Welcome to the Pequea Creek Watershed



Today's Agenda

7:30 Breakfast and registration

8:00 Welcome

8:10 Power of the Collaborative Network & How That Benefits You

- 5 years of CAP work and looking beyond 2025
 - Progress: Data Dashboard Demo
- Following the Flow of the Pequea: a story of more capacity and why that matters for partner organizations and the network

8:50 Common Agenda Revisions To Ensure Commitment and A Common Voice

10:00 Wrap-up

Results from 2024 Full Partners Meeting

Turf Given Up:



Trust that was built:





Results from 2024 Full Partners Meeting

What do you want the network to provide?



What you are willing to contribute:

- Time & Effort
- Whole hearted engagement on things that make sense to me
- Connection to farmers
- Billable time
- Guidance and expertise in the permitting process

Overview Discussions

Lancaster Clean Water Partners Map

Lancaster

CLEAN WATER PARTNERS

#lancaster-clean-water-partners | permalink

Q Search P Hopkins Molly Hughes Sarah Xenophon Ryan Davis Stephen A. Campbelli Fanok Elizabeth Nellums Kelly Snavely Andrew Malmgren Michael Kyle Jonathan Niles Meltssa Dombrowski Dave Koser Alexandra Kozak Kara Kalupson Mauricio Rosales Zeshan Ismat Zach Johnson-Medland Lamonte Garber Cory Cory Amos Stoltzfus Chris Thompson Jennifer Fetter Tara Hitchens Lindsey Deininger Dave Weldman Adam Stem Jozlyn Grodski Jeb Musser Paula Jastriski Kate Austin Kelly Rosster Todd Umstead Katie Bartling Carly DeanAlexandra Neumann Jim Kauffman Matthew Kofroth Mike LaSala Heather Valudes

Join an Action Team!



Stormwater: 3-4 a year, Lunch-n-Learns, and MS4orum

Communications: 2nd Wednesday 10am Online

Water Quality Monitoring: Quarterly on zoom & in the field

Buffers: 4th Thursday of the month, 4x per year

ALSO - full Partners meetings 2x a year

| Buffer Team | Communications Team | Stormwater Team | Monitoring Team | |
|-------------|---------------------|-----------------|-----------------|--|
| Learn more | Learn more | Learn more | Learn more | |
| 12 | | | 10 | |

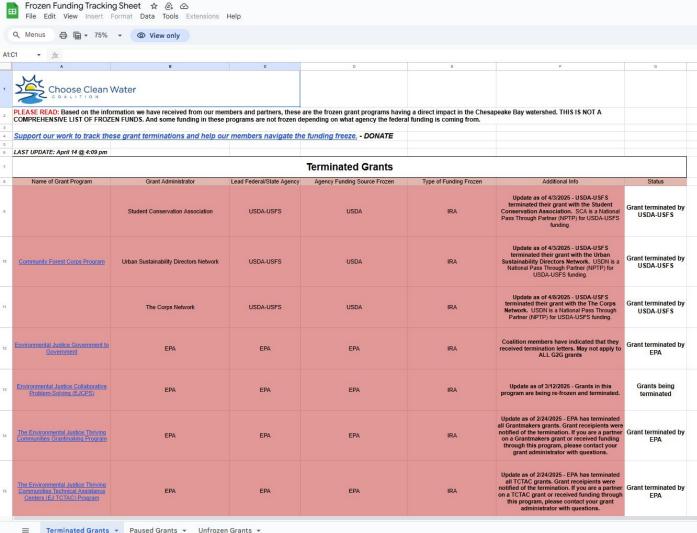
Carpooling Prizes!



Q8. What do you believe are the main causes of pollution in the county's rivers, streams, and lakes? (OPEN ENDED – DO NOT READ CHOICES – CHECK ALL THAT APPLY)

| | | | <u>2021</u> |
|---|-----|-----|-------------|
| 1. Farming runoff/chemicals used in farming fields | 287 | 46% | 44% |
| 2. Traffic/road waste from vehicles | 91 | 15% | 08% |
| 3. Littering | 208 | 34% | 30% |
| 4. Snow/salt removal on roads | 48 | 08% | 03% |
| 5. Climate change/changes in ecosystem | 63 | 10% | 00% |
| 6. Too many people using streams/waterways for recreational usage/fishing/boating | 43 | 07% | 06% |
| 7. Fertilizer and weed killer for lawns and golf courses | 135 | 22% | 08% |
| 8. Not enough natural land remaining in the county | 66 | 11% | 00% |
| 9. Other (See Verbatim Schedule A-3) | 57 | 09% | 06% |
| 10. Not sure (Do Not Read) | 86 | 14% | 13% |
| 11. Refuse | 1 | 00% | 01% |
| | | | |













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ICL BLOG

LEADING IN UNCERTAIN TIMES

by Dianne Russell February 6, 2025



Episode 22 - Funding Freeze

Clean Water Conversations





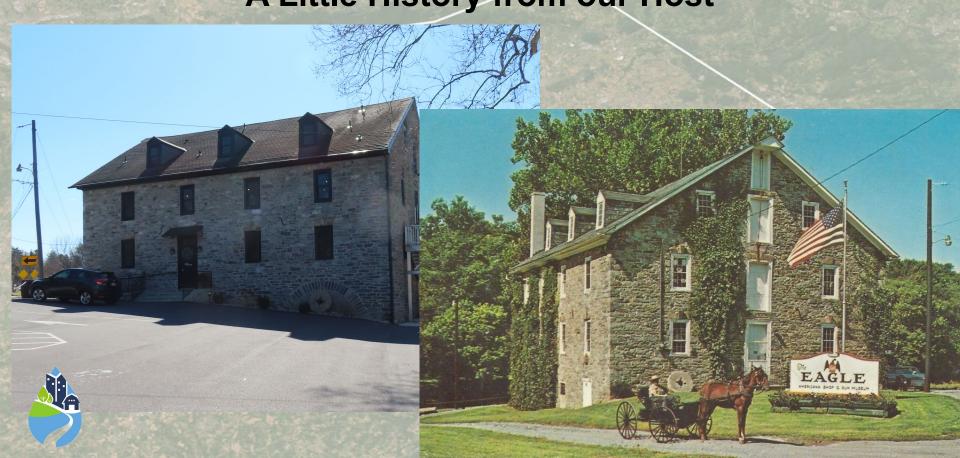


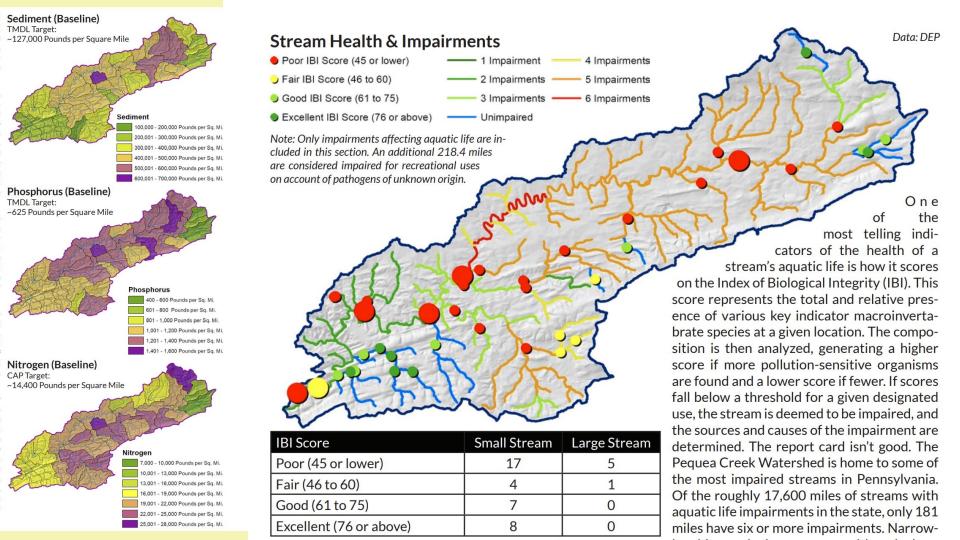


More Info

Share







"Lancaster County has demonstrated tremendous success
through collaboration and strategic, data-driven investments
to clean up their local waters."

- Jill Whitcomb, PA Department of Environmental Protection







Lancaster Countywide Action Plan

A Strategy for Restoring Lancaster's Waterways

2024 Update



How the Collaborative Network & the CAP Benefits You

Process: June 2018 → Current date

Since 2020:

CAP Coordinator

Team of partner organizations contracted - LandStudies, Lancaster Farmland Trust, DMA

Co-led by the Conservation
District and the Lancaster Clean
Water Partners

CAP Implementation

aka Clean Water
Implementation Fund - large
CAP dollars

Financially managed by the Conservation District and the Lancaster Clean Water Partners



How the Collaborative Network & the CAP Benefits You

In 2024

- Reported from Lancaster = 4,025 BMPs
- Total BMPs reported in PA CBWS = 15,430
 - Percentage of BMPs reported from Lancaster = 26.09% of those reported across the Bay watershed part of PA



How the Collaborative Network & the CAP Benefits You

June 2018 → Current date

- Almost \$20 million from DEP
- \$15 million from ACAP plus \$5 million more from 2024 state budget
- Millions from NFWF to many partner organizations
- \$3.4 million from county ARPA
- 2 RCPP awards totalling \$17 million
- ARPs, 319 plans, congressional appropriations, Growing Greener and the WRI
- Private dollars leveraged along with many many others

Congratulations! We want to help set you up for success.

Within this packet, you'll find:

- Basics of Your Agreement
- Callouts of applicable state and federal requirements to note
- **☐** Required documentation
- Invoicing Process
- Required Reporting
- **□** Communications contact and tips

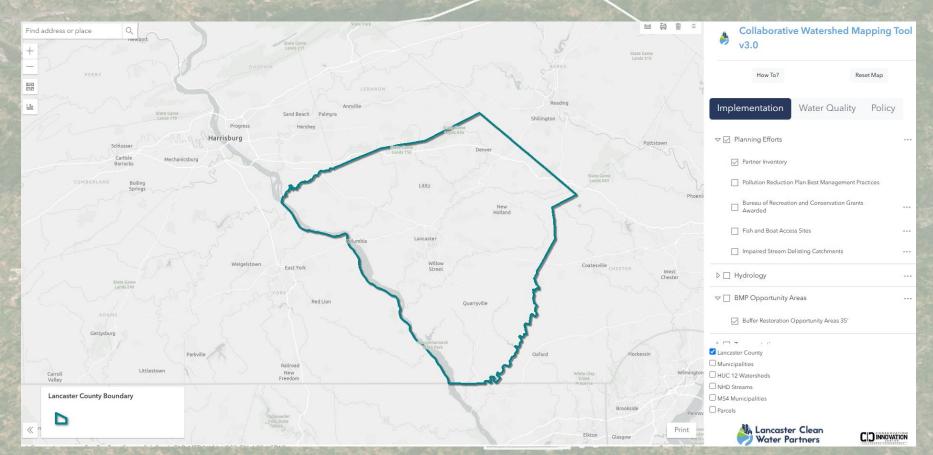








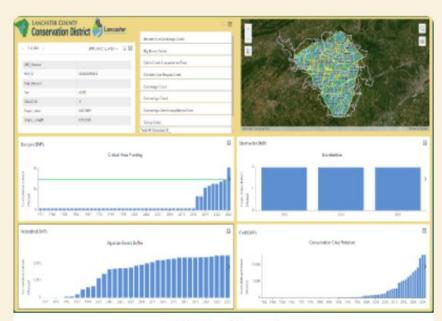
The Power of the Collaborative Network & How It Benefits You



CAP Progress and Future

- CAP 2020 2023
 - 345 BMPs implemented
 - 50+ projects
- CAP 2024
 - 7 stream projects
- CAP 2025
 - 17 projects
 - Largely agricultural

Explore Our Dashboards



BMP Dashboard



Stream Monitoring Experience

BMP Data Dashboard Flow



Step 1

Implementation of BMP(s)



Step 2

Data entry and reporting of BMPs by partner or agency



Step 3

Export & aggregate data by BMP type & HUC12



Step 4

Upload aggregated BMPs into ArcGIS Hub



Step 5

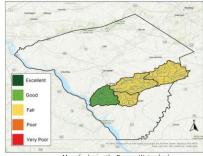
Data are displayed & utilized in dashboard





Overview

Crossing the border between Lancaster and Chester counties, the Pequea watershed spans 154 square miles and contains about 240 miles of stream with 4 distinct sub-watersheds. It is named after a clan of Shawnee Native American tribe who had a village along the creek, with origins of the name meaning "dust" and "ashes." There has been a recent Watershed Implementation Plan (WIP) developed for the Pequea watershed, laying out a plan to restore 25 miles of stream segments impaired for aquatic life use. Agricultural land use (cropland and pastured land)



Pequea Watershed

Map displaying the Pequea Watershed

dominates the Pequea, with forested areas consisting of almost a quarter of the land cover. Most of the streams within the watershed have a designated use of Warm Water Fisheries (WWF), followed by Trout Stocked Fisheries (TSF). There is forward momentum occurring regarding Best Management Practice (BMP) Implementation within the watershed, with multiple stream restoration projects being implemented, as well as conservation practices being employed on farmland.

Pequea Average Watershed Score

The overall watershed score for the entire Pequea watershed is Fair. This score was calculated by averaging the individual final scores across all four Pequea sub-watersheds. In relation to the sub-watersheds, the score of Fair is to be expected as three of the four sub-watersheds had a Fair score overall. The categories with the most potential for improvement include scores within Water Quality and Agriculture & Vegetation. Out of the four sub-watersheds, Climber's Run was the only one to obtain a score that fell within the Good range. Every sub-watershed, however, scored in the Good range for the Urban & Stormwater category.





Watershed

ed report card follows the le that reflects the statuten integrate and inco in into simplified scores t e public.

ese analyses, report cards n watersheds. They can lea ithout the synthesis of m o accelerate management restoration or remedial e rovide accountability and fo storation efforts.

ershed Report Card is to as ariety of indicators to furt vater quality for the comn as the baseline documer ce a Lancaster County W ishing of the first report.

ıg & Data

s were scored by a percenta he gradient to the right. The d report card score. These c om the categories – for exam dicate that action to impro core of Excellent, while mean ax in efforts. The need to mair strategies.

is to some of the data source. There should also be consider bo-watersheds. The different part of this story, as the need ght after. By comparing sub-tersheds, we can identify act data from Lancaster Cous may pass over county a mocaster County data for this

methodology used in this re

HUC 12 Watershed Breakdown

Headwaters of Pequea Creek

Serving as the headwaters of the watershed, this sub-watershed is particularly important at setting the quality of water flowing downstream into the Susquehanna River and ultimately to the Chesapeake Bay. There are about 73 miles of stream within this sub-watershed and overall scored within the Fair range. Scoring categories that fell within the Poor range include Macroinvertebrates and Water Quality, mostly due to the low percentage of stream miles supporting aquatic life due to sedimentation and excess nutrients. Improvements made in the Riparian Zone and Agriculture & Vegetation categories will help to boost those categories in the Poor range.



Eshleman Run

Pequea Watershed

The Eshleman Run sub-watershed consists of about 80 miles of stream feeding into the Pequea Creek. Made up largely of agricultural land, namely cropland, this sub-watershed has large potential for conservation practice implementation. Overall, Eshleman Run scored in the Fair range. This is evident, as half of the scoring categories (Macroinvertebrates, Riparian Zone, and Agriculture & Vegetation) were in the Fair range. Water quality was Poor, mostly due to a low percentage of stream miles supporting aquatic life which is commonly attributed to sediment impairment.

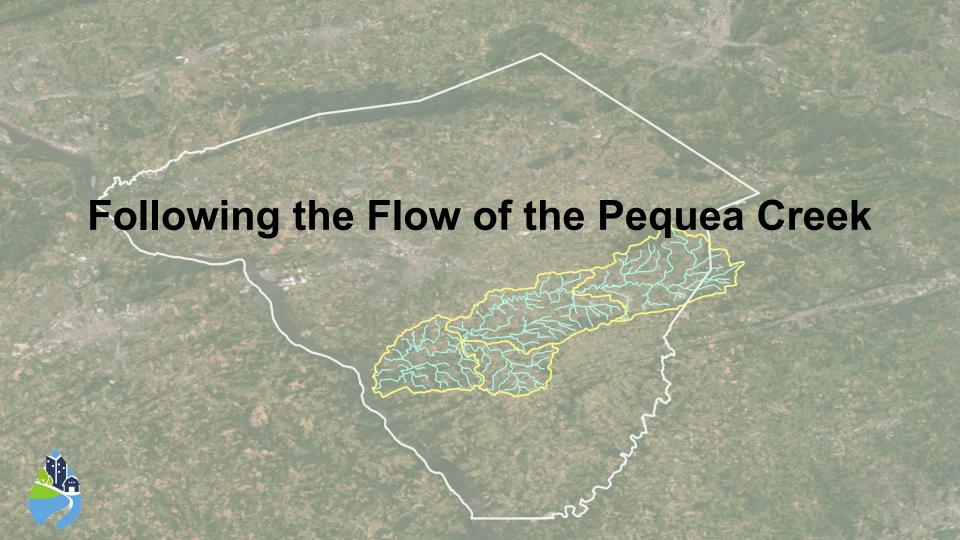
Big Beaver Creek

With about 34 stream miles feeding into the Pequea Creek, the Big Beaver Creek sub--watershed scored within the Fair category overall. None of its waters were found to be supportive of aquatic life, causing a Poor water quality score. There is also a low amount of nutrient management plans reported on agricultural zoned land to help manage waste on those lands. This is particularly important as the majority of land-use within this sub-watershed is labeled as agricultural. The Macroinvertebrate score has room for improvement, however is anticipated to be remedied as water quality improves.



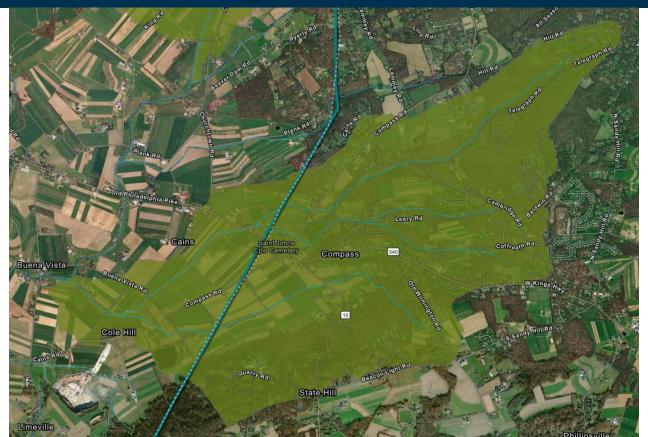
Climber's Run

The Climber's Run sub-watershed, containing about 53 stream miles, is the last sub-watershed along the Pequea Creek before its waters reach the Susquehanna River. This sub-watershed obtained a score of **Good** on average, largely due to the amount of forested areas contributing to the excellent riparian zone and fish scores. It could use some improvements in the water quality, agriculture & vegetation, and macroinvertebrate categories. It's also worth noting that no categories in this sub-watershed scored in the Poor range.











J. Beiler, Indian Spring Run

Glick, White Horse Run



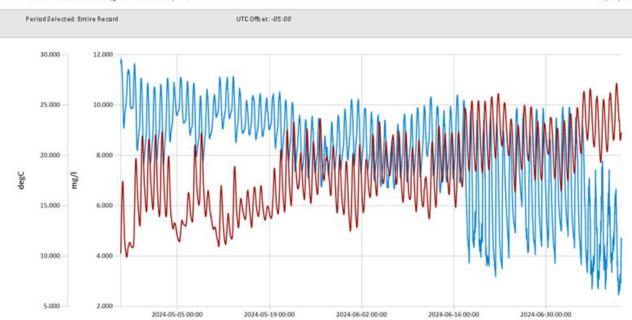
Petersheim, Pequea Creek



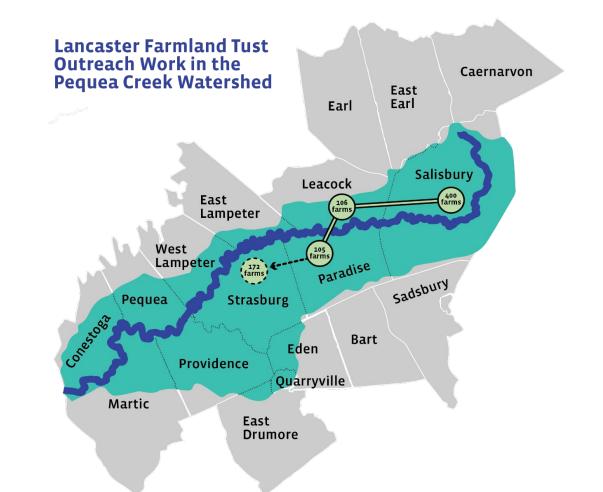


Time Series Data Report Elam Stoltzfus Dissolved Oxygen and Water Temperature

Sep 27, 2024 | 1 of 1



Dissolved Oxygen (mg/l)
 Water Temperature (C)



Barriers to the Implementation of Best Management Practices in the Pequea Creek Watershed

> A Report by Lancaster Farmland Trust





How conservation makes dairy farms more resilient, especially in a lean agricultural economy

Environmental Defense Fund | K-Coe Isom

November 2019

Strengthened Conservation Pathway

Outreach Visits

- LFT Staff completes.
- Results include BMP assessments and early planning committments.
- Annually 100-300 visits

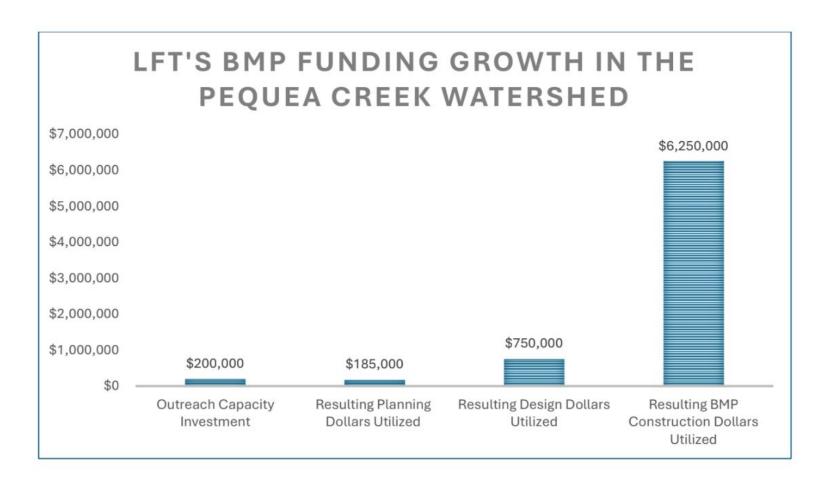
Revisits and/or Concept Planning Meetings

- Completed by TSPs or LFT staff.
- Results include CNMP Lites, funding discussions and more implementation-ready projects.
- Serious project discussions with 45 farms, leading to plans or CNMPs for 37 operations in the Pequea Creek so far.

Design and Construction Phases

- LFT staff apply for and secure funding.
- BMPs implemented.
- Projects moving forward on over 25 farms in the Pequea alone.

Financial Impact of the Capacity Investment in the Pequea Creek Watershed







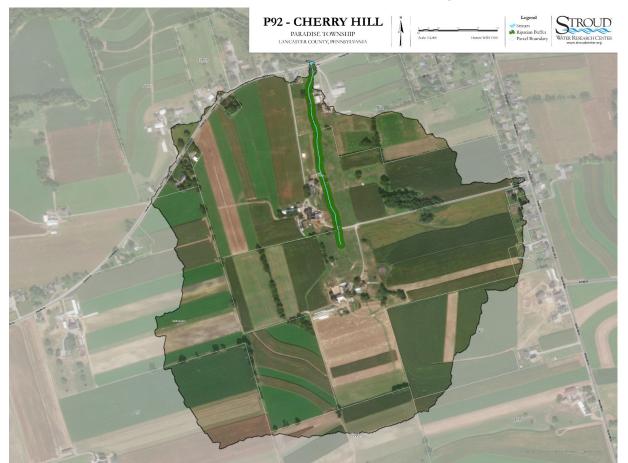
Case Study: The Cherry Hill Research Watershed

Diana Oviedo Vargas, Ph.D. and Lamonte Garber

Technical Leader: TeamAg



Restoration Site: The Cherry Hill Research Watershed

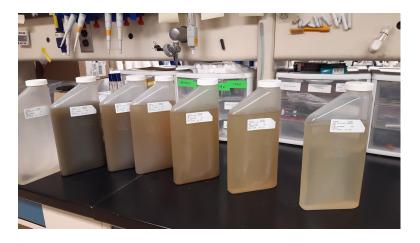


- 225 acres in watershed
 - 4 core farms
 - 3 farms at watershed edge
- Dairy, crops, pasture
 - Dairy farms grow part of the feed on-site
 - Manure as fertilizer
- Owned by Amish farmers
 - Traditional ag practices.
 - Horsepower for operations.
- Representative of much of agricultural practices in SE PA



Water quality monitoring

- Treatment site: two monitoring stations since
 2019 (~biweekly and selected storms)
- Control site: one monitoring station in since 2023 (monthly).
- Water samples:
 - * Salts: Chloride
 - * Nutrients: **Nitrogen, phosphorus,** carbon
 - Suspended sediments
 - Bacterial counts
- Macroinvertebrate Assessment (twice)
- Sensors for water temperature, dissolved oxygen, electric conductivity, and depth.

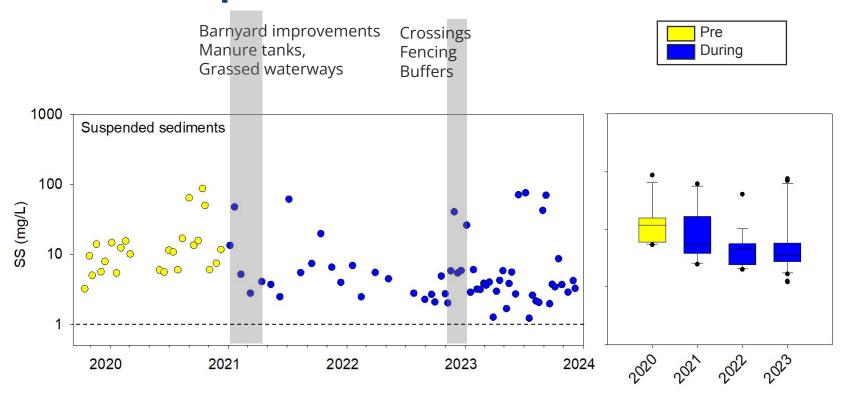






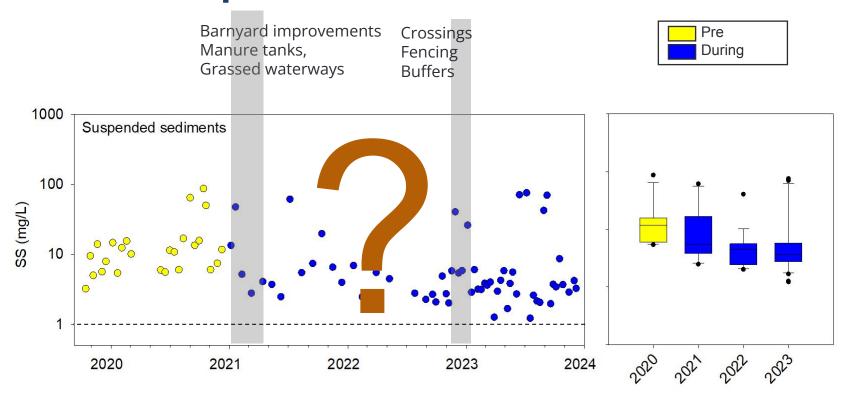
ATER RESEARCH CENTE

Results: Suspended sediments





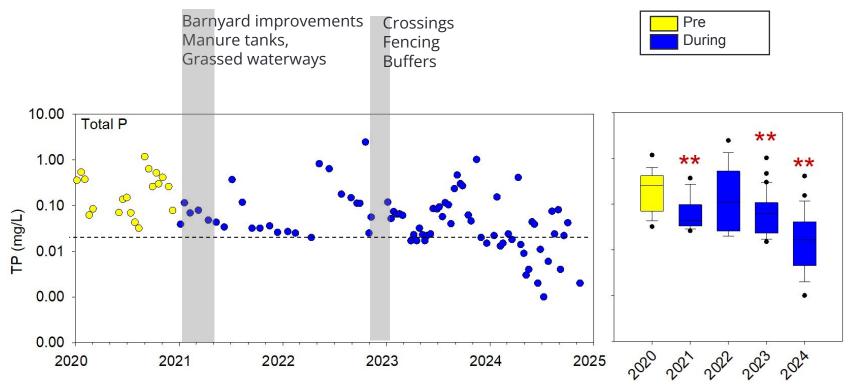
Results: Suspended sediments



Apparent decline but not statistically significant



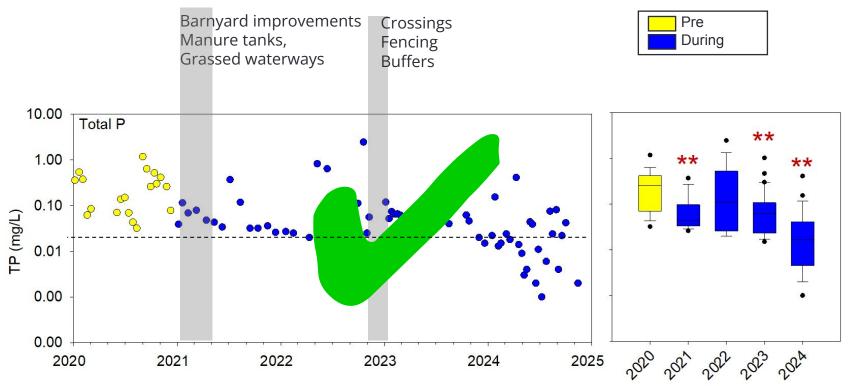
Results: Total phosphorus



Concentrations are 10-100 times lower than pre-restoration!!



Results: Total phosphorus



- Similar pattern for dissolved phosphorus
- Concentrations are 10-100 times lower than pre-restration levels



Results

Significant improvements in macroinvertebrates (necessary

for delisting) will likely take much longer



Entomology team collecting macroinvertebrates at Cherry Hill



Summary

- Phosphorus, and chloride
- Bacterial counts
- Suspended sediments ?
- Nitrogen
- Some of these changes are also observed at the downstream station but not as strong, so far.





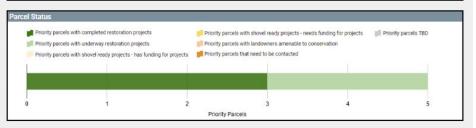
Geography

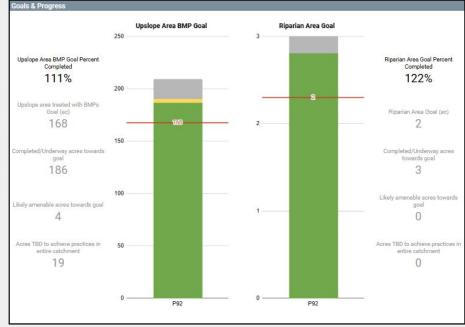
Municipalities

Paradise Twp



Habitat Modification - Other Than Hydromodification - Siltation ; Agriculture - Nutrients ; Agriculture - Organic Enrichment ; Habitat Modification - Other Than Hydromodification - Habitat Alterations ; Agriculture - Siltation













History and Future for the Pequea Creek Watershed Association

- Past Watershed Groups:
 - Paradise Sportsmen Association ⇒ focus on Eshleman/Londonland run
 - Pequea Creek Watershed Association → focus on Big Beaver Creek
- Future: Let's Revive It!
 - Planning Meeting in early July for Partners
 - Kick-Off Public Meeting in September:
 - Brief Project Tour & Ice Cream Social





Lancaster Clean Water Partners | Partners Meeting April 29, 2025



Outcomes for Our Discussion

Welcome & Connecting

Connections, agenda review, brief process check in, defining the Common Agenda and purpose and role of the backbone organization

• Gallery Walk

Add feedback on Values, Mission, Progress Indicators, and Priorities

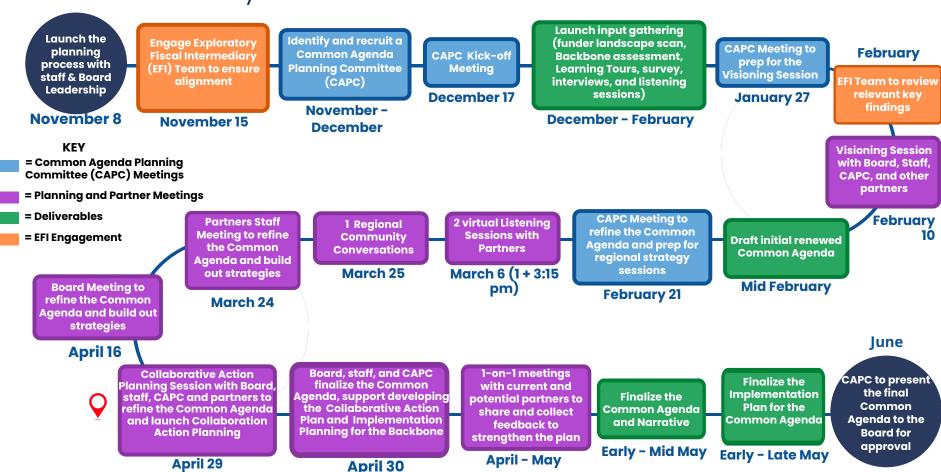
- Strengthening Strategies
 Select a Priority and refine and build out Strategies
- How your commitment shows up Initial brainstorm on leading strategies for implementation, full group discussion about assets, opportunities, and challenges

Closing



Lancaster Clean Water Partners Planning Timeline

November 2024 - May 2025



Clarifying Definitions

Common Agenda

 The Network's shared vision for impact and a joint commitment to advancing toward that vision through aligned priorities, strategies, and collective action. The Common Agenda brings all partners in our Network - local leaders in business, municipal public service, higher education, conservation planning, and non-profit management - together around a unified direction and clear, measurable results.

Implementation Plan for the Common Agenda

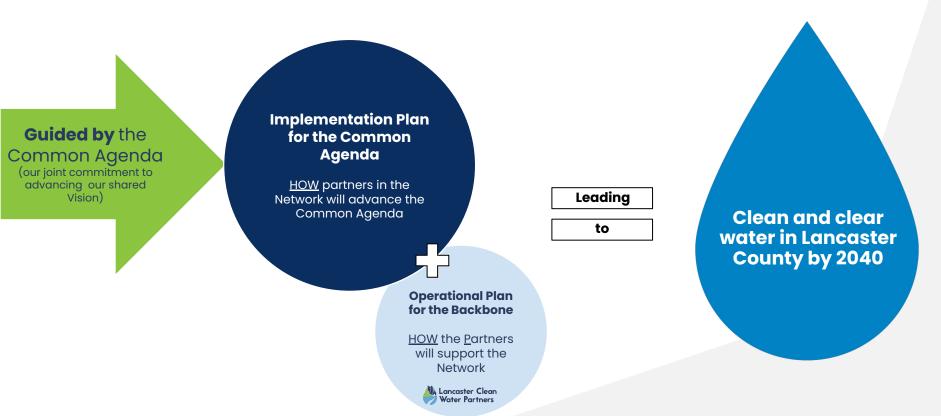
 A co-created roadmap that outlines how partners in the Network will work together to advance the Common Agenda. It details collective actions, aligned activities, and shared measures of progress. This plan is owned and implemented by the full Network of partners, with each contributing according to their strengths, resources, and roles.

Operational Plan for the Backbone

 An internal tool used by the backbone organization to guide and coordinate its specific responsibilities in support of the Implementation Plan for the Common Agenda. It details the backbone's actions, roles, timelines, and resources to ensure that the collective work remains aligned, coordinated, and advancing toward the shared vision outlined in the Common Agenda.



How They Work Together



Who We Heard From

| Key Informant Intervi | ews |
|--|-----|
| Higher Education (Penn State + UPenn) | 2 |
| Lancaster Conservancy | 1 |
| RGS Associates | 1 |
| US Green Building Council | 1 |
| Chesapeake Conservancy | 1 |
| Lancaster County Community Foundation | 1 |
| East Lampeter Township | 1 |
| Environmental Protection's Office of Water Programs | 1 |
| Former House of Representatives | 1 |

| Internal Survey (21 Respondents) | |
|--|----|
| Common Agenda Planning Committee Member | 3 |
| Staff Member | 6 |
| Board Member | 12 |

| Partner Listening Ses | sions |
|------------------------------|-------|
| Total Participants | 14 |

Community Discussion Total Participants 20

65 Total Participants

Key Considerations for Planning

- Partners have built confidence, strength, and momentum for effective cross-sector collaboration. To increase impact, the Network must continue to diversify, expand, deepen partner engagement, cultivate shared leadership, leverage differentiated strengths and share resources and best practices.
- Remain laser-focused on implementation based on a targeted delisting strategy and effective conservation practices.
- Raise the visibility of the Network and the successes of both collaborative efforts and individual partners through consistent, unifying messaging, easy-to-use communication tools, and plug-and-play calls to action.
- Backbone expands role to support increased collaboration and accelerate implementation by raising and distributing sufficient and sustained funding
- Determine what is most important to measure and support partners in data collection and reporting. Create a manageable system for shared measurement that guides decisions-making and supports resource development





DRAFT Common Agenda 2025 - 2030

Vision

Clean and clear water in Lancaster County by 2040

Mission

Collaborate, accelerate, and expand efforts to restore and sustain healthy waterways in Lancaster County.

Values

- Collaboration not duplication: We support and elevate one another to achieve greater impact together than we could alone, combining our unique strengths instead of duplicating efforts.
- Think big be bold: We operate with a bias toward action and innovation, driving results that build momentum for bold solutions and lasting positive change in our communities.
- **Trust**: The partners have confidence in each others' abilities and share a commitment to a community-based approach that fosters accountability and trust.
- Clean and clear water for all: Access to clean water is a fundamental human right. Through collaboration, we amplify diverse voices and work to ensure equitable access for all, particularly for those who have historically been denied it.
- **Transparency**: We communicate how decisions are made and operate with genuine openness and authenticity.
- Responsive Leadership: We are responsive to one another and our communities, adjusting our approach to meet evolving challenges and opportunities.

Our Priorities and Strategies

Strong, Connected, & Mobilized Partners A growing and diverse network of partners collaborating to increase

 Share programs, practices, and lessons learned across the Network to strengthen alignment and accelerate shared progress

impact

- Identify and grow the Network to include a broader range of sectors and individuals with lived experiences
- Expand existing Action Teams to connect and drive greater sector-specific impact
- Engage researchers and subject matter experts

Accelerated Implementation

Increased development and installation of projects that engage communities and improve the health of local streams

- Continue to deploy a Continue to deploy a targeted delisting strategy
- Build implementation and technical assistance expertise from inside and outside languager.
- Remove barriers to landowner participation and provide incentives for investing in clean water projects
- Provide guidance and ongoing support for site-specific implementation of best practices

Collective Advocacy -

Advancement of policy through collective advocacy at the federal, state, and local levels

- Build relationships with regulating agencies to improve efficiencies
- Be a powerful voice for clean water policies

Amplified Communication Enhanced and continuous
storytelling and marketing to
amplify clean water
initiatives, engage partners,
and inspire community
action

- Engage youth voices to elevate their perspectives and share content across social media platforms
- Develop a countywide communications plan and toolkit

Cross-Cutting Strategies (These apply to and advance all of the Priorities)

- Innovate to enable new and scalable solutions
- Enhance shared infrastructure to improve data gathering, analysis and reporting to communicate impact, including BMP

Our Result and Progress Indicators

Result: Clean and Clear Water in Lancaster by 2040

To achieve clean and clear water in Lancaster by 2040, the partners will track the following key population and watershed-level measures:

| 10 doi:10.00 510di 14.00 510di | | | |
|--|--|---|--|
| Water Quality | Land Management | Engagement and Capacity | |
| 20 streams changed from impaired to supporting aquatic life (DEP's Integrated Report)* Positive trends at in-stream monitoring sites: Decreased nutrient and sediment loading Less salt Lower temperature Higher amounts of dissolved oxygen in tributaries Improved macroinvertebrate scores | 90% of farms implementing effective runoff reduction practices (OR with conservation plans) X% of streams buffered Increase in tree canopy X% of land under conservation or agricultural easements Improved stormwater management on developed land to X acres treated by stormwater best management practices | X% of people taking action for clean water (pending baseline per survey) \$100M for the restoration and protection of Lancaster's waterways A connected and growing network of 200+ partners reflecting the diversity of Lancaster County | |



Strategy Workshops - Small Group Discussion:

- Select the priority that you feel most closely aligns with your interest area
- In your small group, refine and build out the set of draft strategies
- Full group report outs



Initial Implementation Planning for the Common Agenda



On your own:

On sticky notes, write down the name of your organization and place them on the Strategies where you think your organization can take a leadership role in implementing the strategy

As a full group:

What assets, opportunities and challenges do you anticipate in implementing the Strategies?

Closing

- Next Steps
 - April 30, 10 am 12:30 pm: Board, Staff and CAPC Meeting
 - Implementation Planning for the Network and Backbone
 - Field Testing
 - Submit the final revised Common Agenda to the Board in June
- Closing reflections
- Acknowledgements



BECOME A PARTNER ORGANIZATION

NOT AN OFFICIAL PARTNER YET?



Click the QR Code or go to LancasterCleanWaterPartners.com/partner-sign-up/

SAVETEDATE

Full Partners Meeting

OCTOBER 28, 2025 8 - 10 AM

> BRICK GABLES 800 E NEWPORT RD LITITZ, PA 17543

