can be flexible regarding when communities decide to join WREP. This is the opportunity to join proactively. Once the next round of MS4 requirements is made public, the County may need to set deadlines for joining and be part of the process of defining program contents and costs so that regional planning or implementation efforts can be formalized.