

Collective Action for Clean Water: A Partners & Resources Inventory, Analysis, and Recommended Integrated Funding Delivery Strategy for Lancaster County



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LIST OF ACRONYMS

319	Section 319 Nonpoint Source Pollution Control Program
ACB	Alliance for the Chesapeake Bay
AEC	Agriculture and Environment Center
APRP	Agricultural Planning Reimbursement Program
BEST	Buffer Establishment Support Team
BMPs	Best Management Practices
C&B	Crow & Berry Land Management LLC
C2P2	Community Conservation Partnerships Program
C3RP	Chiques-Conoy-Conewago Regional Partnership
CBF	Chesapeake Bay Foundation
CBIG	Chesapeake Bay Implementation Grants
CBLP	Chesapeake Bay Landscape Professional Certification Program
CBP	Chesapeake Bay Partnership
CBRAP	Chesapeake Bay Regulatory and Accountability Program
CCC	Chiques-Conoy-Conewago
CCWA	Cocalico Creek Watershed Association
CDBG	Community Development Block Grant
CEG	Conservation Excellence Grant
CFA	Commonwealth Financing Authority
CIG	Conservation Innovation Grants
CREP	Conservation Reserve Enhancement Program
CSD	C.S. Davidson, Inc.
CSP	Conservation Stewardship Program
D&G	Dirt & Gravel/Low Volume Road Program
DCED	PA Department of Community and Economic Development
DCNR	PA Department of Conservation and Natural Resources
DEP	PA Department of Environmental Protection
DM/A	David Miller/Associates, Inc.
DTU	Donegal Chapter of Trout Unlimited
E&S	Erosion and Sedimentation Control
EA	Earthbound Artisans
EPA	US Environmental Protection Agency
EQIP	Environmental Quality Incentives Program
ERM	Environmental Resource Management
FA	Financial Assistance
FSA	USDA Farm Service Agency
FSP	Farm Stewardship Program
GG	Growing Greener
HUD	US Department of Housing and Urban Development
INSR	Innovative Sediment and Nutrient Reduction Grants
K10	Keystone 10 Million Trees Partnership
LC	Lancaster Conservancy
LCCD	Lancaster County Conservation District
LCCF	Lancaster County Community Foundation
LCCWC	Lancaster County Clean Water Consortium
LCPD	Lancaster County Planning Department
LCRA	Lancaster County Redevelopment Authority
LCWF	Lancaster Clean Water Fund

LFT	Lancaster Farmland Trust
LSI	LandStudies, Inc.
MPO	Metropolitan Planning Organization
MS4	Municipal Separate Storm Sewer System
NFWF	National Fish and Wildlife Foundation
NRCS	USDA Natural Resources Conservation Service
OWA	Octoraro Watershed Association
PACD	PA Association of Conservation Districts
PASA	PASA Sustainable Agriculture
PENNDOT	PA Department of Transportation
PENNVEST	PA Infrastructure Investment Authority
PFBC	PA Fish & Boat Commission
PFW	Partners for Fish and Wildlife Program
PL-566	Watershed Protection and Flood Prevention Program
PSU	Pennsylvania State University
RC&D	Resource Conservation and Development Council
RCPP	Regional Conservation Partnership Program
REAP	Resource Enhancement and Protection Program
RFP	Request for Proposals
SCC	State Conservation Commission
SGTP	Smart Growth Transportation Program
SWG	Small Watershed Grants
TA	Technical Assistance
THCWP	Turkey Hill Clean Water Partnership
TCCCA	Tri-County Conewago Creek Association
USDA	US Department of Agriculture
USFWS	US Fish & Wildlife Service
WIP	Watershed Implementation Plan
WRE	Wetland Reserve Easement Program
WSI	Water Science Institute

EXECUTIVE SUMMARY

The Lancaster Clean Water Partners (Partners) is a countywide, collaborative partnership of diverse partner organizations – local leaders in business, municipal public service, higher education, conservation planning, and non-profit management – that come together with shared vision of clean and clear local streams by 2040.

Cross-sector collaboration is essential to achieving this goal. The Partners believe that an organized, collaborative effort with a bias toward action is the best way to move the needle and make a lasting, positive impact on Lancaster County. Among the baseline activities necessary for these action-oriented collaborative efforts is a comprehensive understanding of the many partners working successfully on clean water across the county and the resources and expertise that are available from and for these partners.

Through support from the National Fish and Wildlife Foundation, the Penn State Agriculture and Environment Center (AEC) has undertaken an inventory and assessment of existing partners and resources available to implement conservation practices in Lancaster County. The inventory concentrated on those partners and funding resources necessary to implement conservation practices on the ground, considering a continuum of services from outreach-to-technical assistance (TA)-to-implementation assistance. Conservation practices were organized by practice type (agricultural best management practices (BMPs), stormwater BMPs, riparian buffers, and restoration practices). A total of 36 partners were inventoried from federal, state and county and local government, academia, and the non-profit and private sectors. A total of 49 funding sources, many provided by these partners, were also inventoried across government, county, nonprofit and foundations, and private sectors. Summaries of each partner and funding source are provided.

Partners and resources were analyzed and organized by critical categories, including conservation practice type and services funded, funding source or sector, funding sources requiring matching funds, and available resources by watershed. Summary charts and graphics showing the partners and resources by critical categories are provided.

Our analysis found that, given the plethora of partners and resources available in Lancaster County, it is critical to develop and deploy a strategy that integrates partners and funding to take full advantage of specific and collective strengths and identify and address weaknesses, thus enhancing the delivery of conservation on the ground. The following recommendations are provided to achieve ***integrated funding delivery*** for maximum collective impact:

1. Strategically match and leverage different funding sources to stretch limited dollars for maximum impact.
2. Recognize the importance of maintaining and growing a diversity of funding sources.
3. Determine and utilize core funding sources for specific conservation practice types.
4. Use flexible funding sources to gap-fill and match.
5. Use a strategic mix of partner skills and funding resources to maximize outreach and TA capacity and deliver the dollars for implementation.
6. Develop and deploy customized strategies that work best for specific watersheds and communities.
7. Seek to develop common standards and approaches to funding conservation across all partners and, to the extent possible, programs.
8. Centralize administration and coordination of funding to streamline integrated funding delivery processes for all.

SECTION 1: PROJECT OVERVIEW

The Lancaster Clean Water Partners

Formed in 2017, the Lancaster Clean Water Partners (Partners) is a countywide, collaborative partnership of diverse partner organizations – local leaders in business, municipal public service, higher education, conservation planning, and non-profit management – that come together with shared vision of clean and clear local streams by 2040.



Lancaster
CLEAN WATER PARTNERS

Lancaster County faces a significant set of challenges, but also is presented with significant opportunities. The county boasts a mix of urban and rural assets, representing a vibrant city, unique towns and suburbs, and some of the most productive farmland in the United States. Its residents are as diverse as the land on which they live. The goal of the Partners is to unite these perspectives and use Lancaster County's diversity to fuel innovative and effective solutions to environmental challenges facing land and water.

The Partners believe that an organized, collaborative effort with a bias toward action is the best way to move the needle and make a lasting, positive impact on Lancaster County. Among the baseline activities necessary for these action-oriented collaborative efforts is a comprehensive understanding of the many partners working successfully on clean water across the county and the resources and expertise that are available from and for these partners. That is, what partners are doing work that helps put conservation practices on the ground to improve water quality, where are they concentrating their efforts, what skills and resources do they offer, what funding resources do they bring and are otherwise available to them and—perhaps most critical—how can they work together to achieve greater results more cost effectively than they would be able to do on their own?

The Partners and Resources Inventory

Through support from the National Fish and Wildlife Foundation, the Penn State AEC has undertaken an inventory and assessment of existing partners and resources available to implement conservation practices in Lancaster County. Our inventory consisted of developing a list of partners doing this work in Lancaster County and conducting interviews in person, by phone, or through email to learn about the capacity of each partner and the funding resources available. A total of 36 partners were inventoried from federal, state and county and local government, academia, and the non-profit and private sectors.

Consistent with the Partners' bias toward action, this inventory focuses on the skills and resources necessary to **implement conservation practices** on the ground on farms, residential lands, commercial and institutional properties, and municipal and other publicly owned lands.

In using the term “conservation practice,” we mean a change in land management or land use that is implemented on the landscape to improve water quality. For purposes of this report, we organize the types of conservation practices in to **four categories**:

Agricultural Best Management Practices (Ag BMPs), which are conservation practices implemented on farms, such as stream bank fencing, grassed waterways, nutrient management, no-till, cover crops, grazing management, loafing lot management, barnyard runoff controls, and manure storages.

Stormwater Best Management Practice (Stormwater BMPs), which are practices to manage stormwater runoff from developed lands, including rain gardens, stormwater basin retrofits, bioswales, and urban tree planting.

Riparian Buffers, the establishment of permanent vegetative cover along streams, which can occur on both agricultural and developed lands. Our focus in this inventory is on forest riparian buffers.

Restoration Practices, including wetland restoration, stream restoration and floodplain restoration. These can also occur on both agricultural and developed lands.

In order to implement these conservation practices, certain **services** are required. These services are often provided by partners and the cost of providing them can be funded by funding resources. We organized and considered these necessary services as **a continuum of outreach-to-technical assistance-to-implementation assistance**, each of these having several components that roughly fit along this continuum (see Figure 1).

Figure 1. The continuum of activities necessary to achieve successful adoption of conservation practices on the ground. The red-yellow-green color scheme represents the outreach-TA-implementation assistance continuum and is used throughout this document.

OUTREACH → TECHNICAL ASSISTANCE (TA) → IMPLEMENTATION ASSISTANCE

Workshops & Events	Landowner Visits	Conservation Planning	Design, Engineering & Permitting	Construction & Implementation	Maintenance
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Outreach activities would include holding workshops and events with targeted audiences of farmers and other landowners and/or municipalities where partners share information on conservation and the resources available to implement practices on the ground. These activities would also include landowner visits, where knowledgeable partners are available to meet with farmers and other landowners or municipal staff to walk the property and discuss opportunities and options for conservation and build positive relationships and trust.

Technical assistance (TA) activities are those specialized professional services that are needed to plan and design conservation practices that are often complex and require trained professionals to develop and design. These services include developing conservation and nutrient management plans for farm operations, or stormwater management plans for urban lands, or planting plans for riparian buffers, rain gardens, and other green infrastructure practices. They also include design and engineering and developing applications and obtaining permits necessary to implement a project. These types of services often need professionals in trained scientific disciplines including soil science, hydrology, agronomy, environmental sciences, landscape architecture, forestry, ecology, and engineering.

Implementation assistance refers to the assistance—most directly funding—that is needed to construct and implement a conservation project. This is sometimes also referenced as financial assistance, or “FA,” but in the context of this inventory, it can mean both the funding and partner support for implementation. Funding is necessary to pay for materials, excavation and other construction costs, plants and planting labor for vegetative-based practices like buffers, project management, and construction oversight to ensure the practice is implemented and constructed as designed and to existing technical standards for the practice. (It should be noted that funding is often also needed to provide the necessary technical assistance for a project, particularly if that TA is not being provided by a public agency.) Finally, in order to ensure long term success of a conservation project, operation and maintenance (O&M) is critical. The cost and implementation of O&M often falls upon the landowner, but there are funding resources and technical assistance partners to support certain necessary maintenance services, particularly for riparian buffers and other green infrastructure practices.

With these important categories of conservation practice types and services in mind, we organized and present the partners and resources inventory in Sections 2 and 3 as follows.

Section 2 is our partner inventory. In this section we provide a one-page summary assessment of each partner and the skills and resources the partner provides related to the outreach/TA/implementation continuum. While summaries are provided for 36 partners, it must be noted that our assessment is not an exhaustive list of every entity, organization or business providing skills and resources helpful in implementing conservation practices to improve water quality in Lancaster County. For example, while we highlight eight private sector firms that are active in the Partners in this report, there are many more such firms that provide technical support and services to make clean water projects possible, some of which are listed following the individual firm profiles. Similarly, many local volunteer watershed groups provide valuable volunteer labor and support for such projects, and Lancaster County’s 60 municipalities are critical local partners and often champions in clean water efforts. We list the watershed groups and municipalities at the end of Section 2. The focus of our inventory was largely on those entities with technical capacity and/or funding resources to accelerate implementation. These are primarily government agencies, foundations, and nonprofit organizations eligible for grants. Accordingly, we are certain there are many clean water partners working in the county who are adding tremendous value to the collective effort but are not listed in this inventory.

Section 3 is the inventory of the funding resources available in Lancaster County, many of them offered by partners inventoried in Section 2. An impressive array of such resources exists in the county, consisting of federal, state, and local government funding, foundations, and private sector funding in the form of grants, loans, tax credits and mitigation funds. All told, 49 funding resources that support conservation practice implementation are identified and inventoried. Some are funding sources that allow landowners to apply directly (like NRCS programs and REAP), some are grant programs that allow eligible partners to apply during open application periods (like Growing Greener and NFWF grants); many are existing grants that a variety of partners have secured and are administering to implement conservation practices in certain watersheds or across the county.

Regarding the latter, we should explain that there are also many grants that have been obtained by partners (including many by municipalities and watershed groups) that are funding the implementation of specific pre-identified projects. These grants represent an entirely other set of funding resources being put to good use for clean water, but they were not inventoried specifically in Section 3, since they are already earmarked or being spent for specific projects. The inventory in Section 3 is focused more on resources that provide programmatic support not already allocated to

specific projects, and therefore can provide opportunities for strategic and integrated action moving forward. A list of some of these grants where we became aware of them through our research are listed in the excel spreadsheet of available grants that accompany this report.

For each funding resource inventoried a summary description is provided, indicating the types of services funded along the outreach/technical assistance/implementation assistance continuum, and what types of conservation practices are funded (ag BMPs, stormwater BMPs, buffers, restoration practices), as discussed above. Details on cost share amounts provided and other funding specifications are also summarized for each funding resource.

An Analysis and Recommendations for Integrated Funding Delivery

Following our inventory of partners and funding resources, in **Section 4** we undertook an analysis of these assets across the county.

By assessing assets cumulatively and collectively, we were able to identify areas of high capacity and gaps, areas of natural synergies and collaboration, opportunities for leveraging, and strategies for integrating capacity and funding to accelerate conservation.

As we inventoried the many partners and funding resources for implementing conservation practices, we noticed variability in the types of services and the types of practices funded. We analyzed the resources by **critical categories** and provide summary charts organizing the resources by these categories. A more elaborate and dynamic spreadsheet that organizes partners and resources in this manner is also provided.

In addition, as we inventoried available partners and resources across the county, it became clear that certain partners or resources are focused in specific watersheds or regions of the county. Accordingly, one of the critical categories of our analysis is by the watersheds of Lancaster County. We subdivide the county into 16 major watersheds and provide specific summary profiles for each watershed that include a list of partners and resources available and what type of services they provide in support of acceleration conservation practice implementation.

Finally, we end by providing a set of eight specific recommendations for how best to integrate the many funding and partner resources available in Lancaster County for maximum collective impact. Ultimately, we recommend an **integrated funding delivery approach** whereby existing resources are “knitted” together to achieve higher levels of implementation of higher priority conservation practices across the county. We offer recommendations for a strategic approach toward use of these resources where different funding sources can fund types of projects or project services, or target the type of landowner for which particular funding sources are best suited. We also recommend a high degree of leveraging of different funding resources, so that funding programs and funders are not in competition with one another, but jointly can make higher impact projects happen and accelerate conservation adoption. This approach can be scaled up countywide or downscaled to specific priority areas, such as watersheds.

SECTION 2: PARTNERS INVENTORY

A total of 36 partners were inventoried, all providing some level of support for implementation of conservation in Lancaster County. The 36 partners include federal and state agencies, county entities, nonprofit and academic organizations, foundations, and private sector businesses. For each partner, a summary description of the skills and resources offered is provided, as well as geographic scope. An additional 10 private sector partners which provide support to clean water efforts in the county are also listed.

In addition, Lancaster County is home to 14 watershed groups and 60 municipalities, all of which may be critical local partners in providing resources and leadership to implement conservation in their local watersheds and communities. Watershed groups and municipalities are listed at the end of this section, with contact information provided.

Federal Partners

Susquehanna River Basin Commission (SRBC)

USDA Farm Service Agency (FSA)

USDA Natural Resources Conservation Service (NRCS)

US Fish and Wildlife Service (USFWS)

US Environmental Protection Agency (EPA)

Susquehanna River Basin Commission

www.srbc.net

Contact: Josh Brengel, 4423 North Front Street, Harrisburg PA 17110,
(717) 238-0423, jbrenzel@srbc.net



SRBC is a federal-interstate coordinating agency established by the Susquehanna River Basin Compact that seeks to enhance public welfare through comprehensive planning, water supply allocation, and management of the water resources of the Susquehanna River Basin.

Resources and Expertise

Outreach

SRBC staff are available to speak at meetings and outreach events on a variety of water resources, water quality and conservation topics.

Technical Assistance

SRBC's technical assistance capacity includes water quality monitoring, modeling and scientific analysis in support of watershed planning to guide implementation strategies locally.

Implementation Assistance

While SRBC does not traditionally provide implementation funding or assistance, SRBC is available to support implementation efforts through the outreach and technical assistance services outlined above.

Geographic Focus

Countywide

USDA Farm Service Agency

www.fas.usda.gov

Contact: Kimberly Merlau, Lancaster County Executive Director, 1383
Arcadia Road, Lancaster PA 17601, (717) 874-2500,

kimberly.merlau@usda.gov



FSA provides technical and financial assistance to help farmers implement riparian buffers and other wildlife-related conservation practices under the Conservation Reserve Enhancement Program (CREP), and provides a wide variety of other funding and loan opportunities to farmers.

Resources and Expertise

Outreach

FSA can work with the broader CREP partnership to provide educational materials in support of outreach to farmers and landowners about CREP.

Technical Assistance

FSA technicians provide assistance in processing applications, contracts and other administrative services necessary to administer the CREP program, as well as other funding and loan opportunities available to farmers.

Implementation Assistance

Funding available through CREP for implementation of riparian buffers and other conservation practices on farms. Other FSA funding programs may also be of interest to farmers.

Geographic Focus

Countywide

USDA Natural Resources Conservation Service



www.nrcs.usda.gov

Contact: Heather Grove, District Conservationist, Lancaster Office, 1383 Arcadia Road, Lancaster PA 17601, (717) 874-2530,

heather.grove@usda.gov

NRCS provides technical and financial assistance to help farmers implement conservation practices on working lands.

Resources and Expertise

Outreach

NRCS staff from the Lancaster and PA state office are frequent speakers at farmer meetings and field days on a variety of conservation topics. NRCS technicians are also available for farm visits to discuss NRCS programs, assess conservation needs and priorities for farmers, and determine how NRCS funding can best meet the goals of the farmer.

Technical Assistance

NRCS technicians provide full service technical assistance for farmers, including conservation plan writing and design, engineering and permitting services for a wide variety of agricultural and restoration-based conservation practices.

Implementation Assistance

Funding is available through NRCS for implementation of agricultural conservation practices and restoration of natural lands and wildlife habitat on farms. Major programs include the Environmental Quality Incentives Program (EQIP), Conservation Stewardship Program (CSP), and the Wetland Reserve Easement Program (WRE).

Geographic Focus in Lancaster County

Countywide

US Fish and Wildlife Service

www.fws.gov

Contact: Mark Roberts, 110 Radnor Rd, Suite 101, State College PA 16801,
(814) 234-4090 ext. 7457, mark_roberts@fws.gov



USFWS administers the Partners for Fish and Wildlife Program, which provides technical and financial assistance to private landowners to restore, enhance, and manage private land to improve fish and wildlife habitats. Projects typically include stream restoration, wetland restoration, riparian buffer installation, and stream bank fencing.

Resources and Expertise

Outreach

Staff are available to meet with landowners interested in stream or wetland restoration projects to assess the site and discuss the program.

Technical Assistance

Technical assistance in survey, design, engineering and permitting for stream and wetland restoration projects. Project management and construction oversight is also provided.

Implementation Assistance

External funding is required to implement projects, but financial assistance can be contributed to a project through in-kind matching funds.

Geographic Focus in Lancaster County

Countywide

US Environmental Protection Agency

www.epa.gov

Contact: Kelly Shenk, 410 Severn Ave, Suite 112, Annapolis MD 21403, (410) 267-5728, shenk.kelly@epa.gov;

Other points of contact vary by EPA grant program, and are provided in Section 3 under “Federal Funding Programs.”



EPA is a federal agency with the mission of protecting human health and the environment. There are two divisions in EPA Region 3 that are relevant to providing resources to help implement conservation practices in Lancaster County, PA. One is the Water Division, which manages, among many other Clean Water Act (CWA) programs, the nonpoint source pollution program (CWA Section 319 Program) and Clean Water State Revolving Loan Fund (SRF). The other is the Chesapeake Bay Program Office, which manages the Chesapeake Bay Program partnership, a federal-state partnership to restore the Chesapeake Bay and its watershed.

Resources and Expertise

Outreach

EPA resources and materials are available for use in outreaching to farmers and landowners about the benefits of implementing conservation practices. EPA funding programs (see below) can also help fund outreach work by partners. EPA staff and grantees in the Chesapeake Bay Program Office are available to participate in outreach events or efforts.

Technical Assistance

Some of EPA funding programs can fund technical assistance necessary to implement agricultural conservation practices, such as conservation district staff, State agriculture department staff, land grant universities, NGOs who work with farmers to implement conservation practices.

Implementation Assistance

Financial assistance to implement conservation practices is available through a variety of EPA funding programs. Most notably are the Section 319 Program, CWA Section 117(e)(1)(A) Chesapeake Bay Implementation Grants (CBIG) and Chesapeake Bay Regulatory and Accountability Program (CBRAP) Grants, administered by the Pennsylvania Department of Environmental Protection, Fish and Boat Commission, Department of Conservation and Recreation, and State Conservation Commission; and the Clean Water State Revolving Loan Fund, which award funding to state partner agencies (i.e., PENNVEST) for a wide variety of water quality protection efforts. Additionally, substantial EPA CWA Section 117(d)(1) funds support EPA's Innovative Nutrient and Sediment Reduction (INSR) Grants and CWA Section 117 (g)(2) Small Watershed Grants (SWG) that are currently administered by the National Fish and Wildlife Foundation (NFWF).

Geographic Focus in Lancaster County

Varies by grant program

State Partners

PA Department of Community and Economic Development (DCED)

PA Department of Conservation and Natural Resources (DCNR)

PA Department of Environmental Protection (DEP)

PA Fish and Boat Commission (PFBC)

PENNVEST

State Conservation Commission (SCC)

PA Department of Community and Economic Development

www.dced.pa.gov

Contact: Aliyah Furman, Southeast Regional Office, 110 North 8th Street, Suite 505, Philadelphia PA 19107-2471, (215) 560-5822, alifurman@pa.gov



DCED's mission is to encourage the shared prosperity of all Pennsylvanians by supporting good stewardship and sustainable development initiatives across our commonwealth.

Resources and Expertise

Outreach

DCED's resources related to implementing conservation practices are primarily financial assistance (see below)

Technical Assistance

DCED's resources related to implementing conservation practices are primarily financial assistance (see below)

Implementation Assistance

Funding is available through a variety of DCED programs. The most relevant to clean water initiatives are the Watershed Restoration and Protection Program and the Flood Mitigation Program through Act 13, which are administered by the Commonwealth Financing Authority.

Geographic Focus in Lancaster County

Countywide

PA Department of Conservation and Natural Resources

www.dcnr.pa.gov

Contact: Teddi Stark, 400 Market Street, 6th Floor, Harrisburg PA 17105, (717) 787-0656, (814) 335-5665, c-tstark@pa.gov



DCNR provides staff and resources for outreach, technical assistance and funding to implement forest riparian buffers on public and private lands and other conservation implementation, planning and capacity building projects.

Resources and Expertise

Outreach

DCNR has staff capacity to speak at a variety of workshops and events that outreach to farmers and landowners about the benefits of planting riparian buffers, technical aspects of planning, planting and maintaining buffers, and the funding resources available for implementing riparian buffers.

Technical Assistance

DCNR technicians will develop riparian buffer planting plans, can provide project coordination and management, and can assist in buffer planting (often through volunteer coordination) and buffer maintenance. DCNR grant programs can also provide planning and capacity building assistance on a variety of conservation initiatives.

Implementation Assistance

Funding is available through DCNR grant programs to fund technical assistance, planting and maintenance of riparian buffers. Riparian buffer grants are available through the Community Conservation Partnerships Program (C2P2). Several DCNR grants are currently funding buffer implementation and maintenance throughout Lancaster County. DCNR grant programs can also support other conservation projects (such as stream and floodplain restoration and green infrastructure implementation at recreation sites).

Geographic Focus in Lancaster County

Countywide

PA Department of Environmental Protection

www.dep.pa.gov

Contact: Kristen Wolf, PA Chesapeake Bay Office, 400 Market Street,
Harrisburg PA 17101, (717) 772-1675, kwolf@pa.gov



DEP's mission is to protect Pennsylvania's air, land and water from pollution and to provide for the health and safety of its citizens through a cleaner environment. DEP partners with individuals, organizations, governments and businesses to prevent pollution and restore our natural resources. DEP is Pennsylvania's lead agency in developing and implementing the Phase 3 Chesapeake Bay Watershed Implementation Plan (Phase 3 WIP).

Resources and Expertise

Outreach

DEP has staff capacity to speak at a variety of workshops and events that outreach to farmers and landowners about the benefits of actions to improve water quality through implementing the Phase 3 WIP and about the resources and opportunities available to implement conservation practices.

Technical Assistance

Particularly for projects that require permitting, DEP is available for pre-application site meetings to assess the project and discuss permitting expectations and options.

Implementation Assistance

DEP provides a variety of funding assistance for implementation of conservation projects. These include grant opportunities through Growing Greener Plus and PA's Nonpoint Source Pollution Management (Section 319) Program. Other funding is provided through the Chesapeake Bay Program funding (particularly Chesapeake Bay Implementation Grants (CBIG) and Chesapeake Bay Regulatory and Accountability Program (CBRAP). One specific Chesapeake Bay funding program is the Agricultural Plan Reimbursement Program, which reimburses farmers the cost of preparing agricultural erosion and sediment control and manure/nutrient management plans.

Geographic Focus in Lancaster County

Countywide

PA Fish and Boat Commission

www.fishandboat.com

Contact: Tyler Neimond, Chief, Division of Habitat Management, 595 East Rolling Ridge Drive, Bellefonte PA 16823, (814) 359-5185, tneimond@pa.gov



PFBC's mission is to protect, conserve, and enhance the Commonwealth's aquatic resources and provide fishing and boating opportunities. PFBC resources are available to improve aquatic habitat through restoration efforts.

Resources and Expertise

Outreach

PFBC has staff capacity to speak at a variety of workshops and events that outreach to farmers and landowners about the benefits of habitat restoration to improve fisheries and water quality. Staff are also available to meet with landowners who may be candidates for PFBC restoration projects.

Technical Assistance

PFBC staff can provide design and construction oversight for stream restoration projects.

Implementation Assistance

PFBC receives \$100,000 annually for habitat improvement projects in York and Lancaster Counties. These may include agricultural conservation practices, restoration projects, and riparian buffers. Funds are awarded for projects through an RFP process typically on a semi-annual basis. A maximum of \$75,000 per project is awarded. Match is not required but is encouraged.

Geographic Focus

Countywide

PENNVEST



www.pennvest.pa.gov

Contact: Tesra Schlupp, 333 Market Street 18th Floor, Harrisburg PA 17101,
(717) 713-8618, tschlupp@pa.gov

PENNVEST serves communities and the citizens of Pennsylvania through capital funding for drinking water, sewer, storm water, non-point source pollution prevention and other related projects that benefit the health, safety, environment, promote economic development, and improve water quality.

Resources and Expertise

Outreach

PENNVEST's resources are primarily financial assistance and staff is available to speak at workshops or events about PENNVEST funding and implementation of water quality improvement projects.

Technical Assistance

PENNVEST's resources are primarily financial assistance and can cover the costs of technical assistance associated with implementing water quality improvement projects.

Implementation Assistance

The PENNVEST Clean Water State Revolving Fund (CWSRF) program provides affordable financing for wastewater and certain other projects throughout Pennsylvania for the construction, improvement, extension, expansion, repair or rehabilitation of wastewater collection, treatment or disposal facilities, storm water management, nonpoint source pollution controls including but not limited to agricultural best management practices and watershed and estuary management. The program offers low interest loans with flexible terms and principal forgiveness funds where applicable and available.

PENNVEST performs similarly to a bank for the CWSRF program in Pennsylvania and manages the financial aspects of the fund, while the Department of Environmental Protection is the technical arm for the program. The seed money for the CWSRF has been distributed to states annually under Congressional authorization pursuant to the Clean Water Act of 1987. The funds and the program are administered nationally by United States Environmental Protection Agency (EPA).

Geographic Focus in Lancaster County

Countywide

State Conservation Commission

www.agriculture.pa.gov

Contact: Joel Semke, REAP Coordinator, 2301 N Cameron St, Harrisburg PA 17110, (717) 705-4032, jsemke@pa.gov



SCC is a 14-member commission with a mission to ensure the wise use of Pennsylvania's natural resources and to protect and restore the natural environment through the conservation of its soil water and related resources. The commission provides support and oversight to the state's 66 county conservation districts for the implementation of conservation programs and is responsible for administering several state conservation programs including the Nutrient Management and Odor Management Program, the Dirt and Gravel Program, Resource Enhancement and Protection (REAP Tax Credit) Program, and the new Conservation Excellence Grant Program.

Resources and Expertise

Outreach

SCC has staff capacity to speak at events and trainings relating to its conservation programs, particularly nutrient management, REAP and the Conservation Excellence Grant Program.

Technical Assistance

Technical guidance on REAP is available on its [website](#) and staff can answer questions about the program and application process. REAP will pay for the full range of TA associated with implementing agricultural conservation practices, including conservation planning (including conservation/ag E&S plans and manure/nutrient management plans, design, engineering and permitting, and project management.

Implementation Assistance

Funding is available through REAP and the Conservation Excellence Grants to fund implementation of agricultural conservation practices (including riparian buffers) on farms. REAP can also fund equipment purchases that allow farmers to implement conservation practices, such as no till planters. REAP is administered by the SCC, while Conservation Excellence Grants are administered by the Lancaster County Conservation District.

Geographic Focus in Lancaster County

Countywide

County Partners

Lancaster County Clean Water Consortium (LCCWC)

Lancaster County Conservation District (LCCD)

Lancaster County Planning Department (LCPD)

Lancaster County Redevelopment Authority (LCRA)

Lancaster County Clean Water Consortium



www.lccwc.com

Contact: Joellyn Warren, Chair, 1383 Arcadia Road, Lancaster PA 17601,

lancasterccwc@gmail.com

The Lancaster County Clean Water Consortium provides resources for municipalities and community stakeholders to assist with local, state, and federal stormwater permit requirements.

Resources and Expertise

Outreach

The Consortium provides educational seminars, workshops, and training, such as the first annual Municipal Stormwater Forum (MSForum) that focused on providing municipalities with the information they need to achieve MS4 compliance and manage their stormwater operations and maintenance responsibilities. Other training topics have included stream restoration, MS4 audits, and technological resources for managing stormwater. The Consortium also develops resources to help municipalities such as the BMP Maintenance Guide. The Consortium provides leadership for the Clean Water Partner's Stormwater Action Team and every other month offers an educational event held in different locations in the county and focused on new topics that relate to clean water issues that impact municipalities.

Technical Assistance

The Consortium has been the recipient of grants to support communities in watershed and community planning, and Consortium members provide technical assistance with project implementation, including design and engineering services.

Implementation Assistance

The Consortium provides \$10,000 annually for stormwater mini grants to fund implementation of stormwater BMPs. One or more projects may be awarded per year.

Geographic Focus in Lancaster County

Countywide

Lancaster County Conservation District



www.lancasterconservation.org

Contact: Matt Kofroth, Watershed Specialist, 1383 Arcadia Road,
Lancaster PA 17601, (717) 299-5361 ext. 2523,

mattkofroth@lancasterconservation.org

LCCD promotes stewardship of the land, water, and other natural resources; to make all citizens aware of the interrelationships between human activities and the natural environment; to provide assistance for current efforts in natural resource conservation; and to develop and implement programs which promote the stewardship of natural resources; while enlisting and coordinating help from public and private sources in accomplishing this mission.

Resources and Expertise

Outreach

LCCD has staff capacity to speak at a variety of workshops and events that outreach to farmers and landowners about the benefits of the full range of conservation practices and how to take advantage of the technical and financial assistance resources available for implementing such practices. LCCD staff will also conduct farmer and landowner visits to discuss specific conservation goals and needs of the landowner.

Technical Assistance

LCCD staff provide a variety of technical assistance to help farmers and other landowners implement conservation practices, including conservation plan and manure management plan development, agricultural conservation practices and stream restoration design and permitting, construction oversight, and technical assistance for stormwater and erosion control projects through the Dirt & Gravel/Low Volume Roads Program.

Implementation Assistance

LCCD administers several funding sources for implementing conservation practices. These include the Dirt & Gravel/Low Volume Roads Program, Exelon funding for stream restoration and agricultural conservation practices, and the Conservation Excellence Grant program. The district also has a fundraising arm, the Conservation Foundation of Lancaster County, which is a tax exempt 501(c)(3) nonprofit organization that can apply for and administer grants to implement conservation practices in the County.

Geographic Focus in Lancaster County

Countywide

Lancaster County Planning Department



www.lancastercountypanning.org

Contact: Mark Huber, Senior Planner, 150 N. Queen St., Ste. 320,
Lancaster, PA 17603, (717)299-8333, mhuber@co.lancaster.pa.us

The Lancaster County Planning Department (LCPD) seeks to be the leader and catalyst for innovative planning and placemaking in Lancaster County. Its purpose is to ensure that Lancaster County remains a special place in the future, and it achieves this by facilitating inclusive dialogue, creating shared visions and plans, and helping communities achieve results.

Resources and Expertise

Outreach

LCPD has staff capacity to participate in public outreach with the core goals of managing growth and preserving large spaces of contiguous agricultural and natural areas, preserving both farmland and the farmer, and improving water quality and encouraging stakeholders to work together on stormwater management.

Technical Assistance

Places2040, the county's new comprehensive plan, provides a framework for conservation implementation, by encouraging implementation of two of the plan's big ideas: Taking Care of What We Have and Growing Responsibly. These goals call for efforts to improve water quality, and to work together on stormwater management. Additional supporting plans include two elements from the previous Lancaster County Comprehensive Plan: *Greenscapes*, the green infrastructure element, and *Blueprints*, the integrated water resources planning element. Mapping and GIS support are other technical resources that LCPD offers to assist with conservation practice implementation.

Implementation Assistance

LCPD administers the Smart Growth Transportation program, which funds transportation projects and studies that build infrastructure for safer, more walkable, bikeable and transit-friendly communities. Such projects can align with improved stormwater management infrastructure.

Geographic Focus in Lancaster County

Countywide

Lancaster County Redevelopment Authority

www.lchra.com

Contact: Justin Eby, Deputy Executive Director, 28 Penn Square, Suite 200,
Lancaster, PA 17603, (717) 394-0793 ext. 225, jeby@lchra.com



The Lancaster County Redevelopment Authority (LCRA) is a public authority chartered by the state that works independent of county government. It promotes redevelopment of underutilized properties and development of affordable housing. LCRA focuses on planning and developing balanced mixed-use communities to create thriving, well-served neighborhoods, boroughs, and municipalities.

Resources and Expertise

Outreach

LCRA has staff capacity to participate in public outreach to teach municipalities and county residents about its priority programs that administer HUD funding in support of affordable housing, bond financing for economic development and housing, and economic development in borough downtowns.

Technical Assistance

Technical assistance is provided in the form of planning and administration of various funding programs to support redevelopment of underutilized properties and development of affordable housing in communities across the county.

Implementation Assistance

Among other funding programs, LCRA administers the Community Development Block Grant (CDBG) program, which is a direct allocation from HUD. CDBG can fund a variety of improvements in a community's low-to-moderate income areas, including street repairs, improved water and sewer infrastructure to reduce inflow and infiltration (I&I), or stormwater management improvements.

Geographic Focus in Lancaster County

Countywide

Nonprofit and Academic Partners

Alliance for the Chesapeake Bay

Capital RC&D

Chesapeake Bay Foundation

Chesapeake Conservancy

Donegal Trout Unlimited

Lancaster Conservancy

Lancaster Farmland Trust

Penn State University

Stroud Water Research Center

Water Science Institute

Alliance for the Chesapeake Bay

www.allianceforthebay.org

Contact: Jenna Mitchell, PA Director, 37 East Orange St, Suite 302,
Lancaster PA 17602, (717) 517-8698, jmitchell@allianceforthebay.org



The Alliance brings together communities, companies, and conservationists to improve the lands and waters of the Chesapeake Bay watershed.

Resources and Expertise

Outreach

The Alliance has staff capacity to provide events and workshops for landowners on water quality and conservation. Education and outreach capacity extends into sportsman groups and business sector. The Alliance has particular expertise and experience in engaging the agricultural business sector regarding market-based approaches to conservation, the best example of this being the Turkey Hill Clean Water Partnership. Staff conduct farm visits, with a focus on farms in the Octoraro Creek watershed and those supplying milk to Turkey Hill, and outreach visits to landowners interested in riparian buffers countywide.

Technical Assistance

Staff can develop planting plans, project management, and planting of riparian buffers, and help provide overall project management for agricultural conservation practices projects. The Alliance also coordinates many volunteer planting events to plant buffers and other green infrastructure practices. Staff provides technical assistance for green infrastructure implementation with a focus on the City of Lancaster. Through its Restoring the Environment and Developing Youth (READY) initiative, the Alliance has a crew of 4-5 trainees who can assist in green infrastructure maintenance.

Implementation Assistance

The Alliance has a variety of grants that fund implementation of riparian buffers and other conservation practices, and buffer maintenance countywide. A Growing Greener grant provides “buffer bonus” funding to implement agricultural conservation practices, stormwater BMPs, and stream restoration on lands where new forest riparian buffers are also implemented. Buffer bonus funds are earned at \$4,000/acre, capped at \$20,000. This grant also funds buffer maintenance. The Alliance also provides DCNR funding for implementation and maintenance of forest riparian buffers in Lancaster County. In addition, the Alliance is always willing to work with interested landowners and partners to explore and secure funding sources to support implementation. NFWF grants were recently awarded to the Alliance to fund ag BMP implementation on Turkey Hill farms and farms in the Octoraro Creek watershed.

Geographic Focus in Lancaster County

Countywide

Focus Watersheds: Octoraro Creek

While the Alliance works countywide, aspects of the Alliance’s farmer outreach and implementation work is focused in Octoraro Creek.

Capital RC&D

www.capitalrcd.org

Contact: Susan Richards, 401 East Louther Street, Suite 307, Carlisle PA 17013, (717) 241-4361, srichards@capitalrcd.org



The Capital Resource Conservation and Development (RC&D) Area Council is a locally led nonprofit with a mission to network people, resources and projects to promote responsible use and conservation of our region's natural, community and economic resources. Serving South Central Pennsylvania in Adams, Cumberland, Dauphin, Franklin, Lancaster, Lebanon, and York counties, Capital RC&D's members bring a variety of perspectives to developing and implementing the organization's work, as well as providing an important network to link resources and programs that support Capital RC&D's vision and mission.

Resources and Expertise

Outreach

RC&D has staff capacity to host or contribute to a variety of workshops and events that outreach to farmers and landowners about agricultural conservation practices. In particular, RC&D's participation in the PA Soil Health Coalition supports farmer to farmer networking, mentoring and training for soil and stream health, with a particular emphasis on grazing management for improved soil health of pasture lands and use of cover crops and cover crop grazing on cropland.

Technical Assistance

RC&D's farmer-to-farmer grazing program provides technical assistance for farmers interested in implementing improved grazing management systems by linking interested farmers with experienced graziers.

Implementation Assistance

Through a NFWF grant administered by RC&D, funding is available for farmers to implement rotational grazing management systems. Grazing management infrastructure is cost shared at 50%. Costs of developing grazing management plans are fully covered.

Geographic Focus in Lancaster County

Countywide

Chesapeake Bay Foundation

www.cbf.org

Contact: Harry Campbell, 1426 North 3rd Street, Harrisburg PA 17102, (717) 234-5550, hcampbell@cbf.org



**CHESAPEAKE BAY
FOUNDATION**

Saving a National Treasure

CBF is the largest non-profit organization dedicated to protection and restoration of the Chesapeake Bay, its tributaries, and its resources.

Resources and Expertise

Outreach

CBF has staff capacity to speak at a variety of workshops and events that outreach to farmers and landowners about the benefits of planting riparian buffers and implementing conservation practices. Staff also are available to visit landowners to discuss riparian buffer and conservation practice implementation opportunities and programs. CBF outreach staff are also available to provide outreach to urban and suburban municipalities and communities relevant to green infrastructure stormwater practices and programs.

Technical Assistance

CBF buffer specialists provide technical assistance in developing riparian buffer plans and applying for program funding, including CREP. CBF science, community outreach and watershed planning staff also have capacity to assist communities and watershed partners in developing strategies and plans for community green infrastructure and stormwater management and comprehensive watershed plans to guide strategic watershed restoration implementation. CBF also leads the Keystone 10 Million Trees Partnership (K10 Partnership), which provides trees, supplies and other necessary support to implement riparian buffer projects.

Implementation Assistance

The K10 Partnership provides funding for trees, tree tubes and stakes for riparian buffer restoration projects. In addition, CBF has other funding resources that can help pay for implementation of forest-based conservation practices, particularly forest riparian buffers and reforestation of upland flow path contributing areas.

Geographic Focus in Lancaster County

Countywide

Chesapeake Conservancy

www.chesapeakeconservancy.org

Contact: Carly Dean, 716 Giddings Ave, Suite 42, Annapolis MD 21401,
(443) 321-3610, cdean@chesapeakeconservancy.org



Chesapeake Conservancy is a non-profit organization based in Annapolis, Maryland. We are a team of conservation entrepreneurs. We believe that the Chesapeake is a national treasure that should be accessible for everyone and a place where wildlife can thrive. We use technology to enhance the pace and quality of conservation, and we help build parks, trails and public access sites.

Resources and Expertise

Outreach

Conservancy staff are available to speak at meetings and outreach events on a variety of water quality and conservation topics, particularly related to the services of its Conservation Innovation Center, described below.

Technical Assistance

The Conservancy's [Conservation Innovation Center](#) uses cutting cutting-edge GIS technology and other technical resources to empower data-driven conservation and restoration. Just as the use of technology changed the corporate world and made it more efficient, technology can do the same for the conservation movement. Through national and international partnerships, the CIC makes this data accessible for restoration professionals to practice precision conservation, yielding greater impact with less resources. The Conservancy has worked with the Lancaster Clean Water Partners to create the [Lancaster Watershed Collaborative Mapping Tool](#) to help partners make strategic decisions about restoration and implementation of conservation practices. The Conservancy provides other technical services to partners seeking precision in conservation implementation.

Implementation Assistance

The Conservancy is happy to work with partners to explore funding opportunities for implementation of conservation practices in Lancaster County, providing the technical resources described above in support of these efforts.

Geographic Focus in Lancaster County

Countywide

Donegal Trout Unlimited

www.donegaltu.org

Contact: Greg Wilson, Conservation Co-Chairman, P.O. Box 8001, Lancaster
PA 17604 (717) 587-8351, gregsfish@gmail.com



The Donegal Chapter of Trout Unlimited's mission is to conserve, protect and restore Lancaster County's cold water resources.

Resources and Expertise

Outreach

Donegal TU holds several workshops and volunteer opportunities annually to educate landowners on a variety of conservation and restoration practices to improve water quality and habitat. Chapter members are available to meet with landowners interested in improving cold water habitat on their properties.

Technical Assistance

Donegal TU provides project coordination and oversight on a variety of partnership-based restoration efforts, including in Fishing Creek and Conowingo Creek watersheds. Members coordinate many volunteer efforts across the county's watersheds to plant riparian buffers and implement stream habitat improvements. Trees are provided for project implementation from TU's volunteer nursery at Millport Conservancy.

Implementation Assistance

Donegal TU is the recipient of many grants from a variety of funding sources to implement conservation practices, riparian buffers and stream restoration in several county watersheds, including Donegal Creek, Lititz Run, Fishing Creek, Conowingo Creek, Climbers Run, Hammer Creek, and Peters Creek.

Geographic Focus in Lancaster County

Countywide

Focus Watersheds: Donegal Creek, Lititz Run, Fishing Creek, Conowingo Creek, Climbers Run, Hammer Creek, Peters Creek

Donegal TU has focused their restoration work on cold water fisheries in Lancaster County.

Lancaster Conservancy

www.lancasterconservancy.org

Contact: Fritz Schroeder, 117 S West End Ave, Lancaster PA 17603, (717) 392-7891, fschroeder@lancasterconservancy.org



The Lancaster Conservancy mission is to provide wild and forested lands and clean waterways for our community, forever.

Resources and Expertise

Outreach

The Conservancy leads “Lancaster Water Week,” the preeminent outreach event in the county which engages citizens and partners through a week of water-related events and activities.

Technical Assistance

The Conservancy provides technical assistance related to finding and preserving natural lands in Lancaster and York Counties through acquisition and conservation easements.

The Conservancy also runs Community Wildlife Habitat a group of trained volunteers that advise property owners on how to improve their landscape through the use of native plants and trees as well as gardens that reduce stormwater runoff while providing habitat that will benefit wildlife and attract pollinators.

Implementation Assistance

The Conservancy contributes to the Lancaster Clean Water Fund, administered by the Community Foundation of Lancaster County, which provides grant funding to accelerate implementation of conservation projects to improve water quality. Community Conservation grants of \$2500-\$5000 are awarded to assist smaller, implementable projects led by local watershed groups, municipalities, or community groups. Water Quality Impact Grants of \$10,000-\$50,000 support implementation of larger-scale projects. The Conservancy also administers the Susquehanna Riverlands Conservation Landscape Program, which provides \$50,000 annually in mini grants for non-profits and municipalities that border the Susquehanna, to conserve and protect the river lands.

Geographic Focus in Lancaster County

Countywide

Lancaster Farmland Trust

www.lancasterfarmlandtrust.org

Contact: Jeff Swinehart, 125 Lancaster Ave, Strasburg PA 17579, (717) 687-8484, jswinehart@lancasterfarmlandtrust.org



LFT seeks to preserve and steward the beautiful, productive farmland of Lancaster County that reflects our heritage, supports our economy, protects our environment, nourishes our health, and enhances our quality of life.

Resources and Expertise

Outreach

LFT has staff capacity to speak at a variety of workshops and events that outreach to farmers and landowners about the benefits of preserving farmland and implementing conservation practices on farms. Staff also conduct farmer visits to assess current conservation status and willingness to develop conservation plans and implement conservation practices.

Technical Assistance

LFT outreach staff can provide concept plans and mapping for farmers interested in implementing conservation practices.

Implementation Assistance

LFT administers several grants that provide funds for conservation practice implementation on farms.

Geographic Focus in Lancaster County

Countywide

Focus Watersheds: Pequea Creek, Mill Creek

While LFT's scope is generally countywide, farmer outreach, technical assistance and funding for implementation of conservation practices has focused most recently in the Pequea and Mill Creek watersheds, particularly Salisbury, Paradise and Leacock Townships.

Penn State University

www.psu.edu

Contact: Matt Royer, 111 Ferguson Building, University Park PA 16802,
(814) 863-8756, mroyer@psu.edu



Pennsylvania's land-grant university is active in clean water initiatives in Lancaster County. Through its Agriculture and Environment Center (AEC), Penn State provides research-based information to help landowners and communities implement conservation practices to improve water quality. Through Penn State Extension, a variety of science-based educational information is disseminated to farmers, residents and communities. The AEC and Extension facilitate the Greening the Lower Susquehanna program countywide and watershed-based partnerships in the Chiques, Conewago and Conoy watersheds to increase knowledge and awareness of clean water and help accelerate adoption of conservation practices.

Resources and Expertise

Outreach

The AEC facilitates watershed partnerships in Chiques, Conoy, Conewago and north River Hills tributaries, and provides landowner visits in this region to explore conservation implementation opportunities. Extension-based programming is offered countywide for farmers, residents, municipalities and other clean water partners, in the form of field days, winter meetings, workshops, and trainings. The Greening the Lower Susquehanna program coordinates and engages volunteers in implementing and maintaining riparian buffers and other green infrastructure practices.

Technical Assistance

Penn State staff and student interns can provide assistance in writing manure management plans for small farms. Through the Greening the Lower Susquehanna Program, assistance can be offered to develop riparian buffer planting plans and volunteer assistance in planting and maintaining buffers, rain gardens and other green infrastructure practices.

Implementation Assistance

Funding is available for implementation of conservation projects in Chiques-Conoy-Conewago region through a NFWF grant. Free trees are available for small riparian buffer and upland forest planting projects through Greening the Lower Susquehanna.

Geographic Focus in Lancaster County

Countywide

Greening the Lower Susquehanna program and Extension-based programs and activities are offered countywide.

Focus Watersheds: Chiques, Conoy, Conewago, River Hills Tributaries North

AEC watershed partnership facilitation, farmer outreach, technical assistance and funding for implementation is focused in these watersheds.

Stroud Water Research Center

www.stroudcenter.org

Contact: Lamonte Garber, 970 Spencer Road, Avondale PA 19311, (610) 268-2153, lgarber@stroudcenter.org



Stroud Water Research Center seeks to advance knowledge and stewardship of freshwater systems through global research, education, and watershed restoration.

Resources and Expertise

Outreach

Stroud has staff capacity to host or contribute to a variety of workshops and events that outreach to farmers and landowners about riparian buffers, stream ecology, agricultural conservation practices, tree establishment, and soil health. Stroud's partnership with the PA No Till Alliance and Cover Crop Coaching supports farmer to farmer networking, mentoring and training for soil and stream health. Stroud also hosts trips and tours to the Stroud Center. Finally, Stroud's staff are available to visit farms and discuss opportunities for riparian buffer restoration and implementation of conservation practices.

Technical Assistance

Stroud staff can provide riparian buffer plans for buffer restoration outside of the CREP program. Free technical assistance to advise landowners on maintenance and replacement trees are also provided during the establishment period. Through the PA Soil Health Partnership, technical assistance opportunities include participation in PASA Soil Health Benchmark Program, nitrogen modeling by Penn State Extension researchers, and grazing mentoring through the PA Grazing Lands Coalition

Implementation Assistance

Stroud's Farm Stewardship Program offers funding to farmers to plan and implement agricultural conservation practices on farms where farmers are willing to install forest buffers. Vouchers of \$4,000/acre can be earned up to \$20,000 based on acres of forest buffers planted. These funds can be used on their own or combined with other funding to pay for other conservation practices on the farm. Among the priority focuses of this program is converting wet croplands to buffers.

Geographic Focus in Lancaster County

Countywide

Soil health outreach and technical assistance programs available countywide

Focus Watersheds: Conewago, Chiques, Cocalico, Pequea and Octoraro

Initial focus of Farm Stewardship Program funding is these watersheds, but funding is made available countywide if funds are not spent in focus watersheds

Water Science Institute

www.waterscienceinstitute.org

Contact: Joe Sweeney, joe@waterscienceinstitute.org



DATA DRIVEN, SCIENCE BASED, VALUE ADDED

MAP, MODEL, MEASURE is how WSI promotes the sustainable, science-based benefits of projects that provide available clean water through conservation, restoration and exploration. This is accomplished through the funding and administration of education, policy development and applied and academic research projects that study the interrelationship of water and its surroundings. WSI's primary focus is the support and use of innovative technologies to identify nutrient and sediment reduction opportunities for public and private partners. A key aspect of our work is to raise public and practitioner awareness of the impact of past environmental practices, such as mill dams and legacy sediment, on today's landscape and provide practical approaches for cost effective water quality improvement. We promote and utilize rigorous economic analysis to promote taxpayer value and transparency in conservation programs.

Resources and Expertise

Outreach

WSI has staff capacity to speak at any event that provides farmers, landowners, policy makers and funders with the benefits of flood plain and wetland restoration projects through the identification and removal of legacy sediment and other historic practices that are a key component of current water quality impairment. WSI also offers tours and field events at the Big Spring Run wetland complex restoration project in Lancaster County as well as at mill dam sites that are a significant cause of legacy water quality impairment throughout the region.

Technical Assistance

WSI develops and applies mapping and modeling technology that examines opportunities across Lancaster County and the Chesapeake Bay watershed for removal of legacy sediment impairments to promote improved ground and surface water quality. WSI staff are available to consult with private landowners and public agencies interested in utilizing desk top technologies and innovative field practices that address legacy sediment, dam removal and flood plain restoration practices. We apply rigorous cost effectiveness analysis to examine best practices across watershed sectors engaged in nutrient and credit reduction practices.

Implementation Assistance

WSI welcomes and regularly partners with public, private and non-profit institutions and organizations to support research, development and restoration opportunities that promote clean, clear water throughout the Chesapeake Bay watershed.

Geographic Focus in Lancaster County

Countywide

Foundation Partners

Campbell Foundation

Lancaster County Community Foundation (LCCF)

National Fish and Wildlife Foundation (NFWF)

Campbell Foundation

www.campbellfoundation.org

Contact: Alex Echols, Program Director, Agriculture, 410 Severn Ave,
Suite #210, Annapolis MD 21403, (410) 990-0900,
aechols@campbellfoundation.org



The Campbell Foundation is a family foundation that believes in strategic infusions of funding, with nearly 100% of grant dollars dedicated to the environment. Among its primary funding geographies is the Chesapeake Bay and its watershed. Within the Bay watershed, Lancaster County is a priority focus region for its funding efforts.

Resources and Expertise

Outreach

Campbell's Chesapeake Bay grant funding can help fund outreach work by partners. Building capacity of partners to accelerate conservation efforts is a high priority for the Foundation.

Technical Assistance

Campbell's Chesapeake Bay grant funding can also help fund technical assistance necessary to implement conservation practices, though building capacity for broader implementation of conservation is the primary focus.

Implementation Assistance

Implementation funding generally is leveraged from other grants and programs, but Campbell grant funding can also help to fund implementation in certain instances, particularly if it will help advance broader adoption.

Geographic Focus in Lancaster County

Countywide

Lancaster County Community Foundation

www.lancfound.org

Contact: Ashlinn Masland-Sarani, 24 W King Street, Suite 201, Lancaster PA 17603, (717) 397-1629, amaslandsarani@lancfound.org



LCCF is a community foundation that manages more than \$115 million in community assets and is involved in championing the extraordinary community of Lancaster County in a variety of ways. It impacts the quality of life in Lancaster County by improving health, education, youth programs, environment, neighborhoods, and access to arts and culture. In partnership with the Partners and funded by seed money from NFWF and Lancaster Conservancy Water Week giving, it has established the Lancaster Clean Water Fund, which funds conservation implementation projects in Lancaster County.

Resources and Expertise

Outreach

The smaller "Community Grants" (see below) may include some project elements that provide outreach to farmers and landowners about implementation of conservation practices.

Technical Assistance

Both "Community Grants" and "Water Quality Impact Project" grants (see below) may fund technical assistance necessary to implement conservation practices.

Implementation Assistance

Financial assistance to fund conservation practice implementation is provided by the Clean Water Fund through a grant application process by the Community Foundation. Grants can either be a "Community Grant" of \$2,500-\$5,000, or a "Water Quality Impact Project" of \$10,000-\$50,000. Both grant categories required 1:1 match.

Geographic Focus in Lancaster County

Countywide

National Fish and Wildlife Foundation

www.nfwf.org

Contact: Jake Reilly, Chesapeake Bay Stewardship Fund Director, 1133 Fifteenth St, N.W., Suite 1000, Washington, DC 20005, (202) 595-2610, jake.reilly@nfwf.org



NFWF administers the Chesapeake Bay Stewardship Fund, which provides resources for outreach, technical assistance and financial assistance to implement conservation.

Resources and Expertise

Outreach

NFWF's Chesapeake Bay funding programs (see below) can also help fund outreach work by partners.

Technical Assistance

NFWF's Chesapeake Bay funding programs (see below) can fund technical assistance necessary to implement conservation practices.

Implementation Assistance

Financial assistance to implement conservation practices is available through the Chesapeake Bay Stewardship Fund's two grant programs, Innovative Nutrient and Sediment Reduction Grants (INSR) and Small Watershed Grants (SWG) which are federally funded by the U.S. EPA.

Geographic Focus in Lancaster County

Countywide

Private Sector Partners

C.S. Davidson, Inc.

Crow & Berry Land Management

David Miller/Associates, Inc.

Earthbound Artisan

LandStudies, Inc.

Red Barn Consulting

RETTEW

TeamAg, Inc.

Other Private Sector Partners

C.S. Davidson, Inc.

www.csdavidson.com

Contact: Jordan Good, 315 West James Street, Suite 102, Lancaster PA 17603, (717) 481-2991, jtg@csdavidson.com



C.S. Davidson is a full-service engineering firm based in Lancaster.

Resources and Expertise

Outreach

C.S. Davidson has staff capacity to speak at a variety of workshops and events that outreach to and landowners and municipalities about the benefits of implementing conservation practices

Technical Assistance

C.S. Davidson provides planning, design, engineering and permitting services for implementing stormwater BMPs. C.S. Davidson also provides support to municipalities in MS4 permit compliance and developing and implementing MS4 Pollutant Reduction Plans. In particular, through its GIS-based data platform, CSDatum, it can provide data management for all of a municipality's MS4 permit needs.

Implementation Assistance

C.S. Davidson can work with interested landowners and partners to explore and secure funding sources to implement conservation projects.

Geographic Focus in Lancaster County

Countywide

Crow & Berry Land Management

www.crowandberry.com

Contact: Austin Unruh, Owner, 2860 Best Rd, Morgantown, PA 19543,
484-364-0315, austin@crowandberry.com



CROW & BERRY
LAND MANAGEMENT

Crow & Berry restores economies and ecologies by planting hard-working trees at scale on farms, in pastures, and along streams. We research, trial, and learn how best to integrate trees with active pastures for profit and conservation, and advance that through creative education and partnerships. We're committed to helping farmers add trees in such a way that they increase profits, resiliency, and their positive impact on the land.

Resources and Expertise

Outreach

Our outreach is particularly focused on silvopasture, the planting of trees in pastures. It is proving to be of real interest to farmers.

Technical Assistance

Crow & Berry provides technical assistance on the aforementioned silvopasture, but also in the practical establishment of riparian buffers, with particular expertise in multifunctional buffers.

Implementation Assistance

We can design, plant, and perform ongoing post-planting care for buffers. For silvopasture, we can locate funding, manage the installation, and perform follow-up care.

Geographic Focus in Lancaster County

Countywide

David Miller/Associates, Inc.

www.dmai.com

Contact: Scott Hain, 1076 Centerville Road, Lancaster PA 17601, (717) 898-3402 x116, shain@dmai.com



DM/A is a full-service consulting firm with expertise in civil engineering, landscape architecture, planning, geology and surveying.

Resources and Expertise

Outreach

DM/A has staff capacity to speak at a variety of workshops and events that outreach to farmers and landowners about the benefits of implementing conservation and restoration practices.

Technical Assistance

DM/A can provide planning, design and engineering services for implementing stormwater BMPs. DM/A also provides support to municipalities in MS4 permit compliance and developing and implementing MS4 Pollutant Reduction Plans, and provides coordination support for implementing Lancaster County's Phase 3 Watershed Implementation Plan (Phase 3 WIP) County Action Plan (CAP).

Implementation Assistance

DM/A can work with interested landowners and partners to explore and secure funding sources to implement conservation projects.

Geographic Focus in Lancaster County

Countywide

Earthbound Artisan LLC

www.earthboundartisan.com

Contact: Tim Seifarth, Owner, 175 East King Street Suite #4 Ephrata, 17522
(717) 507-6267, tim@earthboundartisan.com



Earthbound Artisan is a social enterprise with a focus on ecological land care, in design, construction, management and consultation that relies on natural systems and processes. That means we prefer using native plants and ecological benefactors in design and construction. And we only hand-weed and use organic soil amendments in management.

Resources and Expertise

Outreach

Earthbound Artisan works primarily with private landowners to help stabilize and maintain productive ecosystems while avoiding inorganic chemicals and reducing fossil fuel use (for more details on services, see Technical Assistance below).

Technical Assistance

Earthbound Artisan is a garden and stonework construction company that is fully committed to weighing the environmental impact of each action. We provide design, consultation, and implementation of conservation landscaping, rainwater BMPs, organic land management, stonework, riparian buffers and restoration projects. Our staff has certifications in Arboriculture (ISA) and Permaculture, is Landscape Industry Certified (CLT-E) and has certified Chesapeake Bay Landscape Professionals (CBLP).

Implementation Assistance

Earthbound Artisans works with clients to explore grant opportunities and secure funding to implement water quality and conservation projects.

Geographic Focus in Lancaster County

Countywide

LandStudies, Inc.

www.landstudies.com

Contact: Kelly Gutshall, President, 315 North Street, Lititz PA 17543, (717) 627-4440, kelly@landstudies.com



LandStudies, Inc. is a design-build ecological restoration firm located in Lititz, Lancaster County. We believe that by properly restoring and managing our natural resources, we improve their function while maximizing their economic potential.

Resources and Expertise

Outreach

LandStudies staff has experience speaking at a variety of workshops and events that educates both the public and private sectors on the benefits of Economic Ecology – the symbiotic relationship between the environment and economics. LandStudies’ Healthy Watershed Tours are another way that they provide educational opportunities through first-hand observations of their implemented projects in Lancaster County.

Technical Assistance

LandStudies has assisted thousands of clients on projects throughout the Mid-Atlantic region, specifically focusing on ecological restoration that addresses water resource issues and the challenges facing the Chesapeake Bay Watershed. Examples include design, permitting, construction and maintenance for stream and floodplain restoration, stormwater management BMPs, watershed restoration, riparian buffers, native landscapes (meadows, reforestation, wetlands, etc.) and forest / tree preservation.

Our diverse and talented design and environmental professionals provide a range of services related to the interaction of land and water systems. As a design-build company, we boast an ecological construction division comprised of experienced construction managers and field operations crew who provide the licensure, materials, personnel and skills necessary to produce quality naturalized landscapes. We also offer monitoring and maintenance services to ensure that our projects continue to be successful after construction. Our services include: water resources engineering; municipal services related to MS4, land management and stormwater management; watershed planning and assessment; landscape architecture; construction management; maintenance and monitoring; and urban forestry.

Implementation Assistance

LandStudies provides construction and construction oversight, planting and maintenance services to implement conservation projects, and can work with interested landowners and partners to explore and secure funding sources to support implementation.

Geographic Focus in Lancaster County

Countywide

Red Barn Consulting

www.redbarnag.com

Contact: Peter Hughes, 3050 Yellow Goose Road, Lancaster PA 17601-1818, (717) 393-2176, peterh@redbarnag.com



Red Barn Consulting is a full-service agricultural consulting firm providing permitting, planning, design and engineering services for farmers.

Resources and Expertise

Outreach

Red Barn has staff capacity to speak at a variety of workshops and events that outreach to farmers and landowners about the benefits of conservation. Red Barn staff will also visit farms to discuss conservation practice implementation goals and needs.

Technical Assistance

Red Barn develops conservation and nutrient management plans, provides assistance with CAFO permitting, and provides full-service design and engineering to implement conservation projects.

Implementation Assistance

Red Barn can assist farmers in assessing and obtaining funding sources for implementation of conservation practices on farms, and provide construction oversight, inspections, and post-construction certifications.

Geographic Focus in Lancaster County

Countywide

RETTEW

www.rettew.com

Contact: Kara Kalupson, RLA, MS4 Coordinator, 3020 Columbia Avenue,
Lancaster, PA 17603, 717-431-3706, kara.kalupson@rettew.com



RETTEW is an engineering and environmental consulting firm headquartered in Lancaster. The company provides a wide variety of services supporting implementation of conservation practices.

Resources and Expertise

Outreach

RETTEW's professional staff speak at a variety of workshops and events to educate landowners about the benefits of managing stormwater for water quality, implementing green infrastructure, increasing native plant species in the landscape, and restoring stream corridors.

Technical Assistance

RETTEW's team of landscape architects, engineers, and restoration specialists provide planning, design, engineering, and permitting services necessary to implement stormwater management best management practices, conservation landscaping and riparian buffers, constructed wetlands, and floodplain restoration projects.

RETTEW also serves as the MS4 coordinator for municipalities to support MS4 permit compliance, prepare and implement pollutant reduction plans, and implement pollutant control measures within the watersheds of impaired streams.

Implementation Assistance

RETTEW works with municipalities and landowners to explore grant opportunities and secure funding to implement water quality and conservation projects.

Geographic Focus in Lancaster County

Countywide

TeamAg, Inc.

www.teamaginc.com

Contact: Chris Sigmund, President, 120 Lake Street, Ephrata PA 17522,
(717) 721-6795, chriss@teamaginc.com



TeamAg is a full-service agricultural consulting firm providing engineering and land planning, crop consulting, and agricultural and conservation planning and permitting services for farms.

Resources and Expertise

Outreach

TeamAg has staff capacity to speak at a variety of workshops and events that outreach to farmers and landowners about the benefits of implementing conservation practices. TeamAg also conducts farmer visits to discuss conservation practice implementation and determine a plan of action for farmers willing to implement conservation on their farms.

Technical Assistance

TeamAg provides full scale technical assistance for farmers interested in implementing conservation practice, including conservation and nutrient management plan development, design, engineering and permitting. TeamAg also provides crop consulting and fertility services for crop farmers.

Implementation Assistance

TeamAg can assist farmers in assessing and obtaining funding sources for implementation of conservation practices, and provide construction oversight, inspections, and post-construction certifications for agricultural and stormwater BMPs.

Geographic Focus in Lancaster County

Countywide

Other Private Sector Partners

A variety of other private sector firms provide services relevant to the implementation of conservation practices in Lancaster County. These primarily include design, engineering and permitting services, particularly in the stormwater and municipal sectors. Some, like Rosetree Consulting, provide services for the agricultural sector.

ARRO Consulting, Inc.

Contact: 108 W. Airport Road, Lititz PA 17543,
(717) 569-7021

<https://www.arroconsulting.com/>

Lancaster Civil Engineering Company

Contact: Ben Craddock, 100 S Marshall St, P.O.
Box 8972, Lancaster, PA 17604, (717) 799-

8599, bencraddock@lancastercivil.com

<http://www.lancastercivil.com/>

Becker Engineering

Contact: 525 Greenfield Rd #201, Lancaster,
PA 17601, (717) 295-4975

<http://beckereng.net/>

RGS Associates

Contact: 53 W James St #101, Lancaster, PA
17603, (717) 715-1396,

info@rgsassociates.com

<http://www.rgsassociates.com/>

Diehm & Sons

Contact: 15 Toll Gate Rd, Lititz, PA 17543,
(717) 626-0175, info@diehmandsons.com

<https://www.diehmandsons.com/>

Rosetree Consulting

Contact: Eric Rosenbaum, 20 Glenbrook Drive,
Shillington, PA 19607, (610) 396-7101,

ericrosenbaum@rosetreeconsulting.com

www.rosetreeconsulting.com

ELA Group, Inc.

Contact: 743 S Broad St, Lititz, PA 17543,
(717) 626-7271

<http://www.elagroup.com/>

Spotts, Stevens and McCoy

Contact: Randy Heilman, 701 Creekside Lane,
Lititz PA 17543, (717) 568 2678,

information@ssmgroup.com

<https://www.ssmgroup.com/>

Hanover Engineering

Contact: 20 Snyder Ln # C, Ephrata, PA 17522,
(717) 721-7444

<https://www.hanovereng.com/>

Solanco Engineering Associates, LLC

Contact: Mark Deimler, 103 Fite Way, Suite C,
Quarryville, PA 17566, (717) 786-0355,

mark@solancoengineering.com,

<https://southernlancasterchamber.org/members/solanco-engineering-associates-llc/>

Local Partners

Lancaster County Watershed Groups

Lancaster County Municipalities

Lancaster County Watershed Groups

Contact: Matt Kofroth, Watershed Specialist, 1383 Arcadia Road, Lancaster PA 17601, (717) 299-5361 ext. 2523, mattkofroth@lanasterconservation.org

For more information on Lancaster County's watersheds and its watershed groups, visit www.lancasterwatersheds.org.

Chiques Creek Watershed Alliance

Contact: Penn Township Office, 97 N Penryn Rd, Manheim PA 17545, planner@penntwplanco.org; www.chiquescreewatershed.org

Cocalico Creek Watershed Association

Contact: Jay Snyder, PO Box 121, Reinholds PA 17569, jsnyder@ephrataboro.org www.facebook.com/CocalicoCreekWatershedAssn/

Donegal Fish and Conservation Association

Contact: www.facebook.com/groups/63211886100/

Friends of Fishing Creek

Contact: friendsoffishingcreek@gmail.com
www.friendsoffishingcreek.com
www.facebook.com/Friends-of-Fishing-Creek-1299118563536584/

Lititz Run Watershed Alliance

Contact: jmartzall@warwicktownship.org
www.warwicktownship.org/LRWA

Little Conestoga Watershed Alliance

Contact: PO Box 6355, Lancaster PA 17607, lcwa@mail.com
www.littleconestoga.org

Millcreek Preservation Association

Contact: PO Box 300, Bird-in-Hand PA 17505

Octoraro Watershed Association

Contact: 517 Pine Grove Rd, Nottingham PA 19362, (717) 529-2132, octorarowa@gmail.com
www.theowa.org

Pequea Creek Watershed Association

Contact: kara.kalupson@rettew.com
www.facebook.com/Pequea-Creek-Watershed-325656381245/

Tri-County Conewago Creek Association

Contact: conewagocreek@yahoo.com
www.conewagocreek.org
www.facebook.com/tricountyconewagocreekassociation/

Lancaster County Municipalities

Adamstown Borough
<http://adamstownborough.org/>

Akron Borough
<http://www.akron-pa.com/>

Bart Township
46 Quarry Rd, Quarryville PA 17566
(717) 786-2877

Brecknock Township
<http://brecknocktownship.us/>

Caernarvon Township
<https://caernarvonlancaster.org/>

Christiana Borough
<http://christianaboro.com/>

Clay Township
<http://www.claytwp.com/>

East Cocalico Township
<https://www.eastcocalicotownship.com/>

West Cocalico Township
<http://westcocalicotownship.com/>

Colerain Township
<http://www.coleraintwppa.com/>

Columbia Borough
<https://www.columbiapa.net/>

Conestoga Township
<https://conestogatwp.com/>

Conoy Township
<https://conoytownship.org/>

Denver Borough
<http://denverboro.net/>

East Donegal Township
<https://eastdonegaltwp.com/>

West Donegal Township
<http://www.wdtwp.com/>

Drumore Township
<http://www.drumoretownship.org/>

East Drumore Township
[Website](#)

Earl Township
<http://earltownship.com/>

East Earl Township
<https://eastearltwp.org/>

West Earl Township
<http://www.westearltwp.org/>

East Petersburg Borough
<https://www.eastpetersburgborough.org/>

Eden Township
<https://www.edentownship.org/>

Elizabeth Township
<http://elizabethtownship.net/>

Elizabethtown Borough
<https://www.etownonline.com/>

Ephrata Borough
<http://ephrataboro.org/>

Ephrata Township
<http://www.ephratatownship.org/>

Fulton Township
<http://fultontownship.org/>

East Hempfield Township
<http://www.easthempfield.org/>

West Hempfield Township
<http://www.easthempfield.org/>

East Lampeter Township
<https://eastlampetertownship.org/>

West Lampeter Township
<http://www.westlampeter.com/>

City of Lancaster
<https://cityoflancasterpa.com/>

Lancaster Township
<http://www.twp.lancaster.pa.us/>

Leacock Township
<https://www.leacocktwp.com/>

Upper Leacock Township
<https://www.ultwp.com/>

Lititz Borough
<https://www.lititzborough.org/>

Little Britain Township
<https://www.littlebritain.org/>

Manheim Borough
<https://manheimboro.org/>

Manheim Township
<http://www.manheimtownship.org/>

Manor Township
<http://www.manortwp.org/>

Marietta Borough
<https://boroughofmarietta.com/>

Lancaster County Municipalities (cont.)

Martic Township

<https://www.martictownship.com/>

Millersville Borough

<https://millersvilleborough.org/>

Mount Joy Borough

<http://mountjoyborough.com/>

Mount Joy Township

<http://www.mtjoytwp.org/>

Mountville Borough

<http://mountvilleborough.com/>

New Holland Borough

<http://newhollandborough.org/>

Paradise Township

<https://paradisetownship.org/>

Penn Township

<https://penntwplanco.org/>

Pequea Township

<https://www.pequeatwp.org/>

Providence Township

<http://providencetownship.com/>

Quarryville Borough

<https://quarryvilleborough.com/>

Rapho Township

<https://www.raphotownship.com/>

Sadsbury Township

<http://www.sadsburytownshiplancaster.org>

Salisbury Township

<https://www.salisburytownship.org/>

Strasburg Borough

<https://strasburgboro.org/>

Strasburg Township

<https://www.strasburgtownship.com/>

Terre Hill Borough

<http://www.terrehillboro.com/>

Warwick Township

<https://www.warwicktownship.org/>

SECTION 3: FUNDING RESOURCES INVENTORY

This section provides an inventory of the funding resources available to implement conservation practices in Lancaster County. A total of 49 funding resources are inventoried.

These resources are organized by funding source or sector as follows: federal funding programs; state funding programs; county funding programs; and specific programmatic grants administered by county clean water partners.

For each funding program or resource, the sponsor organization is listed and a summary description of the funding specifications are given. In addition, the types of services funded are listed, as are the types of conservation practices funded by each funding resource.

Federal Funding Programs

Clean Water Revolving Fund (EPA)

Conservation Innovation Grants (CIG) (USDA NRCS)

Conservation Reserve Enhancement Program (CREP) (USDA FSA)

Conservation Stewardship Program (CSP) (USDA NRCS)

EPA's Chesapeake Bay Program Funding (CBIG, CBRAP) (EPA)

EPA's Innovative Nutrient and Sediment Reductions (INSR) Program (NFWF)

EPA's Most Effective Basins Funding (EPA)

EPA's Small Watersheds Grants (SWG) Program (NFWF)

Environmental Quality Incentives Program (EQIP) (USDA NRCS)

Nonpoint Source Pollution Control Section 319 Program (Section 319) (EPA)

Partners for Fish and Wildlife Program (USFWS)

Watershed Protection and Flood Prevention Program (PL-566) (USDA NRCS)

Wetland Reserve Easement Program (WRE) (USDA NRCS)

Clean Water State Revolving Loan Fund

US Environmental Protection Agency (EPA)

Contact: Magdaline Cunningham, (215) 814-2338, Cunningham.magdalene@epa.gov

Services Funded

Conservation Planning
Design, Engineering
Construction

Conservation Practice Types Funded

Ag BMPs
Stormwater BMPs
Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

EPA Region 3 provides grants to the Pennsylvania Infrastructure Financing Agency (PENNVEST) which provides loans at below-market interest rates. Any project with a water quality related purpose is eligible. No cost share or match is required. CWSRF loans provide the cost share for other grant programs. Applications are accepted and loans awarded throughout the year. Over \$300 million is available annually in PENNVEST's revolving fund.

Geographic Focus in Lancaster County

Countywide

Conservation Innovation Grants (CIG)

USDA Natural Resource Conservation Service (NRCS)

Contact: Ashley Lenig, Conservation Program Manager, 359 East Park Drive, Suite 2, (717) 237-2204, ashley.lenig@usda.gov

Services Funded

Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Innovative Agricultural Conservation Practices,
Riparian Buffers, or Restoration Projects

Cost Share Amount/Funding Specifications

CIG is a competitive program that supports the development of new tools, approaches, practices, and technologies to further natural resource conservation on private lands. State and national CIG grants are awarded. All non-federal entities and individuals are eligible to apply, and projects must involve EQIP-eligible producers. 1:1 match is required.

Geographic Focus in Lancaster County

Countywide

Conservation Reserve Enhancement Program (CREP)

USDA Farm Service Agency

Contact: Kimberly Merlau, Lancaster County Executive Director, (717) 874-2500, kimberly.merlau@usda.gov

Services Funded

Design & Engineering
Construction & Implementation

Maintenance
Annual Rental Payments

Conservation Practice Types Funded

Forested Riparian Buffers
Associated Ag BMPs (fencing, crossings, etc.)
Other Wildlife-Related Conservation Practices

Cost Share Amount/Funding Specifications

Depending on width, CREP may cover 100% of the cost of planning, designing, and implementing forest riparian buffers and stream bank fencing. Additional funding is also provided with financial caps for other associated BMPs (crossings, off-stream watering, etc.) and for maintenance (4 years of herbicide application). Per acre annual rental payments for total buffer area for the length of the contract (10 or 15 years) are also provided. Minimum buffer width is 35 feet, but full financial benefits require a width of 50 feet. Funding is also available for other wildlife-related conservation practices on farms (wildlife habitat plantings, warm season grasses, etc.)

Geographic Focus in Lancaster County

Countywide

Conservation Stewardship Program (CSP)

USDA Natural Resource Conservation Service (NRCS)

Contact: Heather Grove, District Conservationist, Lancaster Office, 1383 Arcadia Road, Lancaster PA 17601, (717) 874-2530, heather.grove@usda.gov

Services Funded

Annual Payments

Conservation Practice Types Funded

Enhanced Conservation Activities and Technologies

Cost Share Amount/Funding Specifications

CSP provides annual payments to farmers for implementing enhanced conservation activities and technologies. To be eligible, the farmer must meet a certain threshold of conservation on their farm and want to do more. Payment amounts are determined each year and are on a per unit basis for the practice. The most recent payment rates for CSP-funded practices in Pennsylvania can be found [here](#).

Geographic Focus in Lancaster County

Countywide

EPA's Chesapeake Bay Program Funding (CBIG & CBRAP)

US Environmental Protection Agency (EPA)

Contact: Rebecca Hindin, Grants Manager, EPA Chesapeake Bay Program Office, (410) 267-5770, hindin.rebecca@epa.gov

Services Funded

Conservation Planning
Design, Engineering & Permitting
Implementation & Maintenance

BMP Tracking & Verification
CCD, State Ag Staff &
Programs

Conservation Practice Types Funded

Ag BMPs
Stormwater BMPs

Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

Chesapeake Bay Implementation Grant (CBIG) and Chesapeake Bay Regulatory and Accountability Program (CBRAP) are annual non-competitive grants made to the Bay states to support implementation of priority programs to reduce nutrient and sediment loads to the Bay. Depending on state workplan priorities, funding can potentially be used for all services needed to implement all conservation practice types. 1:1 match required.

Geographic Focus in Lancaster County

Countywide

EPA's Innovative Nutrient and Sediment Reduction (INSR) Grants Program (NFWF)

National Fish and Wildlife Foundation (NFWF)

Contact: Jake Reilly, CBSF Director, 1133 Fifteenth St, N.W., Suite 1000, Washington, DC 20005, (202) 595-2610, jake.reilly@nfwf.org

US Environmental Protection Agency (EPA)

Contact: Rebecca Hindin, Grants Manager, EPA Chesapeake Bay Program Office, (410) 267-5770, hindin.rebecca@epa.gov

Services Funded

Conservation Planning
Design & Engineering

Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Stormwater BMPs

Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

EPA's INSR program, currently administered by NFWF, funds projects that accelerate the rate and scale of water quality improvements through coordination and collaboration of sustainable, regional partnerships implementing proven water quality practices more cost-effectively. Awards generally range from \$500,000 to \$1 million. 1:1 non-federal match is required.

Geographic Focus in Lancaster County

Countywide

EPA's Most Effective Basins Funding

US Environmental Protection Agency (EPA)

Contact: Contact: Rebecca Hindin, Grants Manager, EPA Chesapeake Bay Program Office, (410) 267-5770, hindin.rebecca@epa.gov

Services Funded

Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Riparian Buffers

Cost Share Amount/Funding Specifications

EPA funding allocated to PA (and other States in the Chesapeake Bay watershed) to implement ag BMPs for agricultural nitrogen reductions in the “most effective basins,” which includes several watersheds in Lancaster County.

Geographic Focus in Lancaster County

Chiques Creek, Cocalico Creek, Upper Conestoga River, Lower Conestoga River, Mill Creek, Octoraro Creek, Pequea Creek, River Hills Tributaries North (south of Chiques)

EPA's Small Watershed Grants (SWG) Program (NFWF)

National Fish and Wildlife Foundation (NFWF)

Contact: Jake Reilly, CBSF Director, 1133 Fifteenth St, N.W., Suite 1000, Washington, DC 20005, (202) 595-2610, jake.reilly@nfwf.org

US Environmental Protection Agency (EPA)

Contact: Rebecca Hindin, Grants Manager, EPA Chesapeake Bay Program Office, (410) 267-5770, hindin.rebecca@epa.gov

Services Funded

Conservation Planning
Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Stormwater BMPs
Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

EPA's SWG program, currently administered by NFWF, funds projects that promote community-based efforts. Implementation grants fund projects that result in on-the-ground implementation, range from \$50,000-\$500,000, and require one-third non-federal match. Planning and Technical Assistance grants are awarded up to \$50,000 for projects that enhance local capacity to implement in the future through assessment, planning, design, etc..

Geographic Focus in Lancaster County

Countywide

Environmental Quality Incentives Program (EQIP)

USDA Natural Resource Conservation Service (NRCS)

Contact: Heather Grove, District Conservationist, Lancaster Office, 1383 Arcadia Road, Lancaster PA 17601, (717) 874-2530, heather.grove@usda.gov

Services Funded

Conservation Planning
Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Agricultural Conservation Practices
Riparian Buffers
Restoration Projects
Forestland Management Practices

Cost Share Amount/Funding Specifications

Each year, NRCS reevaluates the amount of funding for each practice in each state. Funding amounts are on a per unit basis for the practice. They roughly equate to around 75% or more of actual costs. The most recent payment rates for EQIP-funded practices in Pennsylvania can be found [here](#). Eligible applicants must have an NRCS Conservation Plan.

Geographic Focus in Lancaster County

Countywide

Nonpoint Source Pollution Control Section 319 Program (Section 319)

US Environmental Protection Agency (EPA)

Contact: Mike Hoffmann, Biologist, EPA Region 3, (215) 814-2716, hoffmann.michael@epa.gov

Services Funded

Conservation Planning
Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Stormwater BMPs
Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

EPA Section 319 funding is administered in Pennsylvania by [DEP](#). Grants are awarded for projects that implement approved Section 319 Watershed Implementation Plans (319 WIPs). Currently 319 WIPs exist for Conewago Creek, Conowingo Creek, and Mill Creek. Section 319 can provide full or partial funding of projects.

Geographic Focus in Lancaster County

Conewago Creek, Conowingo Creek, and Mill Creek Watersheds

Partners for Fish and Wildlife Program

U.S. Fish and Wildlife Service (USFWS)

Contact: Mark Roberts, 110 Radnor Rd, Suite 101, State College PA 16801, (814) 234-4090 ext. 7457, mark_roberts@fws.gov

Services Funded

Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Stream, Wetland Restoration Projects
Riparian Buffers

Cost Share Amount/Funding Specifications

External funding must be available for USFWS to implement restoration projects, but the Partners can provide in-kind match toward projects, some of which may be provided by non-federal partners.

Geographic Focus in Lancaster County

Countywide

Watershed Protection and Flood Prevention Program (PL-566)

USDA Natural Resource Conservation Service (NRCS)

Contact: Heather Grove, District Conservationist, Lancaster Office, 1383 Arcadia Road, Lancaster PA 17601, (717) 874-2530, heather.grove@usda.gov

Services Funded

Watershed Planning

Conservation Practice Types Funded

Floodplain Restoration Projects

Cost Share Amount/Funding Specifications

NRCS's PL-566 program presently pays 100% of the cost of developing a watershed plan to identify priority floodplain restoration projects in the Chiques Creek Watershed. Potential exists for future funding in support of design and implementation of floodplain restoration projects identified through the planning process.

Geographic Focus in Lancaster County

Chiques Creek Watershed

Wetland Reserve Easement Program (WRE)

USDA Natural Resource Conservation Service (NRCS)

Contact: Heather Grove, District Conservationist, Lancaster Office, 1383 Arcadia Road, Lancaster PA 17601, (717) 874-2530, heather.grove@usda.gov

Services Funded

Design, Engineering & Permitting
Construction & Implementation
Easements to Preserve Wetlands

Conservation Practice Types Funded

Wetland Restoration Projects

Cost Share Amount/Funding Specifications

The WRE program pays for the costs of wetland restoration and easements to protect wetland areas on farms. NRCS pays for 50-100% of the easement value and 50-100% of restoration costs of restoration, with exact payment amounts dependent upon what type of easement into which the farmer wants to enter.

Geographic Focus in Lancaster County

Countywide

State Funding Programs

Act 13 Watershed Restoration and Protection and Flood Mitigation Programs (DCED)

Agricultural Plan Reimbursement Program (APRP) (DEP)

Community Development Block Grants (LCRA)

DCNR Riparian Buffer Programs (DCNR)

DCNR Community Conservation Partnerships Program (C2P2) (DCNR)

Exelon Habitat Improvement Project Program (PFBC)

Growing Greener (DEP)

PENNVEST Nonpoint Source Projects (PENNVEST)

Resource Enhancement and Protection Program (REAP) (SCC)

TreeVitalize (DCNR)

Act 13 Watershed Restoration & Protection and Flood Mitigation Programs

PA Department of Community and Economic Development (DCED), Commonwealth Finance Authority

Contact: CFA Programs Division, Commonwealth Keystone Building, 400 North Street, 4th Floor, Harrisburg PA 17120-0225, (717) 787-6245, ra-dcedsitedvpt@pa.gov

Services Funded

Design, Engineering & Permitting
Construction & Implementation
Maintenance

Conservation Practice Types Funded

Ag BMPs
Stormwater BMPs
Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

May not exceed \$300,000 for Watershed Restoration & Protection Grants (which may fund a variety of practices) and \$500,000 for Flood Mitigation Grants (which may include floodplain restoration as part of a flood mitigation project). For both programs, 15% cash match is required and design/engineering is limited to 10% of overall costs.

Geographic Focus in Lancaster County

Countywide

Agricultural Planning Reimbursement Program (APRP)

PA Department of Environmental Protection (DEP)

Contact: Jedd Moncavage, TeamAg, Inc., 120 Lake Street, Ephrata PA 17522, (717) 721-6795, jeddm@teamaginc.com

Services Funded

Conservation Planning

Conservation Practice Types Funded

Ag E&S Plans, Conservation Plans, Manure Management Plans, Nutrient Management Plans

Cost Share Amount/Funding Specifications

Program reimburses farmers who incur a fee to develop their agricultural plans. Total costs depend upon farm size of the farm and number of plans for which reimbursement is sought. Total reimbursement can range from \$250 to \$1500 per plan, with a maximum reimbursement amount per landowner/operator of \$6,000.

Geographic Focus in Lancaster County

Countywide

Community Development Block Grants (CDBG)

Lancaster County Redevelopment Authority

Contact: Justin Eby, Deputy Executive Director, 28 Penn Square, Suite 200, Lancaster, PA 17603, (717) 394-0793 ext. 225, jeby@lchra.com

Services Funded

Construction & Implementation

Conservation Practice Types Funded

Stormwater BMPs

Cost Share Amount/Funding Specifications

The CDBG program is administered by the Lancaster County Redevelopment Authority. CDBG can fund a variety of improvements in a community's low-to-moderate income areas, including street repairs, improved water and sewer infrastructure to reduce inflow and infiltration (I&I), or stormwater management improvements. Maximum grant amounts are \$200,000 per project, and municipalities are limited to 2 projects per funding cycle. CDBG will pay for 95% of construction costs up to \$200,000. 20% match of total project cost and 5% match for construction costs is required. Engineering and design are generally contributed as match. Projects need to be "shovel ready," as they must be fully implemented within one year of contracting, and 50% completed within 6 months.

Geographic Focus in Lancaster County

Countywide, except for the City of Lancaster. The City of Lancaster receives its own CDBG funding allocation from HUD and administers its own program. For more information on the City's CDBG program, contact Susannah Bartlett, Community Development Administrator, (717) 291-4743, subartlett@cityoflancasterpa.com.

DCNR Riparian Buffer Grant Program

PA Department of Conservation and Natural Resources (DCNR)

Contact: Kelly Rossiter, 400 Market Street, Harrisburg PA 17105, (717) 772-3319, krossiter@pa.gov

Services Funded

Planning & Design
Implementation & Post-Planting Establishment

Conservation Practice Types Funded

Riparian Buffers

Cost Share Amount/Funding Specifications

Riparian buffer grants are funded through DCNR's Community Conservation Partnerships Program (C2P2). Grants fund outreach, technical assistance, implementation and maintenance of forest riparian buffers within the grant period (3-4 years). The minimum grant request is \$50,000 and 1:1 match (cash and/or in-kind) is required.

Geographic Focus in Lancaster County

Countywide

DCNR Community Conservation Partnerships Program (C2P2)

PA Department of Conservation and Natural Resources (DCNR)

Contact: Kelly Rossiter, 400 Market Street, Harrisburg PA 17105, (717) 772-3319, krossiter@pa.gov

Services Funded

Planning, Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Stormwater BMPs
Riparian Buffers

Cost Share Amount/Funding Specifications

DCNR's C2P2 grants can fund not only forest riparian buffer projects, but also other conservation related projects, including stream restoration, floodplain restoration, green infrastructure stormwater BMPs at recreation sites, etc. Watershed conservation planning can also be supported. The program can also help build capacity or support broader initiatives to build watershed partnerships and educate and engage the public around watershed initiatives and conduct strategic landowner outreach. For C2P2 grants, 1:1 match is generally required.

Geographic Focus in Lancaster County

Countywide

Exelon Habitat Improvement Project Program (PFBC)

PA Fish and Boat Commission

Contact: Tyler Neimond, Chief, Division of Habitat Management, 595 East Rolling Ridge Drive, Bellefonte PA 16823, (814) 359-5185, tneimond@pa.gov

Services Funded

Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

PFBC receives \$100,000 annually for habitat improvement projects in York and Lancaster Counties. These may include ag BMPs, restoration projects, and riparian buffers. Funds are awarded for projects through an RFP process. A maximum of \$75,000 per project is awarded. Match is not required but is encouraged.

Geographic Focus in Lancaster County

Countywide

Growing Greener

PA Department of Environment Protection (DEP)

Contact: Scott Williamson, Waterways and Wetlands Program Manager, DEP, Southcentral Regional Office, 909 Elmerton Ave, Harrisburg PA 17110, (717) 705-4802, scwilliams@pa.gov

Services Funded

Conservation Planning
Design, Engineering & Permitting
Construction & Implementation
Maintenance

Conservation Practice Types Funded

Ag BMPs
Stormwater BMPs
Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

DEP's Growing Greener program funds watershed projects across all conservation practice types. Grant rounds typically open annually and specific guidance and priorities may vary year to year. 15% match is generally required.

Geographic Focus in Lancaster County

Countywide

PENNVEST Nonpoint Source Projects

PENNVEST

Contact: Tess Schlupp, 333 Market Street 18th Floor, Harrisburg PA 17101, (717) 713-8618, tschlupp@pa.gov

Services Funded

Conservation Planning
Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Stormwater BMPs
Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

PENNVEST can fund agricultural or stormwater BMPs, riparian buffers or restoration projects for eligible applicants. Funding may be in the form of loans, grants or loan/grant combinations.

Geographic Focus in Lancaster County

Countywide

Resource Enhancement and Protection Program (REAP)

PA State Conservation Commission (SCC)

Joel Semke, REAP Coordinator, 2301 N Cameron St, Harrisburg PA 17110, (717) 705-4032, jsemke@pa.gov

Services Funded

Conservation Planning
Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Riparian Buffers
Ag Conservation Equipment (i.e., no till planters)

Cost Share Amount/Funding Specifications

REAP is a tax credit program that funds between 50% and 90% of the costs of implementing ag BMPs (including riparian buffers) on farms. Conservation planning and purchase of equipment necessary to implement ag conservation practices (such as no-till planters) can also be covered. REAP tax credits can be applied to PA tax liability over a 15-year period, or may be sold to another entity with tax liability. 3rd party sponsorship is also permitted.

Geographic Focus in Lancaster County

Countywide

TreeVitalize

PA Department of Conservation and Natural Resources (DCNR)

Contact: Jason Swartz, TreeVitalize Program Manager, (717) 705-2824, c-jlswartz@pa.gov

Services Funded

Implementation

Conservation Practice Types Funded

Urban Tree Plantings
Urban Riparian Buffers

Cost Share Amount/Funding Specifications

The program administration of TreeVitalize is currently transitioning to DCNR, and thus program specifications are not yet available. The program will continue to focus on funding of urban tree plantings, urban riparian buffers, and potentially other green infrastructure-based practices in developed communities.

Geographic Focus in Lancaster County

Countywide

County Funding Programs

Conservation Excellence Grants (CEG) (LCCD)

Dirt & Gravel/Low Volume Roads Program (LCCD)

Exelon Habitat Improvement Project Program (LCCD)

Lancaster Clean Water Fund (LCCF & Partners)

Lancaster County Clean Water Consortium Stormwater Mini Grants (LCCWC)

Smart Growth Transportation Program (Lancaster MPO)

Susquehanna Riverlands Mini Grants (Lancaster Conservancy)

Conservation Excellence Grant Program (CEG)

Lancaster County Conservation District (LCCD)

Contact: Jeff Hill, 1383 Arcadia Rd, Lancaster PA 17601, (717) 299-5361, jeffhill@lancasterconservation.org

Services Funded

Conservation Planning
Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Riparian Buffers
Stream Restoration

Cost Share Amount/Funding Specifications

Funds are for implementation of ag BMPs and buffer and stream restoration projects on farms. The majority of funding will be allocated for implementation, and the goal of the program is to leverage other funding from a mix of grants, loans, tax credits or other funding sources to ensure full implementation of conservation practices on farms. Maximum award is \$250,000 per project. "Small Projects" may be funded at amounts under \$25,000.

Geographic Focus in Lancaster County

Countywide

Dirt & Gravel/Low Volume Road Program

Lancaster County Conservation District (LCCD)

Contact: Matt Kofroth, Watershed Specialist, 1383 Arcadia Road, Lancaster PA 17601, (717) 299-5361 ext. 2523, mattkofroth@lancasterconservation.org

Services Funded

Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Stormwater BMPs

Cost Share Amount/Funding Specifications

Funds are administered by the LCCD to implement culvert replacements, stormwater BMPs, and other environmentally sensitive maintenance practices on unpaved and low volume roads to reduce sediment discharges from roadways to streams. Match is not required but will improve ranking. Eligible applicants include municipalities or PENNDOT. Successful applicants must attend free training presented by the Penn State Center for Dirt & Gravel Road Studies.

Geographic Focus in Lancaster County

Countywide

Exelon Habitat Improvement Project Program (LCCD)

Lancaster County Conservation District (LCCD)

Contact: Matt Kofroth, Watershed Specialist, 1383 Arcadia Road, Lancaster PA 17601, (717) 299-5361 ext. 2523, mattkofroth@lancasterconservation.org

Services Funded

Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

\$225,000 is provided annually to implement conservation practices in Lancaster County. \$150,000 is allocated for stream restoration projects and \$75,000 is for ag BMPs. Match is not required but is accepted. All projects must be fully implemented within the grant period (i.e., design/engineering phase only will not be funded).

Geographic Focus in Lancaster County

Countywide

Lancaster Clean Water Fund

Lancaster County Community Foundation and Lancaster Clean Water Partners

Contact: Allyson Gibson, Lancaster Clean Water Partners, 1383 Arcadia Road, Lancaster PA 17601, (717) 368-4831, agibson@lancastercleanwaterpartners.com

Services Funded

Conservation Planning
Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Stormwater BMPs
Riparian Buffers
Stream Restoration Projects

Cost Share Amount/Funding Specifications

Started with seed money from a NFWF grant and Lancaster Conservancy's Water Week, the fund is established through LCCF as donor advised fund. New donations can grow the fund. Funds awarded by the Partners annually through grant application process administered by the LCCF. Grants are either Community Grants (\$2,500-\$5,000) or Water Quality Impact Grants (\$10,000-\$50,000). Both categories require a 1:1 match of funds or in-kind services. Projects should result in implementation and must be completed within one year.

Geographic Focus in Lancaster County

Countywide

LCCWC Stormwater Mini Grants

Lancaster County Clean Water Consortium

Contact: Joellyn Warren, Chair, 1383 Arcadia Road, Lancaster PA 17601, lancasterccwc@gmail.com

Services Funded

Outreach
Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Stormwater BMPs
Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

\$10,000 are allocated annually. The minimum request is \$3,000. Up to 20% of fund can go toward design; other eligible costs are construction, materials, monitoring and education & outreach. 50% match is required.

Geographic Focus in Lancaster County

Countywide

Smart Growth Transportation Program

Lancaster Metropolitan Planning Organization (MPO)

Contact: Kristiana Barr, Senior Transportation Planner, Lancaster County Planning Department, 150 North Queen Street, Suite 320, Lancaster PA 17603, (717) 299-8333, kbarr@co.lancaster.pa.us

Services Funded

Planning (Studies)
Construction & Implementation

Conservation Practice Types Funded

Stormwater BMPs

Cost Share Amount/Funding Specifications

Funding is provided every two years, with a goal of \$3 million available each funding cycle. Eligible applicants include municipalities, transportation service providers, or other county organizations. Funds can pay for transportation/feasibility studies or construction. Construction projects require all pre-construction costs (design, engineering, etc.) to be paid by applicant. Studies require 20% match. Projects fund transportation improvement projects that may include elements of green infrastructure.

Geographic Focus in Lancaster County

Countywide

Susquehanna Riverlands Mini Grants

Lancaster Conservancy

Contact: Christian Przybylek, 117 S West End Ave, Lancaster PA 17603, (717) 392-7891,
cprzybylek@lancasterconservancy.org

Services Funded

Outreach
Conservation Planning
Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Stormwater BMPs
Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

Grants ranging from \$2,500 to \$25,000 are provided annually for habitat and trail connectivity, ecosystem health, and other conservation priorities along the Susquehanna River. Eligible projects include implementation of conservation projects, particularly those on public lands. Municipalities and nonprofits may apply. A 1:1 match is required, with 50% of the match provided as a cash match.

Geographic Focus in Lancaster County

Municipalities adjacent to Susquehanna River and boroughs within those municipalities (Part of the watersheds of Conewago Creek, Conoy Creek, River Hills Tributaries North, Little Conestoga Creek, Lower Conestoga River, River Tributaries South, Fishing Creek)

Specific Programmatic Grants & Programs

Campbell Foundation Grants

Capital RC&D Grazing Management Program (NFWF, Capital RC&D)

CBF Accelerating Riparian Buffers NFWF Grant (NFWF, CBF)

Chiques-Conoy-Conewago Regional Partnership (NFWF, PSU AEC)

Clay Township Farmer Outreach Initiative (Growing Greener, Clay Township)

Cocalico Creek Watershed Farmer Engagement for Conservation (NFWF, CCWA)

Conewago Creek Watershed 319 Grant (TCCCA)

Conowingo Creek Watershed 319 Grant (DTU)

Farm Stewardship Program (NFWF, Stroud)

Lancaster County 319 Stream Restoration TA (Section 319, LCCD)

Lancaster County Buffer Bonus Program (Growing Greener, Alliance for Chesapeake Bay)

Lancaster County Forest Riparian Buffers Partnership (DCNR, Alliance for Chesapeake Bay)

Lancaster Farmland Trust Farm Conservation Grants (various funding sources, LFT)

Mill Creek Watershed 319 Grant (LCCD)

Multifunctional Riparian Buffers (DCNR, PACD)

Octoraro Farmer Outreach Initiative (Growing Greener, OWA)

PA Soil Health Partnership (NFWF, Growing Greener, Stroud)

Restoring the Octoraro Reservoir (NFWF, Alliance for Chesapeake Bay)

Stroud Forest Riparian Buffer Program (DCNR and other funding sources, Stroud)

Subsurface Application of Manure (Campbell Foundation, LCCD)

Turkey Hill Clean Water Partnership (NFWF, Alliance for Chesapeake Bay)

Campbell Foundation Grants

Campbell Foundation

Contact: Alex Echols, Program Director, Agriculture, 410 Severn Ave, Suite #210, Annapolis MD 21403, (410) 990-0900, aechols@campbellfoundation.org

Services Funded

Outreach and Capacity Building

Conservation Practice Types Funded

Capacity building support to advance broader implementation of all conservation practice types

Cost Share Amount/Funding Specifications

The Keith Campbell Foundation for the Environment provides grants to advance implementation of conservation that results in improvements in water quality, particularly in the Chesapeake Bay. Major support is being provided by the Campbell Foundation currently for the Lancaster Clean Water Partners.

Geographic Focus in Lancaster County

Countywide

Capital RC&D Grazing Management Program

Capital RC&D

Contact: Susan Richards, 401 East Louther Street, Suite 307, Carlisle PA 17013, (717) 241-4361, srichards@capitalrcd.org

Services Funded

Grazing Plans
Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs (specifically, rotational grazing management BMPs)

Cost Share Amount/Funding Specifications

Through funding provided by a NFWF grant and other sources, RC&D can provide peer-to-peer grazing mentoring and technical assistance to farmers interested in implementing grazing management for a variety of animal operations. The program also provides cost share for implementation of rotational grazing management systems. Practices are cost-shared at up to 50%. Development of grazing management plans are fully covered.

Geographic Focus in Lancaster County

Countywide

CBF Accelerating Riparian Buffers NFWF Grant

Chesapeake Bay Foundation

Contact: Molly Cheatum, 1426 North 3rd Street, Harrisburg PA 17102, (717) 769-4141, mcheatum@cbf.org

Services Funded

Outreach
Buffer Planning, Design and Implementation
Maintenance

Conservation Practice Types Funded

Forest Riparian Buffers

Cost Share Amount/Funding Specifications

This grant provides outreach, technical assistance, and implementation and maintenance funds for forest riparian buffers in Lancaster and other priority counties. Technicians are available to meet with landowners and provide planning and technical assistance. Funds cover all costs of implementation and post-planting maintenance. The grant also funds a simulated property tax relief incentive of \$100/acre/year to the landowner for the ecosystem services provided by buffers implemented through this program. Training and certification in buffer planning, design, planting and maintenance through the Chesapeake Bay Landscape Professionals (CBLP) program is available to landscape professionals to enhance technical assistance capacity.

Geographic Focus in Lancaster County

Countywide

Chiques-Conoy-Conewago Regional Partnership (NFWF INSR)

Penn State Agriculture and Environment Center

Matt Royer, Director, 111 Ferguson Building, University Park, 16802, (814) 863-8756, mroyer@psu.edu

Services Funded

Outreach
Conservation Planning
Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

Grant funds partnerships focused on ag outreach in the target watersheds. Funding for implementation of ag BMPs, riparian BMPs or restoration earned per acre of buffer implemented at \$4,000/acre capped at \$20,000. Buffers are funded by leveraging other resources (CREP, DCNR, etc.) Farms with no streams may earn up to \$10,000 cost share for ag BMPs. Additional grant funds are available for larger-scale stream restoration projects.

Geographic Focus in Lancaster County

Conewago Creek, Chiques Creek, Conoy Creek, River Tributaries North Watersheds

Clay Township Farmer Outreach Initiative (GG Grant)

Clay Township

Contact: Bruce Leisey, Township Manager, 870 Durlach Road, Stevens PA 17578, (717) 733-9675,
bruce@claytwp.com

Services Funded

Outreach

Conservation Practice Types Funded

None, but farmer outreach will set the stage for implementation of ag BMPs, riparian buffers and potentially restoration projects.

Cost Share Amount/Funding Specifications

An inventory of all farms in Clay Township to document existing BMPs and outreach to farmers about implementing additional conservation practices will be conducted. The grant will also fund 3 farmer educational workshops and deploy 3 water quality monitoring sondes in the township.

Geographic Focus in Lancaster County

Clay Township (Cocalico Creek Watershed)

Cocalico Creek Watershed Farmer Engagement for Conservation (NFWF SWG)

Cocalico Creek Watershed Association

Contact: Jay R. Snyder, Cocalico Creek Watershed Association, P.O. Box 121, Reinholds, PA 17569-0121, (717) 738-9282, jsnyder@ephrataboro.org

Services Funded

Outreach
Soil Health Mentoring, Testing
Nutrient Management
Design

Conservation Practice Types Funded

Ag BMPs (preliminary design work)

Cost Share Amount/Funding Specifications

Funding available for farmer outreach (winter meetings, farmer visits), soil health testing, mentoring and coaching, advanced N testing, and preliminary design work for ag BMPs.

Geographic Focus in Lancaster County

Cocalico Creek Watershed

Conewago Creek Watershed (319 Grant)

Tri-County Conewago Creek Association

Stewart Williammee, President, 230 South Hertzler Road, Elizabethtown PA 17022, (717) 984-3708,
conewagocreek@yahoo.com

Services Funded

Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

Grant is funding stream restoration, riparian buffers and ag BMPs in Conewago Creek watershed.

Geographic Focus in Lancaster County

Conewago Creek Watershed

Conowingo Creek Watershed (319 Grant)

Donegal Trout Unlimited

Bob Kutz, P.O. Box 8001, Lancaster PA 17604, (717) 940-1541, kutz.bob@gmail.com

Services Funded

Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

Grant is funding stream restoration, riparian buffers and ag BMPs in Conowingo Creek watershed.

Geographic Focus in Lancaster County

Conowingo Creek Watershed

Farm Stewardship Program (NFWF SWG)

Stroud Water Research Center

Lamonte Garber, 970 Spencer Road, Avondale PA 19311, (610) 268-2153, lgarber@stroudcenter.org

Services Funded

Conservation Planning
Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Riparian Buffers

Cost Share Amount/Funding Specifications

Two NFWF Small Watershed Grants fund ag BMPs through Farm Stewardship Program offering a “buffer bonus” for implementing forest riparian buffers. One of these is focused on converting marginal cropland. Funding is earned per acre of buffer implemented at \$4,000/acre capped at \$20,000. Buffers are funded by leveraging other resources (CREP, DCNR, etc.)

Geographic Focus in Lancaster County

Initially Conewago, Cocalico, Chiques, Pequea and Octoraro Watersheds, then opens up countywide.

Lancaster County 319 Watersheds Stream Restoration Technical Assistance (319 Grant)

Lancaster County Conservation District

Contact: Matt Kofroth, Watershed Specialist, 1383 Arcadia Road, Lancaster PA 17601, (717) 299-5361 ext. 2523, mattkofroth@lanasterconservation.org

Services Funded

Design, Engineering & Permitting
Monitoring

Conservation Practice Types Funded

Stream Restoration

Cost Share Amount/Funding Specifications

Grant funds design and permitting of approximately 8 stream restoration projects in the three approved 319 watersheds in the Lancaster County. Funding also covers installation of four monitoring sondes, two each in Conewago and Conowingo Creek watersheds.

Geographic Focus in Lancaster County

Conewago Creek, Conowingo Creek, Mill Creek Watersheds

Lancaster County Buffer Bonus Program (GG Grant)

Alliance for the Chesapeake Bay

Contact: Jenna Mitchell, PA Director, 37 East Orange St, Suite 302, Lancaster PA 17602, (717) 517-8698,
jmitchell@allianceforthebay.org

Services Funded

Outreach
Conservation Planning
Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Stormwater BMPs
Restoration Projects

Cost Share Amount/Funding Specifications

“Buffer bonus” funds are for landowners willing to implement new forest riparian buffers. Funds are earned at \$4,000/acre of new buffer installed, capped at \$20,000 and may be used toward implementation of ag BMPs, stormwater BMPs, and stream restoration projects. Funding is also available to support buffer maintenance.

Geographic Focus in Lancaster County

Countywide

Lancaster County Forest Riparian Buffers Partnership (DCNR Grants)

Alliance for the Chesapeake Bay

Contact: Jenna Mitchell, 37 East Orange St, Suite 302, Lancaster PA 17602, (717) 517-8698,
jmitchell@allianceforthebay.org

Services Funded

Outreach
Buffer Planning, Design & Implementation
Maintenance

Conservation Practice Types Funded

Riparian Buffers

Cost Share Amount/Funding Specifications

Grant funds outreach, technical assistance, implementation and maintenance of forest riparian buffers, including multifunctional buffers, across Lancaster County. Planning, design and implementation costs are covered at 100% for buffers, fencing and crossings. Maintenance is also covered at 100% for three years over the life of the grant.

Geographic Focus in Lancaster County

Countywide

LFT Farm Conservation Grants

Lancaster Farmland Trust

Contact: Jeff Swinehart, 125 Lancaster Ave, Strasburg PA 17579, (717) 687-8484,
jswinehart@lancasterfarmlandtrust.org

Services Funded

Outreach
Conservation Planning

Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Ag BMPs
Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

LFT has received a variety of grants over the years from various sources (NFWF, Chesapeake Bay Trust, Campbell Foundation, CFA, DEP) to fund farmer outreach and implementation of BMPs on farms. Outreach staff identifies landowners willing to implement priority projects, and funds are provided for conservation planning where needed and implementation of BMPs. Implementation is generally fully cost shared, although there is some self-funding depending on the project. Different grants are often matched together to fully meet project costs. Presently funding is available for conservation plan development in Paradise Township (Pequea Creek Watershed) and BMP implementation in Mill Creek Watershed.

Geographic Focus in Lancaster County

Countywide with focus on Pequea Creek, Mill Creek and Upper Conestoga Watersheds.

Mill Creek Watershed (319 Grant)

Lancaster County Conservation District

Contact: Matt Kofroth, Watershed Specialist, 1383 Arcadia Road, Lancaster PA 17601, (717) 299-5361 ext. 2523,
mattkofroth@lancasterconservation.org

Services Funded

Watershed Planning
Monitoring
Design, Engineering & Permitting
Construction & Implementation

Conservation Practice Types Funded

Riparian Buffers
Restoration Projects

Cost Share Amount/Funding Specifications

Grant is funding update to 319 Watershed Implementation Plan, monitoring sondes, and implementation of stream restoration projects.

Geographic Focus in Lancaster County

Mill Creek Watershed

Multifunctional Riparian Buffers (DCNR Grant)

PA Association of Conservation Districts

Contact: Amy Brown, 5925 Stevenson Ave, Suite A Harrisburg, PA 17112 (717) 238-7224 ext. 104,
abrown@pacd.org

Services Funded

Construction & Implementation
Maintenance

Conservation Practice Types Funded

Multi-Functional Riparian Buffers

Cost Share Amount/Funding Specifications

Subgrants from PACD are available to county conservation districts to fund implementation and maintenance of multifunctional riparian buffers. Funds are available statewide, first come, first serve. Funds can cover planting materials, labor and maintenance through the life of the grant (through June 2022)

Geographic Focus in Lancaster County

Statewide

Octoraro Farmer Outreach Initiative (GG Grant)

Octoraro Watershed Association

Contact: Rupert Rossetti, OWA President, 517 Pine Grove Rd, Nottingham PA 19362, (717) 529-2132, (302) 250-1965 (mobile), rupertrossetti@gmail.com

Services Funded

Outreach
Conservation Planning

Conservation Practice Types Funded

None, but farmer outreach will set the stage for implementation of ag BMPs, riparian buffers and/or restoration projects.

Cost Share Amount/Funding Specifications

This Growing Greener grant funds OWA outreach to mainly plain sect farmers and church elders in the priority Bells Run watershed within the Octoraro. Funds are also available for conservation planning. Farmers interested in implementation are matched with program funding and technical assistance, particularly provided by the Alliance for the Chesapeake Bay, which focuses much of its ag work in the Octoraro.

Geographic Focus in Lancaster County

Bells Run (Octoraro Creek Watershed)

PA Soil Health Partnership (NFWF, Growing Greener)

Stroud Water Research Center

Lisa Blazure, 970 Spencer Road, Avondale PA 19311, (610) 268-2153, lblazure@stroudcenter.org

Services Funded

Outreach
Soil Health and Cover Crop Mentoring & Coaching
Implementation of Soil Health Practices

Conservation Practice Types Funded

Ag BMPs (soil health practices)

Cost Share Amount/Funding Specifications

Various grants fund soil health outreach, mentoring and technical assistance from soil health partners, most notably PA No Till Alliance. No Till Alliance members available to speak at outreach events and visit and mentor farmers interested in transitioning to no-till. Partners PASA offering Soil Health Benchmarking; PSU N modeling. REAP 90% tax credits for soil health practices also being developed through this project.

Geographic Focus in Lancaster County

Countywide

Restoring the Octoraro Reservoir (NFWF SWG)

Alliance for the Chesapeake Bay

Contact: Jenna Mitchell, 37 East Orange St, Suite 302, Lancaster PA 17602, (717) 517-8698,
jmitchell@allianceforthebay.org

Services Funded

Conservation Planning
Implementation

Conservation Practice Types Funded

Ag BMPs

Cost Share Amount/Funding Specifications

Grant funds implementation of ag BMPs in the Octoraro Creek watershed. 50% of total cost is covered, capped at \$50,000 per landowner. 100% of costs of any necessary conservation planning is also funded.

Geographic Focus in Lancaster County

Octoraro Creek Watershed

Stroud Forest Riparian Buffer Program (DCNR, etc.)

Stroud Water Research Center

Lamonte Garber, 970 Spencer Road, Avondale PA 19311, (610) 268-2153, lgarber@stroudcenter.org

Services Funded

Outreach
Buffer Planning, Design & Implementation
Maintenance

Conservation Practice Types Funded

Riparian Buffers

Cost Share Amount/Funding Specifications

A DCNR riparian buffer grant along with other funding sources (NFWF, K10, etc.) funds forest riparian buffer implementation initially in focus watersheds, but then opens up countywide. Costs of forest riparian buffer establishment and post-planting maintenance are fully covered, with landowners encouraged to take on mowing. Funding can be matched with Stroud's Farm Stewardship Program "buffer bonus" to implement ag BMPs, or stand alone for riparian buffer implementation only.

Geographic Focus in Lancaster County

Initial focus on small watersheds in Chiques, Pequea and Octoraro Watersheds, then opens up countywide.

Subsurface Application of Manure (Campbell Foundation Grant)

Lancaster County Conservation District

Contact: Francesca DePrator, 1383 Arcadia Road, Lancaster PA 17601, (717) 299-5361 ext. 2545, grants@lancasterconservation.org

Services Funded

Implementation

Conservation Practice Types Funded

Manure Injection

Cost Share Amount/Funding Specifications

Grant funds custom operator to inject manure for participating farmers. Grant pays for the cost difference of injection vs. surface application of manure. Grant also will cover or subsidize rental of a horse-drawn manure injection unit for plain sect operators.

Geographic Focus in Lancaster County

Countywide

Turkey Hill Clean Water Partnership (NFWF SWG)

Alliance for the Chesapeake Bay

Contact: Jenna Mitchell, 37 East Orange St, Suite 302, Lancaster PA 17602, (717) 517-8698,
jmitchell@allianceforthebay.org

Services Funded

Conservation Planning
Implementation

Conservation Practice Types Funded

Ag BMPs

Cost Share Amount/Funding Specifications

Grant funds implementation of ag BMPs on farms that supply milk to Turkey Hill. 75% of total cost is covered, capped at \$60,000 per landowner. 100% of costs of any necessary conservation planning is also funded.

Geographic Focus in Lancaster County

Countywide

SECTION 4: ANALYSIS AND RECOMMENDATIONS

As is clear from the inventories in Sections 2 and 3, Lancaster County has a large number and diversity of partners and resources to foster action toward achieving clean water goals. Given this fact, one challenge is determining the best strategies and approaches for having these partners and resources work in collaboration and avoid duplication of effort. In this section, we organize and analyze the bounty of resources available in Lancaster County to encourage collaboration and leveraging of resources for maximum impact.

It should be noted at the outset of this section that, even with the existing resources inventoried in this report, Lancaster County lacks what it needs to meet the nutrient reduction goals of the Phase 3 WIP. Funding projections in the Phase 3 WIP indicates that Lancaster County requires a staggering \$107 million annually to implement actions needed to meet WIP goals. Current resources are clearly far short of that. The analysis and the recommendations that follows will not only allow Lancaster County partners to use existing resources more effectively, but it will put the county in a better position to administer the additional money and conduct the necessary outreach and technical assistance that is needed to accelerate the pace of restoration.

Being in the Bullseye: Challenges and Opportunities

The “hot spot” for nutrient and sediment pollution challenges in Pennsylvania and the Chesapeake Bay is Lancaster County. In heat maps showing nutrient loading sources to the Bay, the entire county glows red. The priority focus on Lancaster County has led to many, many partners becoming involved in clean water efforts, and many funders prioritizing the county. Consequently, there is a lot going on in Lancaster County, a lot of different funding resources available, and a lot of partners working to achieve this success. It becomes a challenge to navigate and coordinate. It is a challenge that was the impetus for the formation of the Partners.

This inventory of partners and funding resources does reveal that there are some partners and some resources that provide similar necessary services, or work in similar fashions to achieve clean water goals. Yet given the magnitude of the challenge, the sheer size of the county, the number of individual farmers, other landowners, and local municipalities, there is plenty of room for all partners and resources to achieve impact without duplication or competition. The bigger challenges are figuring out who is doing what and where, what is the full panoply of funding resources available to partners, what are the specifications and requirements with respect to those funding sources, and how can a mix of partners and funds be used best together to work most efficiently and achieve maximum collective impact.

Below we analyze the resources inventoried in Sections 2 and 3 in ways that may help address these challenges. First, we organize the resources available by critical categories. Second, we analyze the resources based largely on these critical categories and make recommendations for combining funding and partner resources in a “integrated funding delivery” concept that allows resources to be leveraged off of one another for maximum strategic impact.

Organizing Resources by Critical Categories

Different partners and funding resources are available in Lancaster County to support a variety of different services in different geographies necessary to implement different types of conservation projects. Some provide outreach assistance to reach landowners; some engineering and design; and some are financial resources to support implementation. Some are focused on agricultural conservation practices, others stormwater BMPs, others stream restoration, or riparian buffer planting. Some resources are available countywide or even beyond Lancaster County; others are focused on specific watersheds or municipalities.

Here we organize the resources available to partners by several important categories that must be considered in any collaborative and accelerated restoration effort. These categories are:

- **Resources by project type** (do they help support implementation of agricultural conservation practices, stormwater BMPs, riparian buffers, or stream/floodplain/wetland restoration, or some combination thereof?) **and services provided** (following the continuum of services illustrated in Figure 1, are these services in the outreach, technical assistance, or implementation assistance categories?)
- **Resources by source or sector** (are the partners or funding resources available to implement conservation coming from the government, non-profit, or private sectors?)
- **Resources needing matching funds** (this analysis helps to determine how best to match and leverage funding resources to develop successful proposals that may require matching funds, following the integrated funding delivery recommendations discussed in the next section)
- **Available resources by watershed** (we divide the county into 16 watersheds and provide a profile of each watershed and list of the partners and resources available in each)

Resources by Project Type and Services Provided

As discussed in Section 1, we organized the **types of conservation projects** necessary to improve clean water in Lancaster County into four basic categories: agricultural BMPs, stormwater BMPs, riparian buffers, and restoration practices (wetland/stream/floodplain restoration).

Another important metric we considered was the **services needed to implement conservation**, following the continuum of outreach-to-technical assistance-to-implementation assistance illustrated in Figure 1. For each category of conservation practice type and each service necessary for implementation, there are several partners, funding programs, and specific programmatic grants available to achieve conservation goals.

These resources are organized and displayed in separate tables for each conservation project type (Table 1 for Ag BMPs, Table 2 for Stormwater BMPs, Table 3 for Riparian Buffers, and Table 4 for Restoration Practices). A color scheme is used to distinguish between these four project types (see Figure 2). Resources are organized into three categories: Partners (with respect to staff or volunteer capacity to provide certain services); Funding Programs (established programs to pay for certain services); and Funding from Programmatic Grants (i.e., funding to pay for services that comes from a particular grant already awarded to a particular partner). The red/yellow/green columns on the right in each table show the types of services provided, following the outreach/TA/implementation continuum and color scheme depicted in Figure 1. If a particular service is provided by a particular resource, this is indicated with a dot.

Figure 2. Color scheme for conservation practice types. Ag BMPs are shown in browns, stormwater BMPs in blues, riparian buffers in greens and restoration practices in purples.



Figure 3. Color scheme for sector types. Federal government is in blue, state government in green, county entities in orange, nonprofits and foundations in gold, private sector in pink, and municipalities in purple.



Finally, we also use a color scheme to represent the source or sector of the partner, funding program, or grantee of the programmatic grant listed in these tables (see Figure 3). With respect to funding resources, in Tables 1-4, we use the source/sector color to represent the funding program source (not necessarily the source/sector of the administrator of the funds), and the grantee of any programmatic grants (not necessarily the source/sector of the funding source itself). These distinctions are made and more fully represented in the next section in Table 5, where we organize all partners and resources by source or sector.

Table 1. Resources for Agricultural BMPs by Services Provided

Resources for Agricultural BMPs	Services Provided					
	Outreach		Technical Assistance		Implementation Assistance	
	Workshops/ Events	Landowner Visits	Planning	Design/ Engineering	Construction/ Implementation	Maintenance
Partners: Staff Capacity						
USDA NRCS	•	•	•	•	•*	
USDA FSA	•					
US EPA	•					
PA DEP	•					
State Conservation Commission	•					
PENNVEST	•					
Lancaster County Conservation District	•	•	•	•		
Lancaster Farmland Trust	•	•				
Alliance for the Chesapeake Bay	•	•				
Chesapeake Bay Foundation	•	•				
Stroud Water Research Center	•	•				
Penn State University	•	•				
TeamAg, Inc.	•	•	•	•		
Red Barn Consulting	•	•	•	•		
Funding Programs						
NRCS Environmental Quality Incentives Program (EQIP)			•	•	•	
NRCS Conservation Innovation Grants (CIG)			•	•	•	
NRCS Conservation Stewardship Program (CSP)					•**	
Section 319 Program	•	•	•	•	•	•
EPA Chesapeake Bay Program Funds (CBIG & CBRAP)	•	•	•	•	•	•
Clean Water State Revolving Loan Fund	•	•	•	•	•	
EPA Most Effective Basin Funding				•	•	
EPA's SWG and INSR grants (currently administered by NFWF)	•	•	•	•	•	
Growing Greener	•	•	•	•	•	•
Ag Planning Reimbursement Program (APRP)			•			
REAP			•	•	•	
PENNVEST			•	•	•	
Act 13 Watershed Restoration and Protection Program	•	•	•	•	•	•
Exelon Habitat Improvement Project Program (PFBC)				•	•	
Exelon Habitat Improvement Project Program (LCCD)				•	•	

Resources for Agricultural BMPs (cont.)	Services Provided					
	Outreach		Technical Assistance		Implementation Assistance	
	Workshops/ Events	Landowner Visits	Planning	Design/ Engineering	Construction/ Implementation	Maintenance
Funding Programs (cont.)						
Conservation Excellence Grants (CEG)			•	•	•	
Susquehanna Riverlands Mini Grants (Lancaster Conservancy)	•	•	•	•	•	
Lancaster Clean Water Fund				•	•	
Campbell Foundation Grants	•	•	•	•	•	•
Funding from Programmatic Grants						
PA Soil Health Coalition (Stroud NFWF, GG Grants)	•	•	•			
Capital RC&D Grazing Management Program (RC&D NFWF)	•	•	•	•	•	
Lancaster County Buffer Bonus Program (ACB GG Grant)		•	•	•	•	
Farm Stewardship Program (Stroud NFWF Grant)		•	•	•	•	
LFT Farm Conservation Grants (LFT various funding sources)	•	•	•	•	•	
Chiques-Conoy-Conewago Regional Partnership (PSU NFWF Grant)	•	•	•	•	•	
Conewago Creek 319 Grant (TCCCA)			•	•	•	
Subsurface Application of Manure (LCCD Campbell Grant)			•		•	
Octoraro Watershed Outreach (OWA GG Grant)		•	•			
Restore the Octoraro (ACB NFWF Grant)				•	•	
Turkey Hill Clean Water Partnership				•	•	
Clay Township Farmer Outreach Initiative (Clay Twp GG Grant)	•	•				

*Through NRCS-administered funding programs like EQIP, CSP, etc.

**Does not pay for construction/implementation per se, but rather provides annual payments for implementing conservation enhancements

Table 2. Resources for Stormwater BMPs by Services Provided

Resources for Stormwater BMPs	Services Provided					
	Outreach		Technical Assistance		Implementation Assistance	
	Workshops/ Events	Landowner Visits	Planning	Design/ Engineering	Construction/ Implementation	Maintenance
Partners: Staff Capacity						
US EPA	•					
PA DEP	•					
PA DCNR	•	•	•	•	•	
PENNVEST	•					
PA DCED	•					
Lancaster County Conservation District	•	•				
Lancaster County Planning Department	•					
Lancaster County Clean Water Consortium	•					
Lancaster Conservancy	•	•				
Alliance for the Chesapeake Bay	•	•			•	•
Chesapeake Bay Foundation	•	•				
Penn State University	•	•			•	•
LandStudies, Inc.	•	•	•	•	•	•
RETTEW	•	•	•	•	•	•
C.S. Davidson	•	•	•	•		
David Miller/Associates	•	•	•	•		
Earthbound Artisan			•	•	•	•
Funding Programs						
Section 319 Program	•	•	•	•	•	•
EPA Chesapeake Bay Program Funds (CBIG & CBRAP)	•	•	•	•	•	•
EPA's SWG and INSR grants (currently administered by NFWF)	•	•	•	•	•	
Clean Water State Revolving Loan Fund	•	•	•	•	•	
Community Development Block Grants					•	
Growing Greener	•	•	•	•	•	•
TreeVitalize						
DCNR C2P2	•	•	•	•	•	
PENNVEST			•	•	•	
Act 13 Watershed Restoration and Protection Program	•	•	•	•	•	•
Dirt & Gravel/Low Volume Road Program				•	•	
Smart Growth Transportation Program			•		•	

Resources for Stormwater BMPs (cont.)	Services Provided					
	Outreach		Technical Assistance		Implementation Assistance	
	Workshops/ Events	Landowner Visits	Planning	Design/ Engineering	Construction/ Implementation	Maintenance
Funding Programs (cont.)						
LCCWC Stormwater Mini Grants	•	•		•	•	
Susquehanna Riverlands Mini Grants (Lancaster Conservancy)	•	•	•	•	•	
Lancaster Clean Water Fund				•	•	
Funding from Programmatic Grants						
Lancaster County Buffer Bonus Program (ACB GG Grant)		•	•	•	•	

Table 3: Resources for Riparian Buffers by Services Provided

Resources for Riparian Buffers	Services Provided					
	Outreach		Technical Assistance		Implementation Assistance	
	Workshops/ Events	Landowner Visits	Planning	Design/ Engineering	Construction/ Implementation	Maintenance
Partners: Staff Capacity						
USDA NRCS	•		•			
USDA FSA	•		•			
PA DEP	•					
PA DCNR	•	•	•	•	•	•
Lancaster County Conservation District	•	•	•			
Lancaster Conservancy	•	•				
Donegal Trout Unlimited	•	•			•	•
Alliance for the Chesapeake Bay	•	•	•	•	•	•
Chesapeake Bay Foundation	•	•	•	•	•	
Stroud Water Research Center	•	•	•	•	•	•
Penn State University	•	•	•	•	•	•
LandStudies, Inc.	•	•	•	•	•	•
Crow & Berry Land Management	•	•	•	•	•	•
Earthbound Artisan	•	•	•	•	•	•
RETTEW	•	•	•	•	•	•
Funding Programs						
CREP				•	•	•
Partners for Fish and Wildlife Program				•	•	
Section 319 Program	•	•	•	•	•	•
EPA Chesapeake Bay Program Funds (CBIG & CBRAP)	•	•	•	•	•	•
Clean Water State Revolving Loan Fund	•	•	•	•	•	
EPA Most Effective Basin Funding				•	•	
Growing Greener	•	•	•	•	•	•
DCNR Riparian Buffer Grant Program	•	•	•	•	•	•
DCNR C2P2	•	•	•	•	•	•
TreeVitalize					•	
REAP			•	•	•	•
PENNVEST			•	•	•	
Act 13 Watershed Restoration and Protection Program	•	•	•	•	•	•
Exelon Habitat Improvement Project Program (PFBC)				•	•	

Resources for Riparian Buffers (cont.)	Services Provided					
	Outreach		Technical Assistance		Implementation Assistance	
	Workshops/ Events	Landowner Visits	Planning	Design/ Engineering	Construction/ Implementation	Maintenance
Funding Programs (cont.)						
Conservation Excellence Grants (CEG)			•	•	•	
Exelon Habitat Improvement Project Program (LCCD)				•	•	
LCCWC Stormwater Mini Grants	•	•		•	•	
Susquehanna Riverlands Mini Grants (Lancaster Conservancy)	•	•	•	•	•	
EPA's SWG and INSR grants (currently administered by NFWF)	•	•	•	•	•	
Lancaster Clean Water Fund				•	•	
CBF K10 Partnership					•	•
Funding from Programmatic Grants						
Mill Creek 319 Grant (LCCD)				•	•	
Lancaster County Buffers Partnership (ACB DCNR Grants)	•	•	•	•	•	•
Multifunctional Riparian Buffers (PACD DCNR Grant)					•	•
CBF Accelerating Riparian Buffers NFWF Grant	•	•	•	•	•	•
Stroud Forest Riparian Buffer Program (DCNR, others)	•	•	•	•	•	•
Chiques-Conoy-Conewago Regional Partnership (PSU NFWF Grant)	•	•	•	•	•	•
Conewago Creek 319 Grant (TCCCA)				•	•	•
PSU AEC CCC Regional Partnership NFWF Grant	•	•	•	•	•	•
LFT Farm Conservation Grants (LFT various funding sources)	•	•	•	•	•	

Table 4: Resources for Restoration Practices by Services Provided

Resources for Restoration Practices	Services Provided					
	Outreach		Technical Assistance		Implementation Assistance	
	Workshops/ Events	Landowner Visits	Planning	Design/ Engineering	Construction/ Implementation	Maintenance
Partners: Staff Capacity						
USDA NRCS	•	•	•	•		
US Fish and Wildlife Service	•	•	•	•	•	•
US EPA	•					
PA DEP	•					
PA Fish & Boat Commission	•	•	•	•		
Lancaster County Conservation District	•	•	•	•		
Donegal Trout Unlimited	•	•			•	•
Penn State University	•	•				
Water Science Institute	•	•	•			
LandStudies, Inc.	•	•	•	•	•	•
RETTEW	•	•	•	•	•	•
Funding Programs						
NRCS Environmental Quality Incentives Program (EQIP)			•	•	•	
NRCS Conservation Innovation Grants (CIG)			•	•	•	
NRCS Wetland Reserve Easement Program (WRE)			•	•	•	•*
NRCS Watershed Protection & Flood Prevention Program (PL-566)			•			
Partners for Fish and Wildlife Program				•	•	
Section 319 Program	•	•	•	•	•	
EPA's SWG and INSR grants (currently administered by NFWF)	•	•	•	•	•	
EPA Chesapeake Bay Program Funds (CBIG & CBRAP)	•	•	•	•	•	
Clean Water State Revolving Loan Fund	•	•	•	•	•	
Growing Greener	•	•	•	•	•	
DCNR C2P2	•	•	•	•	•	
PENNVEST			•	•	•	
Exelon Habitat Improvement Project Program (PFBC)				•	•	
Exelon Habitat Improvement Project Program (LCCD)				•	•	
Conservation Excellence Grants (CEG)			•	•	•	
LCCWC Stormwater Mini Grants	•	•		•	•	
Susquehanna Riverlands Mini Grants (Lancaster Conservancy)	•	•	•	•	•	

Resources for Restoration Practices	Services Provided					
	Outreach		Technical Assistance		Implementation Assistance	
	Workshops/ Events	Landowner Visits	Planning	Design/ Engineering	Construction/ Implementation	Maintenance
Funding Programs (cont.)						
Lancaster Clean Water Fund				•	•	
Funding from Programmatic Grants						
Lancaster County 319 Stream Restoration TA (LCCD 319 Grant)	•	•	•	•		
Mill Creek 319 Grant (LCCD)				•	•	
Conewago Creek 319 Grant (TCCCA)				•	•	
Conowingo Creek 319 Grant (Donegal TU)				•	•	
Chiques-Conoy-Conewago Regional Partnership (PSU NFWF Grant)	•	•	•	•	•	
LFT Farm Conservation Grants (LFT various funding sources)	•	•	•	•	•	
Lancaster County Buffer Bonus Program (ACB GG Grant)		•	•	•	•	

*Program does not provide maintenance per se, but preservation of wetlands through an easement program.

Resources by Source or Sector

As made clear in this report, partners and funding sources represent a range of sectors: government (federal, state, and local), non-profit, foundations, and private sector. For some landowners and local decision makers, the source of the funding by sector may be an important consideration in deciding whether to utilize such resources to implement conservation. Also important may be the sector of lead partners in managing projects and administering funds. For example, a landowner may not be interested in working with a federal government entity to fund conservation, but if a nonprofit organization or private sector consultant was the lead partner in working with the landowner to manage the project and administer government funds, this may be more palatable.

Table 5 organizes the funding resources available in Lancaster County by the type of source or sector of funding (federal government, state government, county, nonprofits and foundations, and private sector). It also indicates the lead partner.

The color scheme used in the previous section to identify each source or sector type (see Figure 3) is also used in Table 5. This allows for easy distinguishing by sector type. In particular, where a partner of a different sector is the lead partner for a funding source (the nonprofit Alliance for the Chesapeake Bay for the DCNR-funded Lancaster County Riparian Buffer Partnership, for example) this can be easily distinguished using the color scheme.

For each funding source in these categories, the table further indicates what types of conservation practices are funded (ag BMPs, stormwater BMPs, buffers, or restoration) and what services it funds (outreach/TA/implementation). These are also color coded for ease of reference between practice types and services provided, following the same color schemes demonstrated in Figures 1 and 2.

Table 5: Funding Resources by Source or Sector

Funding Resource	Lead Partner	Practice Types Funded				Services Funded		
		Ag BMPs	SW BMPs	Buffers	Restoration	Outreach	TA	Implementation
Federal Government								
Envtl Quality Incentives Program (EQIP)	USDA NRCS	●		●	●		●	●
Conservation Stewardship Program (CSP)	USDA NRCS	●		●	●			●*
Wetland Reserve Easement Program (WRE)	USDA NRCS				●		●	●
PL-566	USDA NRCS				●		●	
CREP	USDA FSA	●		●	●		●	●
Partners for Fish and Wildlife Program	USFWS			●	●		●	●
319 Program	PA DEP	●	●	●	●	●	●	●
Lancaster County 319 Stream Restoration TA	LCCD				●		●	
Mill Creek Watershed 319 Grant	LCCD			●	●		●	●
Conewago Creek Watershed 319 Grant	TCCCA	●		●	●		●	●
Conowingo Creek Watershed 319 Grant	Donegal TU			●	●		●	●
EPA Chesapeake Bay Program Funds (CBIG & CBRAP)	PA DEP	●	●	●	●	●	●	●
Clean Water Revolving Fund	PENNVEST	●	●	●	●		●	●
EPA Most Effective Basin Funding	TBD**	●		●			●	●
Community Development Block Grants	LCRA		●					●
EPA's SWG and INSR Grants	NFWF	●	●	●	●	●	●	●
CBF Accelerating Riparian Buffers (NFWF Grant)	CBF			●		●	●	●
Capital RC&D Grazing Program (NFWF Grant)	Capital RC&D	●				●	●	●
Cocalico Farmer Engagement (NFWF Grant)	CCWA	●				●	●	
Chiques-Conoy-Conewago Regional Partnership	PSU	●		●	●	●	●	●
Farm Stewardship Program (NFWF Grant)	Stroud	●					●	●
PA Soil Health Coalition (NFWF Grant)	Stroud	●				●	●	
Restoring the Octoraro (NFWF Grant)	Alliance for Bay	●					●	●
Turkey Hill Clean Water Partnership (NFWF Grant)	Alliance for Bay	●					●	●
State Government								
Growing Greener	PA DEP	●	●	●	●	●	●	●
Lancaster County Buffer Bonus Program (GG Grant)	Alliance for Bay	●	●		●		●	●
PA Soil Health Coalition (GG Grant)	Stroud	●				●	●	
LFT Farm Conservation Program (various grants)	LFT	●	●	●	●	●	●	●
Ag Planning Reimbursement Program	PA DEP	●					●	
DCNR Riparian Buffer Grant Program	PA DCNR			●		●	●	●
DCNR C2P2 Grant Program	PA DCNR		●	●	●	●	●	●
Multifunctional Riparian Buffers (DCNR Grant)	PACD & LCCD			●			●	●

Funding Resource (cont.)	Lead Partner	Practice Types Funded				Services Funded		
		Ag BMPs	SW BMPs	Buffers	Restoration	Outreach	TA	Implementation
State Government (cont.)								
Lancaster County Buffers Partnership (DCNR Grant)	Alliance for Bay			●		●	●	●
Stroud Riparian Buffer Program (DCNR, others)	Stroud			●		●	●	●
TreeVitalize	PA DCNR		●	●			●	●
REAP	SCC	●		●			●	●
PENNVEST	PENNVEST	●	●	●	●		●	●
Act 13 Watershed and Flood Mitigation Programs	CFA	●	●	●	●		●	●
Clay Township Farmer Outreach Initiative (GG Grant)	Clay Township	●				●		
Octoraro Watershed Farmer Outreach (GG Grant)	OWA	●		●		●		
County								
Dirt & Gravel/Low Volume Road Program	LCCD		●				●	●
Conservation Excellence Grants	LCCD	●		●	●		●	●
Smart Growth Transportation Program	Lanc. MPO		●				●***	●
LCCWC Stormwater Mini Grants	LCCWC		●	●	●	●		●
Susquehanna Riverlands Mini Grants	Lanc. Conservancy	●	●	●	●	●	●	●
Lancaster Clean Water Fund	LCCF & Partners	●	●	●	●	●	●	●
Nonprofits and Foundations								
LFT Farm Conservation Program (various grants)	LFT	●		●	●	●	●	●
Subsurface Application of Manure (Campbell Grant)	LCCD	●						●
Private								
Exelon Habitat Improvement Project Program (LCCD)	LCCD	●		●	●		●	●
Exelon Habitat Improvement Project Program (PFBC)	PFBC	●		●	●		●	●

*Does not pay for construction/implementation per se, but rather provides annual payments for implementing conservation enhancements.

**Administrator to be selected by EPA through a request for assistance (RFA) process.

***Pays for planning costs only, not design & engineering.

Resources Needing Matching Funds

Many funding programs require matching funds or only fund a portion of a project. This often requires partners to think strategically about how to match and leverage programs off of one another to fully implement conservation projects.

Table 6 provides a list of those funding programs that require match and are available in Lancaster County. Again, each funding is color coded by sector following the scheme illustrated in Figure 3.

The match required is illustrated by the remaining gray portion of each bar. Sometimes specifications exist with respect to the sector or type of match required, or what services the funding resource or match can fund. Where these specifications exist, they are indicated on the graphic.

What is not well depicted in this graphic is the size of the funding source (and consequently the size of the match required), since relative match percentages are depicted instead. For example, both NFWF INSR grants and Lancaster Clean Water Fund Grants required 50% match, yet INSR grants are usually maximum awards of \$1 million while Clean Water Fund grants are maximum of \$50,000. Maximum size of award is something to be cognizant of when developing a matching funds strategy.

Table 6. Funding Resources in Need of Matching Funds

Funding Resource (with % of funds provided and specifications, if any)	Match Required (with specifications, if any)		
Federal Government			
EQIP (approx. 75%)		approx. 25%	
Community Development Block Grants (80% total costs; can only fund construction)		20% (5% construction)	
EPA's INSR Grants (currently administered by NFWF) (50%)	50% (non-federal)		
EPA's Small Watershed Grants (currently administered by NFWF) (67%)	33% (non-federal)		
State Government			
Growing Greener (85%)		15%	
DCNR Riparian Buffer Grants (50%)	50%		
DCNR C2P2	50%		
TreeVitalize (50%)	50%		
REAP (equipment, many ag BMPs, stream/floodplain rest.) (50%)	50%		
REAP (conservation & nutrient management plans, barnyards & ACA treatment, buffers ≥50 ft) (75%)		25%	
REAP (buffers ≥50 ft, fencing, crossings, etc., soil health tests in TMDL watersheds) (90%)		10%	
Act 13 Watershed & Flood Mitigation Programs (85%; D&E limited to 10%)		15%	
County			
Smart Growth Transportation Program (80% for studies; construction projects require D&E costs as match)		20% (or all D&E costs)	
LCCWC Stormwater Mini Grants (50%; D&E limited to 20%)	50%		
Susquehanna Riverlands Mini Grants (50%)	50% (half of which must be cash)		
Lancaster Clean Water Fund (50%)	50%		

Available Resources by Watershed

The watershed-based approach to management and restoration is critical to achieving success in clean water improvement efforts. While there are many different ways of organizing and classifying the watersheds of Lancaster County, for ease of organization and following commonly recognized watershed names and units, we have divided the county in into the following 16 watersheds:

1. Conewago Creek
2. Conoy Creek
3. Chiques Creek
4. River Hills Tributaries North
5. Little Conestoga Creek
6. Lititz Run
7. Cocalico Creek
8. Upper Conestoga River
9. Lower Conestoga River
10. Mill Creek
11. Pequea Creek
12. Octoraro Creek
13. Conowingo Creek
14. Fishing Creek
15. River Hills Tributaries South
16. Brandywine Creek

For each of these watersheds, a watershed profile is provided that contains basic information about the watershed, including total size, municipalities located in the watershed, basic land uses (agriculture, urban, forested), and impaired stream segments within the watershed.

In addition, the profile lists all core partners and funding resources available in the watershed, following the sector-based color scheme illustrated in Figure 3. For each of the partners and resources listed, the services provided within the outreach/TA/implementation continuum is indicated using red/yellow/green bars as applicable (following the color scheme illustrated in Figure 1 and used throughout this document).

Conewago Creek Watershed

Size

52.5 mi²

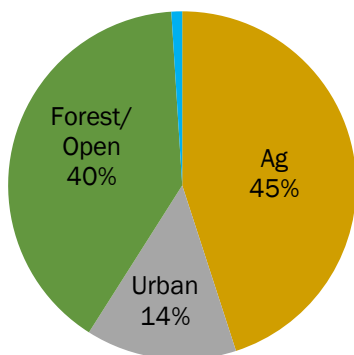
Municipalities

Conoy Twp
 Elizabethtown Boro
 Mt. Joy Twp
 West Donegal Twp
 Conewago Twp

Londonderry Twp
 Mt. Gretna Boro
 S Annville Twp
 S Londonderry Twp
 West Cornwall Twp



Land Use



Impaired Segments

Stream Name	Miles
Conewago Creek	15.8
Hoffer Creek	5.7
Gallagher Run	3.6
Lynch Run	11.2
UNTs to Conewago Creek	6.0
TOTAL	42.3

Core Partners

Tri-County Conewago Creek Assoc.	Red	Green
Penn State AEC	Yellow	Green
CCDs (Lanc., Lebanon, Dauphin)	Yellow	Green
USDA NRCS	Red	Green
US Fish & Wildlife Service	Yellow	Green
Chesapeake Bay Foundation	Red	Green
Stroud Water Research Center	Yellow	Green
PA DEP	Red	Green
Londonderry Township	Red	Green
Mount Joy Township	Red	Green
TeamAg	Yellow	Green
Red Barn Consulting	Red	Green
Other Conewago Initiative Partners	Red	Green

Funding Resources

NRCS Programs (EQIP, CSP, WRE)	Yellow	Green
CREP	Yellow	Green
DCNR Lanc. Co. Buffers Partnership	Red	Green
Lanc. Co. Buffer Bonus (GG Grant)	Red	Green
Multifunctional Buffers (PACD)	Yellow	Green
CBF K10 Partnership	Yellow	Green
Ag Planning Reimbursement	Yellow	Green
PENNVEST	Yellow	Green
REAP	Yellow	Green
Dirt & Gravel Road Program	Yellow	Green
Conservation Excellence Grants	Yellow	Green
PA Soil Health Coalition NFWF	Red	Green
Subsurface Application of Manure	Yellow	Green
CCC Regional Partnership NFWF	Red	Green
Stream Restoration TA 319 Grant	Yellow	Green
Conewago Creek 319 Grant	Yellow	Green
Partners for Fish & Wildlife Program	Yellow	Green
Exelon Program (LCCD)	Yellow	Green
Farm Stewardship Program (Stroud)	Yellow	Green
Capital RC&D Grazing Program	Red	Green
CBF Accelerating Buffers NFWF	Yellow	Green

Conoy Creek Watershed

Size

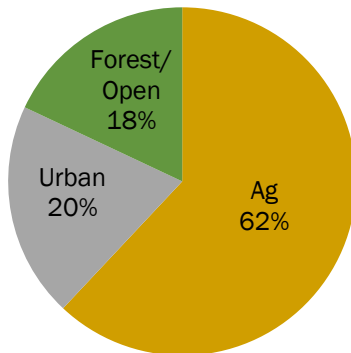
19 mi²

Municipalities

Conoy Twp Mount Joy Twp
 East Donegal Twp West Donegal Twp
 Elizabethtown Boro



Land Use



Impaired Segments

Stream Name	Miles
Conoy Creek	17.68
UNTs to Conoy Creek	24.29
TOTAL	41.97

Core Partners

Penn State AEC			
Lancaster CCD			
Conoy Creek municipalities			
US Fish & Wildlife Service			
TeamAg			
Red Barn Consulting			

Funding Resources

NRCS Programs (EQIP, CSP, WRE)			
CREP			
DCNR Lanc. Co. Buffers Partnership			
Lanc. Co. Buffer Bonus (GG Grant)			
Multifunctional Buffers (PACD)			
CBF K10 Partnership			
Ag Planning Reimbursement			
PENNVEST			
REAP			
Dirt & Gravel Road Program			
Conservation Excellence Grants			
PA Soil Health Coalition NFWF			
Subsurface Application of Manure			
CCC Regional Partnership NFWF			
Partners for Fish & Wildlife Program			
Exelon Program (LCCD)			
Capital RC&D Grazing Program			
CBF Accelerating Buffers NFWF			

Chiques Creek Watershed

Size

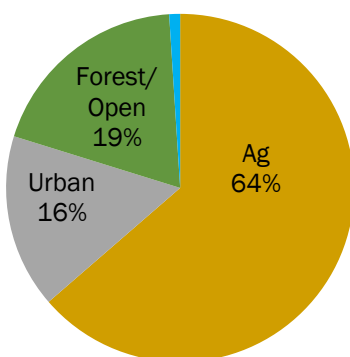
126.1 mi²

Municipalities

East Donegal Twp	Penn Twp
East Hempfield Twp	Rapho Twp
Elizabeth Twp	West Hempfield Twp
Manheim Boro	Cornwall Boro
Marietta Boro	South Lebanon Twp
Mount Joy Boro	S Londonderry Twp
Mount Joy Twp	West Cornwall Twp



Land Use



Impaired Segments

Stream Name	Miles
Chiques Creek	30.58
Little Chiques Creek	33.78
Donegal Creek	25.94
Dellinger Run	4.59
Rife Run	11.69
Doe Run	7.66
Shearers Creek	10.01
Brubaker Run	10.74
Back Run	7.44
Shells Run	10.4
UNTs to Chiques Creek	19.99
TOTAL	172.82

Core Partners

Chiques Watershed Alliance			
Penn State AEC			
Lancaster CCD			
Chiques Creek municipalities			
SRBC			
PA DEP			
USDA NRCS			
US Fish & Wildlife Service			
Chesapeake Bay Foundation			
Stroud Water Research Center			
TeamAg			
Red Barn Consulting			
LandStudies			
Water Science Institute			
Lancaster Farmland Trust			
Donegal TU			

Funding Resources

NRCS Programs (EQIP, CSP, WRE)			
CREP			
DCNR Lanc. Co. Buffers Partnership			
Lanc. Co. Buffer Bonus (GG Grant)			
Multifunctional Buffers (PACD)			
CBF K10 Partnership			
Ag Planning Reimbursement			
PENNVEST			
REAP			
Dirt & Gravel Road Program			
Conservation Excellence Grants			
PA Soil Health Coalition NFWF			
Subsurface Application of Manure			
CCC Regional Partnership NFWF			
Partners for Fish & Wildlife Program			
Exelon Program (LCCD)			
NRCS PL-566 Program			
FSP, Riparian Buffer Programs (Stroud)			
EPA Most Effective Basin Funding			
Capital RC&D Grazing Program			
CBF Accelerating Buffers NFWF Grant			

River Hills Tributaries North Watersheds

Size

52 mi²

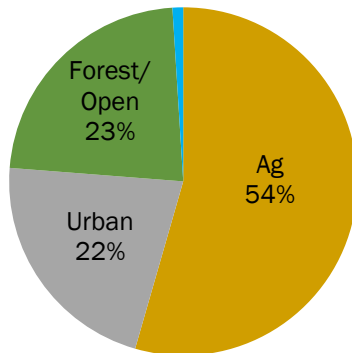
Municipalities

Columbia Boro
Conoy Twp
East Donegal Twp
Manor Twp

Marietta Boro
Mountville Boro
West Donegal Twp
West Hempfield Twp



Land Use



Impaired Segments

Stream Name	Miles
Snitz Creek	6.23
Shawnee Run	4.71
Strickler Run	8.23
Shumans Run	0.94
Stamans Run	3.97
Dry Run	1.24
Witmers Run	2.36
UNTs to Susquehanna River	13.47
TOTAL	41.15

Core Partners

Penn State AEC	
Lancaster CCD	
River Hills North municipalities	
TeamAg	
Red Barn Consulting	

Funding Resources

NRCS Programs (EQIP, CSP, WRE)	
CREP	
DCNR Lanc. Co. Buffers Partnership	
Lanc. Co. Buffer Bonus (GG Grant)	
Multifunctional Buffers (PACD)	
CBF K10 Partnership	
Ag Planning Reimbursement	
PENNVEST	
REAP	
Dirt & Gravel Road Program	
Conservation Excellence Grants	
PA Soil Health Coalition NFWF	
Subsurface Application of Manure	
CCC Regional Partnership NFWF	
EPA Most Effective Basin Funding	
Susquehanna Riverlands Minigrants	
Capital RC&D Grazing Program	
CBF Accelerating Buffers NFWF Grant	

Little Conestoga Creek Watershed

Size

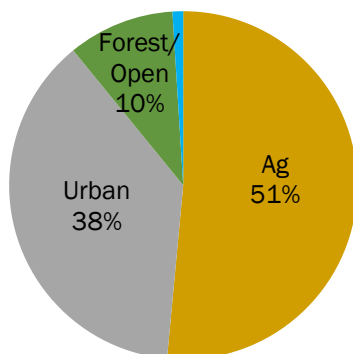
65.5 mi²

Municipalities

East Hempfield Twp	Millersville Boro
East Petersburg Boro	Mountville Boro
Lancaster Twp	Penn Twp
Lititz Boro	Warwick Twp
Manheim Twp	West Hempfield Twp
Manor Twp	



Land Use



Impaired Segments

Stream Name	Miles
Little Conestoga Creek	18.19
Indian Run	4.92
West Branch Little Conestoga Creek	5.42
Brubaker Run	2.97
Swarr Run	9.18
Millers Run	1.95
UNTs to Little Conestoga Creek	15.70
TOTAL	58.33

Core Partners

Little Conestoga Watershed A.	
Lancaster CCD	
Little Conestoga municipalities	

Funding Resources

NRCS Programs (EQIP, CSP, WRE)	
CREP	
DCNR Lanc. Co. Buffers Partnership	
Lanc. Co. Buffer Bonus (GG Grant)	
Multifunctional Buffers (PACD)	
CBF K10 Partnership	
Ag Planning Reimbursement	
PENNVEST	
REAP	
Dirt & Gravel Road Program	
Conservation Excellence Grants	
PA Soil Health Coalition NFWF	
Subsurface Application of Manure	
EPA Most Effective Basin Funding	
Capital RC&D Grazing Program	
CBF Accelerating Buffers NFWF Grant	

Lititz Run Watershed

Size

17.4 mi²

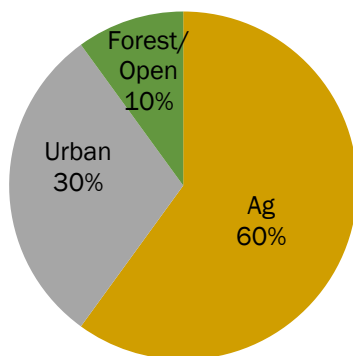
Municipalities

Elizabeth Twp
Lititz Boro
Manheim Twp

Penn Twp
Warwick Twp



Land Use



Impaired Segments

Stream Name

Lititz Run
New Haven Run
Santo Domingo Creek
TOTAL

Miles

4.87
2.29
3.01
10.17

Core Partners

Lititz Run Watershed Alliance		
Warwick Township		
Other Lititz Run municipalities		
Lancaster CCD		
LandStudies		
TeamAg		
Lancaster Farmland Trust		
Donegal TU		

Funding Resources

NRCS Programs (EQIP, CSP, WRE)		
CREP		
DCNR Lanc. Co. Buffers Partnership		
Lanc. Co. Buffer Bonus (GG Grant)		
Multifunctional Buffers (PACD)		
CBF K10 Partnership		
Ag Planning Reimbursement		
PENNVEST		
REAP		
Dirt & Gravel Road Program		
Conservation Excellence Grants		
PA Soil Health Coalition NFWF		
Subsurface Application of Manure		
EPA Most Effective Basin Funding		
Capital RC&D Grazing Program		
CBF Accelerating Buffers NFWF Grant		

Cocalico Creek Watershed

Size

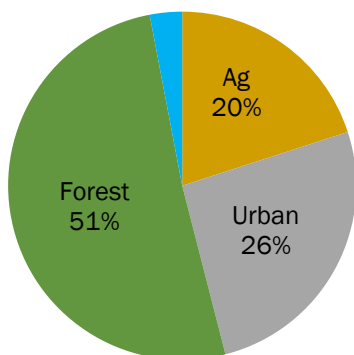
140.1 mi²

Municipalities

Adamstown Boro	Warwick Twp
Akron Boro	West Cocalico Twp
Clay Twp	West Earl Twp
Denver Boro	Cornwall Boro
East Cocalico Twp	Heidelberg Twp
Elizabeth Twp	Millcreek Twp
Ephrata Boro	South Lebanon Twp
Manheim Twp	Spring Twp
Penn Twp	South Heidelberg Twp
Upper Leacock Twp	



Land Use



Impaired Segments

Stream Name	Miles
Cocalico Creek	16.58
Hammer Creek	11.73
Speedwell Forge Lake	95 acres
Meadow Run	1.48
Mohler Run	1.08
Coover Run	1.24
Stony Run	5.30
Harnish Run	2.69
UNTs to Cocalico Creek	6.70
TOTAL	46.80

Core Partners

Cocalico Watershed Assoc	
Lancaster CCD	
TeamAg	
Cocalico Creek municipalities	
LandStudies	
Stroud Water Research Center	
Lancaster Farmland Trust	
Donegal TU	

Funding Resources

NRCS Programs (EQIP, CSP, WRE)	
CREP	
DCNR Lanc. Co. Buffers Partnership	
Lanc. Co. Buffer Bonus (GG Grant)	
Multifunctional Buffers (PACD)	
CBF K10 Partnership	
Ag Planning Reimbursement	
PENNVEST	
REAP	
Dirt & Gravel Road Program	
Conservation Excellence Grants	
PA Soil Health Coalition NFWF	
Subsurface Application of Manure	
Cocalico Farmer Engagement	
Clay Township Farmer Outreach	
Farm Stewardship Program (Stroud)	
EPA Most Effective Basin Funding	
Capital RC&D Grazing Program	

Upper Conestoga River Watershed

Size

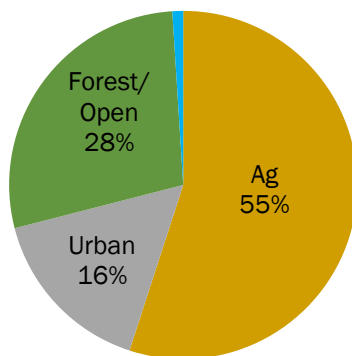
140.3 mi²

Municipalities

Adamstown Boro	Terre Hill Boro
Akron Boro	Upper Leacock Twp
Brecknock Twp	West Earl Twp
Caernarvon Twp	Cumru Twp
Earl Twp	New Morgan Boro
East Cocalico Twp	Robeson Twp
East Earl Twp	Spring Twp
Ephrata Boro	Elverson Boro
Manheim Twp	Honey Brook Twp
New Holland Boro	West Nantmeal Twp
Salisbury Twp	



Land Use



Impaired Segments

Stream Name	Miles
Upper Conestoga River	25.51
Groff Creek	15.00
Muddy Creek	16.31
Little Muddy Creek	5.28
Cedar Creek	6.79
Little Conestoga	11.33
West Branch Conestoga River	6.38
East Branch Conestoga River	11.91
Other Tributaries to Upper Conestoga	33.16
TOTAL	131.67

Core Partners

Stroud Water Research Center	
Lancaster CCD	
Lancaster Farmland Trust	
Upper Conestoga municipalities	
Berks CCD	

Funding Resources

NRCS Programs (EQIP, CSP, WRE)	
CREP	
DCNR Lanc. Co. Buffers Partnership	
Lanc. Co. Buffer Bonus (GG Grant)	
Multifunctional Buffers (PACD)	
CBF K10 Partnership	
Ag Planning Reimbursement	
PENNVEST	
REAP	
Dirt & Gravel Road Program	
Conservation Excellence Grants	
PA Soil Health Coalition NFWF	
Subsurface Application of Manure	
EPA Most Effective Basin Funding	
Capital RC&D Grazing Program	
CBF Accelerating Buffers NFWF Grant	

Lower Conestoga River Watershed

Size

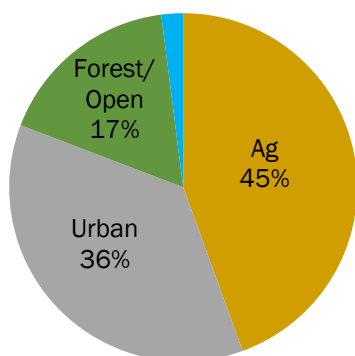
55.1 mi²

Municipalities

Conestoga Twp	Millersville Boro
East Lampeter Twp	Pequea Twp
Lancaster Twp	Upper Leacock Twp
Manheim Twp	Warwick Twp
Manor Twp	West Lampeter Twp



Land Use



Impaired Segments

Stream Name	Miles
Lower Conestoga River	4.70
Landis Run	3.89
Stauffer Run	5.42
UNTs to Lower Conestoga River	14.24
TOTAL	28.25

Core Partners

City of Lancaster	
Lancaster CCD	
Alliance for Chesapeake Bay	
Other Lower Conestoga munis.	

Funding Resources

NRCS Programs (EQIP, CSP, WRE)	
CREP	
DCNR Lanc. Co. Buffers Partnership	
Lanc. Co. Buffer Bonus (GG Grant)	
Multifunctional Buffers (PACD)	
CBF K10 Partnership	
Ag Planning Reimbursement	
PENNVEST	
REAP	
Dirt & Gravel Road Program	
Conservation Excellence Grants	
PA Soil Health Coalition NFWF	
Subsurface Application of Manure	
EPA Most Effective Basin Funding	
Capital RC&D Grazing Program	
CBF Accelerating Buffers NFWF Grant	

Mill Creek Watershed

Size

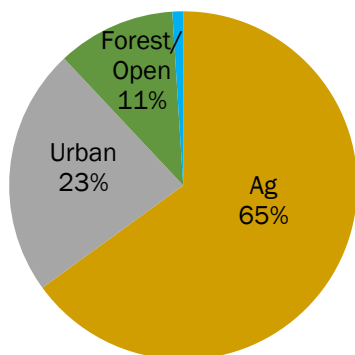
56.4 mi²

Municipalities

Earl Twp	Pequea Twp
East Earl Twp	Salisbury Twp
East Lampeter Twp	Upper Leacock Twp
Lancaster Twp	West Earl Twp
Leacock Twp	West Lampeter Twp
New Holland Boro	



Land Use



Impaired Segments

Stream Name	Miles
Mill Creek	16.84
Big Spring Run	6.74
Bieber Creek	0.84
Muddy Run	8.55
Groff Run	4.19
UNTs to Mill Creek	16.42
TOTAL	53.58

Core Partners

Lancaster CCD	
Mill Creek Preservation Assoc.	
US Fish & Wildlife Service	
Lancaster Farmland Trust	
Water Science Institute	
LandStudies	
Mill Creek municipalities	

Funding Resources

NRCS Programs (EQIP, CSP, WRE)	
CREP	
DCNR Lanc. Co. Buffers Partnership	
Lanc. Co. Buffer Bonus (GG Grant)	
Multifunctional Buffers (PACD)	
CBF K10 Partnership	
Ag Planning Reimbursement	
PENNVEST	
REAP	
Dirt & Gravel Road Program	
Conservation Excellence Grants	
PA Soil Health Coalition NFWF	
Subsurface Application of Manure	
Stream Restoration TA 319 Grant	
Mill Creek 319 Grant	
Partners for Fish & Wildlife Program	
LFT Farm Conservation Grants	
EPA Most Effective Basin Funding	
Capital RC&D Grazing Program	
CBF Accelerating Buffers NFWF Grant	

Pequea Creek Watershed

Size

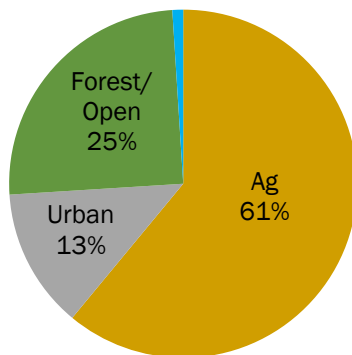
154.9 mi²

Municipalities

Bart Twp	Pequea Twp
Conestoga Twp	Providence Twp
Earl Twp	Quarryville Boro
East Drumore Twp	Sadsbury Twp
East Earl Twp	Salisbury Twp
East Lampeter Twp	Strasburg Boro
Eden Twp	West Lampeter Twp
Leacock Twp	Honey Brook Twp
Martic Twp	West Caln Twp
Paradise Twp	West Sadsbury Twp



Land Use



Impaired Segments

Stream Name	Miles
Pequea Creek	47.01
Goods Run	5.79
Big Beaver Creek	31.31
Little Beaver Creek	22.69
Walnut Run	3.19
Watson Run	3.33
Eshleman Run	14.49
Houston Run	4.49
Umbles Run	14.93
White Horse Run	5.18
Indian Spring Run	4.77
Other Tributaries to Pequea Creek	41.64
TOTAL	198.82

Core Partners

Lancaster Farmland Trust			
Chesapeake Bay Foundation			
Salisbury Township			
Pequea Creek Watershed Assoc.			
Lancaster CCD			
TeamAg			
Red Barn			
Stroud Water Research Center			
Other Pequea municipalities			
Lancaster Conservancy			
Donegal TU			
US Fish & Wildlife Service			

Funding Resources

NRCS Programs (EQIP, CSP, WRE)			
CREP			
DCNR Lanc. Co. Buffers Partnership			
Lanc. Co. Buffer Bonus (GG Grant)			
Multifunctional Buffers (PACD)			
CBF K10 Partnership			
Ag Planning Reimbursement			
PENNVEST			
REAP			
Dirt & Gravel Road Program			
Conservation Excellence Grants			
PA Soil Health Coalition NFWF			
Subsurface Application of Manure			
LFT Farm Conservation Grants			
FSP, Buffer Programs (Stroud)			
EPA Most Effective Basin Funding			
Capital RC&D Grazing Program			
CBF Accelerating Buffers NFWF Grant			

Octoraro Creek Watershed

Size

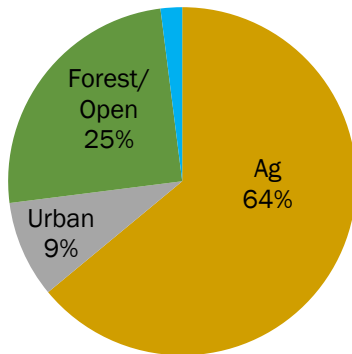
174.6 mi²

Municipalities

Bart Twp	Atglen Boro
Christiana Boro	East Nottingham Twp
Colerain Twp	Highland Twp
East Drumore Twp	Londonderry Twp
Eden Twp	Lower Oxford Twp
Fulton Twp	Oxford Boro
Paradise Twp	Parkesburg Boro
Sadsbury Twp	Upper Oxford Twp
Salisbury Twp	West Fallowfield Twp
Strasburg Boro	West Nottingham Twp
	West Sadsbury Twp



Land Use



Impaired Segments

Stream Name	Miles
Octoraro Creek	13.52
Reynolds Run	4.18
McCreary Run	8.70
Tweed Creek	11.36
Other Tributaries to Octoraro Creek	14.45
Octoraro Reservoir	623 ac
Tributaries to Reservoir	15.39
West Branch Octoraro and Tributaries	63.61
East Branch Octoraro and Tributaries	146.34
TOTAL	277.55

Core Partners

Octoraro Watershed Association	Red	Yellow	Green
Alliance for Chesapeake Bay	Yellow	Green	
Lancaster CCD	Yellow		
Chester CCD	Yellow		
Chester Water Authority	Red	Yellow	Green
Octoraro Creek municipalities	Red	Yellow	Green
Chesco Water Resources Auth.	Red	Yellow	Green

Funding Resources

NRCS Programs (EQIP, CSP, WRE)	Blue	Yellow	Green
CREP	Blue	Yellow	Green
DCNR Lanc. Co. Buffers Partnership	Green	Red	Yellow
Lanc. Co. Buffer Bonus (GG Grant)	Green	Red	Yellow
Multifunctional Buffers (PACD)	Green	Yellow	Green
CBF K10 Partnership	Yellow		Green
Ag Planning Reimbursement	Green	Yellow	Green
PENNVEST	Green	Yellow	Green
REAP	Green	Yellow	Green
Dirt & Gravel Road Program	Yellow	Yellow	Green
Conservation Excellence Grants	Yellow	Yellow	Green
PA Soil Health Coalition NFWF	Yellow	Red	Yellow
Subsurface Application of Manure	Yellow	Yellow	Green
Octoraro Farmer Outreach Initiative	Yellow	Red	Yellow
Octoraro NFWF Grant (Alliance)	Yellow	Yellow	Green
EPA Most Effective Basin Funding	Blue	Yellow	Green
FSP, Buffer Programs (Stroud)	Yellow	Red	Yellow
Capital RC&D Grazing Program	Yellow	Yellow	Green
CBF Accelerating Buffers NFWF Grant	Yellow	Yellow	Green

Conowingo Creek Watershed

Size

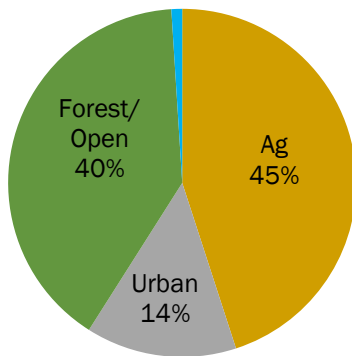
34.2 mi²

Municipalities

Drumore Twp Little Britain Twp
East Drumore Twp Providence Twp
Fulton Twp



Land Use



Impaired Segments

Stream Name	Miles
Conowingo Creek	16.11
Little Conowingo Creek	10.21
Jackson Run	2.86
McFarlands Run	4.55
UNTs to Conowingo Creek	22.94
TOTAL	56.67

Core Partners

Donegal TU			
Lancaster CCD			
US Fish and Wildlife Service			
RETTEW			

Funding Resources

NRCS Programs (EQIP, CSP, WRE)			
CREP			
DCNR Lanc. Co. Buffers Partnership			
Lanc. Co. Buffer Bonus (GG Grant)			
Multifunctional Buffers (PACD)			
CBF K10 Partnership			
Ag Planning Reimbursement			
PENNVEST			
REAP			
Dirt & Gravel Road Program			
Conservation Excellence Grants			
PA Soil Health Coalition NFWF			
Subsurface Application of Manure			
Stream Restoration TA Grant			
Conowingo 319 Grant			
Capital RC&D Grazing Program			
CBF Accelerating Buffers NFWF Grant			

Fishing Creek Watershed

Size

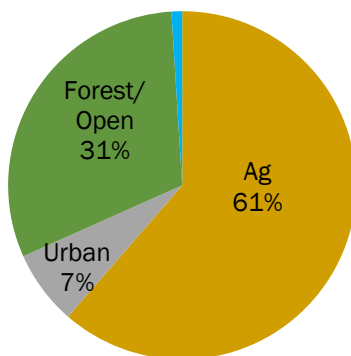
14.2 mi²

Municipalities

Drumore Twp Martic Twp
East Drumore Twp Providence Twp



Land Use



Impaired Segments

Stream Name	Miles
Fishing Creek	8.52
UNTs to Fishing Creek	13.19
TOTAL	21.71

Core Partners

Friends of Fishing Creek	Red	Yellow
PA Department of Agriculture	Red	Yellow
Lancaster CCD	Red	Yellow
Donegal TU	Red	Yellow
US Fish & Wildlife Service	Red	Yellow
PA Fish & Boat Commission	Red	Yellow
PA DEP	Red	Yellow
TeamAg	Red	Yellow

Funding Resources

NRCS Programs (EQIP, CSP, WRE)	Red	Yellow	Green
CREP	Red	Yellow	Green
DCNR Lanc. Co. Buffers Partnership	Red	Yellow	Green
Lanc. Co. Buffer Bonus (GG Grant)	Red	Yellow	Green
Multifunctional Buffers (PACD)	Red	Yellow	Green
CBF K10 Partnership	Red	Yellow	Green
Ag Planning Reimbursement	Red	Yellow	Green
PENNVEST	Red	Yellow	Green
REAP	Red	Yellow	Green
Dirt & Gravel Road Program	Red	Yellow	Green
Conservation Excellence Grants	Red	Yellow	Green
PA Soil Health Coalition NFWF	Red	Yellow	Green
Subsurface Application of Manure	Red	Yellow	Green
Susquehanna Riverlands Minigrants	Red	Yellow	Green
Capital RC&D Grazing Program	Red	Yellow	Green
CBF Accelerating Buffers NFWF Grant	Red	Yellow	Green

River Hills Tributaries South Watersheds

Size

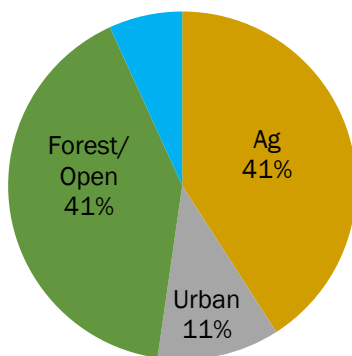
60.4 mi²

Municipalities

Conestoga Twp	Manor Twp
Drumore Twp	Martic Twp
East Drumore Twp	Providence Twp
Fulton Twp	



Land Use



Impaired Segments

Stream Name	Miles
Manns Run	1.35
Peters Creek	15.15
UNTs to Susquehanna River	5.16
TOTAL	21.66

Core Partners

Donegal TU			
Lancaster CCD			
Lancaster Conservancy			
US Fish & Wildlife Service			

Funding Resources

NRCS Programs (EQIP, CSP, WRE)			
CREP			
DCNR Lanc. Co. Buffers Partnership			
Lanc. Co. Buffer Bonus (GG Grant)			
Multifunctional Buffers (PACD)			
CBF K10 Partnership			
Ag Planning Reimbursement			
PENNVEST			
REAP			
Dirt & Gravel Road Program			
Conservation Excellence Grants			
PA Soil Health Coalition NFWF			
Subsurface Application of Manure			
Susquehanna Riverlands Minigrants			
Capital RC&D Grazing Program			
CBF Accelerating Buffers NFWF Grant			

Brandywine Creek Watershed

Size

3.2 mi²

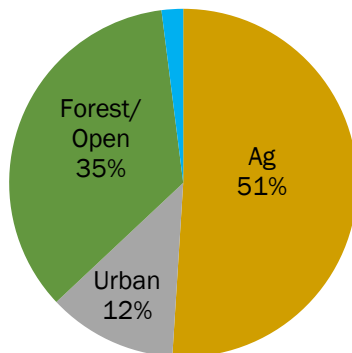
Municipalities

Caernarvon Twp

Salisbury Twp



Land Use



Impaired Segments

Stream Name

UNT to West Branch Brandywine Creek

TOTAL

Miles

2.53

2.53

Core Partners

Lancaster CCD

Chester CCD

Stroud Water Research Center

Brandywine Conservancy

Funding Resources

NRCS Programs (EQIP, CSP, WRE)

CREP

DCNR Lanc. Co. Buffers Partnership

Lanc. Co. Buffer Bonus (GG Grant)

Multifunctional Buffers (PACD)

CBF K10 Partnership

Ag Planning Reimbursement

PENNVEST

REAP

Dirt & Gravel Road Program

Conservation Excellence Grants

PA Soil Health Coalition NFWF

Analysis and Recommendations for Integrated Funding Delivery

The previous sections make clear that there are many and diverse funding resources available and partners who have skills relevant to conservation implementation in Lancaster County. The different critical categories reveal some areas where sufficient capacity exists and others where there are gaps. In addition, trends and strategies can be observed whereby partners and resources can best work collaboratively to support implementation. This section identifies and discusses capacity strengths, gaps, and observable trends and strategies with respect to Lancaster County's partners and resources.

Almost all partners are able to contribute to broader public outreach, like presenting at a workshop, field day, or outreach event. Several partners—particularly in the nonprofit sector, the conservation district, and to some extent the private sector—have the ability and bandwidth to conduct landowner visits and explore conservation opportunities at the individual property and landowner level. This becomes a critical service, since all conservation implementation must happen at the individual landowner level, and landowners must be committed to long term land management changes to ensure sustained land and water quality improvements.

Technical assistance becomes another critical skillset that is provided by only some of the partners inventoried. In the agriculture sector, TA is provided by a mix of agencies (NRCS, conservation district) and private sector ag consultants. Few if any nonprofits have the capacity, experience, and training to develop conservation and nutrient management plans and provide design and engineering services. For restoration practices, private sector environmental consultants have the capacity to provide technical assistance, as does NRCS, the conservation district, and most notably the US Fish and Wildlife Service through its Partners for Fish and Wildlife Program, which has a successful track record of stream and wetland restoration in Lancaster County. With respect to stormwater BMPs, technical assistance services are almost exclusively provided by the private sector. Design of these practices requires specialized technical expertise in landscape design and engineering.

In Lancaster County, capacity for technical assistance in support of forest riparian buffers is uniquely significant, as a large group of entities across sectors (government agencies, nonprofits, and private sector businesses) can provide planning and design (as well as planting and, in more limited capacity, maintenance) assistance for forest riparian buffer projects. These partners work together on the Partners Buffer Action Team.

Funding programs and grants fund the range of services needed to implement conservation along the outreach/technical assistance/implementation assistance continuum. Only a limited number of funding resources are available to fund outreach work, a noticeable gap in resources. Most notably these funding sources include NFWF, Campbell Foundation, Growing Greener, DCNR's Riparian Buffer Grants, and potentially some of EPA's Chesapeake Bay funding programs (CBIG and CBRAP).

Other funding sources more strictly fund TA and implementation, such as NRCS program funding like EQIP, Pennsylvania's REAP tax credit program, and the funding programs administered by the county conservation district (Dirt & Gravel/Low Volume Roads Program for stormwater BMPs and the new Conservation Excellence Grants for agricultural conservation practices). Some have very specific requirements that only construction can be funded (Community Development Block Grants, for example).

These differences in funding resources support strategic leveraging or “knitting together” partners’ skillsets with specific mixes of funding sources to best accomplish all services within the outreach/TA/implementation continuum. Being smart about how match can be provided when pursuing funding programs that require match is also part of this strategic leveraging.

With respect to the type of conservation practice funded, there are a significant number of sustained, core funding resources for agricultural conservation practices. Most of this funding is federal (USDA and to a lesser extent EPA) but state funding (primarily through REAP) and state funding administered at the county level (Conservation Excellence Grants) are also provided, although the latter is not a sustained source of funding at this time. Funding for riparian buffers is also robust and includes a variety of funding sources. Stream and wetland restoration and stormwater BMPs can take advantage of several potential funding resources, even if they lack the kinds of core programmatic funding that are available for agricultural conservation practices (such as EQIP, REAP, and CREP). Lack of core funding for restoration and stormwater BMPs is a clear gap in resources. But even the sustained funding sources for ag BMPs and riparian buffers are not sufficient to achieve the type of accelerated conservation implementation that is needed in Lancaster County to achieve clean water goals. Across the board, more funding is needed to fund conservation practices across all sectors.

Consideration of resources available within the specific watersheds of Lancaster County reveals a range of different local capacities for accelerating implementation. One model that is deployed successfully in several watersheds relies upon local capacity (generally a combination of nonprofits, conservation district, private sector and municipalities) to conduct outreach, and professionals at agencies and private firms to provide technical assistance, tapping into existing funding programs for implementation dollars. In many cases, specific programmatic grants provide enhanced/matching funding for implementation and also help to fund the critical outreach elements in those watersheds.

Watersheds where this model is being deployed and dedicated partners and funding resources are in place include Conewago Creek, Chiques Creek, Mill Creek, Pequea Creek and Octoraro Creek. Emerging capacity for this model is developing in Cocalico Creek, Conoy Creek, and the River Hills Tributaries North (the latter two through the Chiques-Conoy-Conewago Regional Partnership), where partners with programmatic grants support various levels of outreach, partnership facilitation and implementation of conservation.

Lititz Run is a unique example of a long-term, well supported local effort to infuse watershed stewardship into many aspects of life within the community, in support of the economic well-being of its residents, businesses and agricultural industry. Local leadership at the municipal level is key to this success.

Little Conestoga Creek and Fishing Creek are watersheds where grant funded partnership-based efforts were implemented in the recent past, but where an infusion of new funding resources and supporting partners may be needed. A core of local support exists in both watersheds, through local watershed organizations and Donegal TU’s continued stream restoration efforts in Fishing Creek. Conowingo Creek and Peters Creek (the latter within River Hills Tributaries South) are other watersheds in the southern portion of the county where Donegal TU has led stream restoration efforts. The ongoing stream restoration efforts in these watersheds could be enhanced by partners and funding to support accelerated implementation of agricultural conservation practices in these agriculturally impaired watersheds, and the cultivation of additional local leadership.

Portions of the Upper Conestoga River have been the beneficiaries of focused outreach and implementation work by some partners, most notably by Stroud Water Research Center and Lancaster Farmland Trust (the latter through the ELANCO Source Water Collaborative). This watershed does however lack a local watershed organization, a deliberate effort to build locally led watershed partnerships, and focused priority funding from programmatic funding resources (though we note that the new EPA “Most Effective Basin” funding will be available throughout the Conestoga). The same can be said for the Lower Conestoga River, although that watershed includes municipalities that have established successful stormwater green infrastructure programs, of greatest note the City of Lancaster.

Across all watersheds, given the plethora of partners and resources available in Lancaster County, it is critical to develop and deploy a strategy that integrates partners and funding to take full advantage of specific and collective strengths and weaknesses, thus enhancing the delivery of conservation on the ground. We make the following eight specific recommendations to achieve *integrated funding delivery* for maximum collective impact:

Recommendation One: Strategically match and leverage different funding sources to stretch limited dollars for maximum impact.

The funding resources inventory in Section 3 reveals a wide variety of funding sources. Yet each of these are limited in amount, and collectively fall far short of the total amount of funding needed to meet the county’s water quality goals. Moreover, many have caps or matching requirements that prevent use of a particular funding source to fully implement a practice. Accordingly, it becomes important to consider at every juncture how funding resources can be leveraged to stretch limited dollars for maximum impact.

As an example, consider funding for the Heller Restoration Project on the Heller farm on Dellinger Run in the Chiques Creek watershed. The Hellers were interested in addressing stream bank erosion along a reach of the stream that was historically pastured and lacked riparian vegetation. The Penn State Agriculture & Environment Center and Lancaster County Conservation District conducted outreach and worked with the farmer to develop a concept plan that included stream restoration, exclusion fencing and crossings, and the planting of three acres of forest riparian buffer. The buffer was paid for by the DCNR-funded Lancaster County Riparian Buffer Partnership, administered by the Alliance for the Chesapeake Bay, at an estimated cost of \$12,000. Installation of 3 acres of forest buffer made the Hellers eligible for another \$12,000 of “buffer bonus” funding from a Chiques NFWF grant administered by the AEC, which was used toward the costs of the stream restoration project. Stream restoration design and permitting was undertaken by the US Fish & Wildlife Service, which provided in-kind cost share of \$18,000 toward the project through its Partners for Fish and Wildlife Program. An additional \$20,000 of Exelon Habitat Improvement Project funding was provided by the conservation district. Finally, funding for buffer maintenance for the first two years of maintenance (a \$3,000 cost) was provided by the inaugural “Lancaster BEST” (Buffer Establishment Support Team) program, funded by another NFWF grant administered by the Partners.

Accordingly, a high impact conservation project at a total cost of \$65,000 was implemented by six partners working together using six leveraged funding sources (a mix of state, federal, foundation and private sector funding) to provide the outreach, technical assistance and implementation services (including maintenance) necessary to get the project in the ground and be an impactful, long term project to improve clean water. None of the funding sources provided more than \$20,000,

allowing all of them to put dollars saved through strategic leveraging toward other conservation projects.

Recommendation Two: Recognize the importance of maintaining and growing a diversity of funding sources.

As reflected in Table 5, nearly 50 distinct funding programs or programmatic grants are currently available in Lancaster County, representing a diversity of funding sources from five different source or sector categories. While this may seem like an almost overwhelming amount of funding opportunities and choices, it is important that the diversity of funding sources is maintained and provided. As previously discussed, some funding sources inherently have limitations. Some are unable to fund critical outreach components necessary to accelerate implementation. Others fund construction only and would require partners to bring other resources to the table for design and engineering components of a project. Still others provide only partial funding for projects (see Table 6: Funding Sources in Need of Matching Funds). In addition, the nature of certain funding sources (such as government funding) may not be palatable for any number of reasons to certain landowners, and thus a robust diversity of funding sources from public to private is necessary.

In addition to maintaining the diversity of funding sources, the funding amounts must grow. Current funding levels are not nearly enough to implement the number of conservation practices necessary to meet Lancaster County's water quality goals. By establishing an integrated funding delivery system and demonstrating its ability to efficiently transform dollars to on-the-ground conservation, Lancaster County's clean water partners can make a case for further investment in the county's conservation infrastructure.

Recommendation Three: Determine and utilize core funding sources for specific conservation practice types.

To establish some level of certainty with respect to funding resources, we recommend determining and utilizing certain core funding sources for specific conservation practice types. These core funding sources can already be identified for all of the practice type categories discussed in this report.

For agricultural conservation practices, a trifecta of federal (USDA NRCS programs, primarily EQIP), state (REAP and PENNVEST) and county (Conservation Excellence Grants) sources are now established that can provide funding for a full suite of agricultural conservation practices. An established, well-funded program like EQIP, which brings with it high levels of technical assistance competence and technical standards for conservation planning and practice design can be an excellent choice for funding highly engineered and technical structural practices like manure storages, barnyard runoff controls, and stabilized animal concentration areas. These are often more expensive but necessary practices for which larger government sources of funding are often needed. Pursuit of a Regional Conservation Partnership Program (RCPP) for Lancaster County, another NRCS program that can bring specific, targeted NRCS dollars to implement BMPs, would provide significant additional federal funding for agricultural conservation practices. PENNVEST, while newer to the nonpoint source funding arena, can also provide similar levels of financial assistance, including grants or loans as meets a farmer's financial situation and needs. REAP, as a state tax credit program, provides a different financial wrinkle to traditional government grants and therefore may

also be an intriguing option for some producers. The Conservation Excellence Grants program, established under the 2019 Pennsylvania Farm Bill, is a new program offered through the State Conservation Commission and administered locally by county conservation districts. This program provides more of a flexible, local, and simpler approach to cost share funding that is not burdened by the higher levels of paperwork and administrative steps that EQIP, PENNVEST, and even REAP entail.

Forest riparian buffer restoration also has a mix of core funding provided by multiple sectors. USDA's CREP program provides sustained core funding for forest buffers and other wildlife-related conservation practices, but in recent years DCNR's riparian buffer grants program has been a viable option for many landowners, particularly those interested in more program flexibility, including the ability to plan and utilize multifunctional buffers. While the nature of the DCNR program requires eligible applicants to apply for individual grants, in Lancaster County the Alliance for the Chesapeake Bay has led a coalition effort to apply for larger amounts of funding shared by a group of partners who conduct outreach to landowners related to riparian buffers. This allows the funds to be more programmatic in nature and, if this approach continues, establish a state-based companion core funding source alongside CREP available in Lancaster County.

Restoration practices can rely on a few core funding sources, even if the dollar amounts are more limited than what is available for agricultural conservation practices and buffers. Exelon funding administered by both the Lancaster County Conservation District and the PA Fish & Boat Commission are options in Lancaster County, but these can only fund a handful of projects per year, at most. Section 319 funding in Lancaster County has provided another source of funding for stream restoration in the three watersheds with approved Section 319 Plans (Conewago Creek, Mill Creek, and Conowingo Creek). NRCS programs can also be utilized for stream, wetland and floodplain restoration. We recommend that active 319 grants be maintained by project sponsors in each of the 319 watersheds to establish this as a core funding stream for restoration. EQIP can fund stream restoration practices, though that program has been minimally used to date. NRCS' Wetland Reserve Easement Program (WRE) can fund wetland restoration and preservation and should be a funding source considered seriously for landowners interested in wetland restoration. NRCS' Watershed Protection and Flood Mitigation Program (PL-566) funding is currently funding watershed planning in Chiques Creek which may lead to funding opportunities for design and implementation of floodplain restoration practices in the future for that watershed.

Of the four types of conservation practices, stormwater BMPs probably have the greatest dearth of what could be considered core funding. PENNVEST funding provides another state core funding source, but these urban practices lack the sustained core federal funding source that is provided from USDA's conservation programs for agricultural conservation practices, riparian buffers, and restoration on farms. The county-administered Dirt & Gravel/Low Volume Road program has recently begun to fund stormwater BMPs associated with eligible low volume road networks, even in highly urban communities. Federal and state grants can provide opportunities to fund stormwater BMPs but would require individual grant applications and would not be considered the kind of consistent, dedicated funding source necessary for core funding. Municipalities can provide funding to support stormwater BMP implementation but given the plethora of local services that must be provided by municipal government and limited revenue generation sources, funding for stormwater BMPs is scarce at the local level. Some municipalities such as the City of Lancaster have enacted stormwater fees which can establish core and sustainable funding sources, but these have limited applicability and scope in Lancaster County at this point in time.

Recommendation Four: Use flexible funding sources to gap-fill and match.

Reliance on core funding is often not sufficient to ensure that a conservation practice is implemented. Several core funding sources, namely EQIP and REAP, generally provide a cost share and not full funding necessary to implement a project. Depending on the project scope, 10-50% of the project costs may be left unfunded. While in many instances the landowner can provide private funding, this may not always be a realistic option.

Accordingly, we recommend tapping into some of the more flexible funding sources available to fill gaps in funding and provide necessary match to make a project happen. Programmatic NFWF grants are often used in this respect by several partners. Other, smaller flexible pots can be used as well to “top off” funding and make a project happen, including the Lancaster Clean Water Fund, Lancaster County Clean Water Consortium’s Stormwater Mini Grants, and, for those communities along the county’s western River boundary, the Susquehanna Riverlands Mini Grants program administered by the Lancaster Conservancy.

Recommendation Five: Use a strategic mix of partner skills and funding resources to maximize outreach and TA capacity and deliver the dollars for implementation.

Almost all of the funding programs available for implementation cover construction and implementation costs, and often technical assistance as well. Fewer will fund the outreach (or even planning) aspects of a project. NFWF grants and Growing Greener are examples of funding sources that will fund outreach. DEP’s Agricultural Planning Reimbursement Program is available to cover conservation and nutrient/manure management planning costs.

The inventory of partners working in Lancaster County indicates capacity to conduct landowner outreach among nonprofits, for-profits, the conservation district, some local municipalities and watershed organizations, and other agencies. In addition, the county is blessed with an abundance of farmers who are leaders in conservation and epitomes of the culture of stewardship that is a backbone of Pennsylvania agriculture. Many of these farmers are leaders in their communities, and even serve local government leadership roles as planning commission members, other local government boards and committees, or as elected supervisors. There is tremendous potential to tap into this local leadership in the farming community to conduct outreach to other farmers in a peer-to-peer or advisor approach. The successful farmer outreach approach in Salisbury Township is something being modeled in several other municipalities in the county. In addition, the Pennsylvania No Till Alliance, with support from Stroud Water Research Center, has developed and successfully deployed these kinds of farmer-based approaches to outreach, education and technical assistance related to soil health, representing models that can be replicated across the county.

Technical assistance is provided by a similar but more limited network of partners who have the skills, training, and experience to provide the technical services necessary to plan, design, and oversee construction of conservation practices. For agricultural conservation practices, entities providing TA include USDA NRCS, the conservation district, and private sector ag consultants. Stream, wetland and floodplain restoration technical assistance is provided by a different set of specialized technicians, chiefly at the US Fish & Wildlife Service, conservation district, NRCS, PA Fish & Boat Commission, Water Science Institute, and private sector firms with experience in such

restoration practices. Urban stormwater BMP design and engineering is largely provided by the private sector. Technical assistance for forest riparian buffers is provided by a larger partner network of agencies, nonprofits, and for-profits, many of which also can provide landowner outreach assistance.

Given the largely partner-driven capacity for outreach in Lancaster County, and the funding-driven opportunities for implementation dollars, we recommend a strategic approach that takes advantage of existing skills and resources of the county's partnership network. This approach involves nonprofit organizations, municipalities, farmer leaders, or similar entities with local connections and trust taking the lead on farmer and landowner outreach, funneling interested landowners to TA providers at agencies and within the private sector to provide the technical services and leverage the funding pots necessary for implementation of conservation practices. There are many examples of this strategic method in practice in Lancaster County, including the work with the agricultural community in Salisbury Township, the Fishing Creek conservation project, the partnerships working in Octoraro Creek and Chiques Creek watersheds, and Stroud Water Research Center's Farm Stewardship Program.

Recommendation Six: Develop and deploy customized strategies that work best for specific watersheds and communities.

Given the size and diversity of Lancaster County, it is clear that there is not a singular countywide strategy for accelerating conservation practice implementation. While there is certain guidance and methods that are worth sharing and replicating, the exact nature of how these methods are implemented, and the exact mix of partners and programs that are utilized, will depend upon the unique makeup of individual communities and watersheds.

The presence of local leadership—particularly within municipalities or within the agricultural community—is often a lynchpin for successful acceleration of conservation efforts. Some funding strategies may be harder to implement within certain communities—government funding in some plain communities, for example. One approach that has been successful is having non-government entities—such as nonprofits, or private consultants—as lead partners in reaching out to plain sect farmers and serving as project managers for projects that seek to leverage agency funds. The conservation district's plain sect coordinator also provides extensive relationships within the community, can help provide technical assistance, and work with plain sect farmers to navigate conservation program opportunities. Penn State Extension Educators can play similar roles.

Similarly, different watersheds have different mixes of local leadership, community membership, population density, geographic and geologic features, land uses, and partners and funding resources available. Accordingly, customized approaches in these watersheds are necessary to successfully accelerate conservation practice implementation. The Lancaster Clean Water Partners Watershed Action Team can play a key role in working with local watershed communities to help develop these customized approaches. The watershed profiles above help to summarize the partners and resources currently available in each watershed to support these approaches.

Recommendation Seven: Seek to develop common standards and approaches to funding conservation across all partners and, to the extent possible, programs.

Lancaster County is home to many clean water partners, each with innovative ideas on how to fund conservation on the ground. The competitive nature of seeking grants and other sources of funding necessarily requires innovative thinking and creativity to be successful with proposals. Consequently, there are many different and innovative funding opportunities provided by individual organizations. There have been some informal efforts to create some consistency in how these opportunities are managed and what level of funds are offered. For example, several organizations, including the Chesapeake Bay Foundation, Stroud Water Research Center, Alliance for the Chesapeake Bay, and Penn State AEC, provide funding following the “buffer bonus” concept, where landowners willing to implement forest riparian buffers can earn \$4,000/acre capped at \$20,000 that can be used toward implementation of other conservation practices on the property. Yet there may be variations on program details regarding eligibility or how program dollars are administered. We recommend that for these and other funding opportunities, partners providing such programmatic resources meet and discuss the potential development of common standards and approaches to funding conversation. This will ensure consistency, simplify the process for landowners, and avoid situations where landowners shop for the best deal among programs and partners.

Recommendation Eight: Centralize administration and coordination of funding to streamline integrated funding delivery processes for all.

Among the significant barriers to accelerating conservation in Lancaster County is the time and resources that must be spent on seeking and applying for grants and other funding resources, administering grants and programs, and coordinating efforts among partners. To overcome this barrier we recommend a single entity provide centralized assistance in administering and coordinating funding and developing and implementing processes to simplify and streamline the ability of partners to quickly turn dollars into conservation on the ground. This kind of resource would be of tremendous assistance to the conservation community in Lancaster County.

The Conservation Foundation of Lancaster County has the organizational mission and structure to provide these kinds of services, and we recommend that it explore obtaining the resources necessary to provide this role through the Partners. The capacity to provide this would require at a minimum a full-time position with grant management and financial management experience.

With respect to funding conservation practice implementation, the Lancaster Clean Water Fund, established as a donor-advised fund at the Lancaster County Community Foundation, could serve as the foundation on which this kind of nimble and streamlined funding structure could work. From a fundraising perspective, it has the potential to tap into a diversity of funding sources, including private, that could grow the pot of funds available for conservation practice implementation. Currently this fund requires annual applications by eligible partners for grants, and partnership review and selection of successful awards. The manner in which this fund operates could be streamlined to operate less like a re-grant or mini grant program that requires partners to apply annually for funds, but rather administered by the Conservation Foundation as a rolling fund into which all partners across all sectors could tap to deliver dollars to fund conservation practices quickly, avoiding some of the existing administrative and bureaucratic hurdles that sometimes slow

the process and thwart efficiencies. Where the flexibility exists, larger funding resources could be “thrown into the pot” and administered in the same nimble way. A sustainable, long term buffer maintenance fund (for example, the Buffer Action Team’s BEST program) could also be provided through this funding mechanism. For funding programs that lack flexibility to support the Clean Water Fund, the Conservation Foundation, with its enhanced funding administrative capacity, could help partners match Clean Water Fund resources with existing core programs (EQIP, REAP, CREP, PENNVEST, Conservation Excellence Grants, etc.) to accelerate conservation implementation and maximize impact.