



PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION SECTION 319(H) WORKPLAN TEMPLATE

Attachment D

Project Number:

**Mill Creek Tributary Focus Project
(Construction)**

Land County Conservation District
SAP Vendor: #111111

1 Arcadia Rd.
Land, PA 11111

Matt Froth
mfroth@landcounty.org

Grant Request: \$121,000

Project Location: Mill Creek Watershed, Land County

HUC 12: 020503060012

ATTAINS Assessment Unit ID and Latitude/Longitude Coordinates: numerous Mill Creek tributaries provided with quarterly reports, prior to working on any projects and with the final report to be attached in GRTS upon project completion.

I. Context

A. Please explain how the proposed project fits within the current version of the PA Nonpoint Source Management Plan.

The Mill Creek Tributary Focus project is a perfect fit for the Pennsylvania Nonpoint Source Management Plan (2019 Update) due to its load reductions achieved, the partnerships formed achieving those reductions, the potential high visibility of the project locations, and the overall water quality improvements achieved by the projects. All of these aspects and more are key to improving regional water quality from a local perspective. The project supports the following Goals and Objectives from Pennsylvania's Nonpoint Source Management Plan (2019 Update).

Goal 2: Improve and protect the waters of the Commonwealth from nonpoint source pollution associated with agricultural activities.

2.13 Continue to implement PA's Chesapeake Bay WIP over the next five years.

Goal 3: Improve and protect the waters of the Commonwealth from nonpoint source pollution associated with stormwater runoff, as well as streambank and shoreline degradation.

3.4 Implement 30 new, state-funded riparian buffer, stream restoration and/or stormwater management projects annually for the next five years.

3.8 Plant and protect 2,500 acres of riparian forest buffer over the next five years.

Goal 4: Verify the efficacy of Pennsylvania's nonpoint source pollution management efforts through enhanced data collection.

4.11 Through state-wide nonpoint source pollutant load-reduction efforts, one million pounds of nitrogen will be reduced from the nonpoint source pollutant stream each year.

4.12 Through state-wide load-reduction efforts, 300,000 pounds of phosphorus will be reduced from the nonpoint source pollutant stream each year.

4.13 Through statewide load-reduction efforts, 200,000 tons of sediment will be reduced from the nonpoint source pollutant stream each year.

Please explain how the proposed project supports other work in the watershed being performed under other grant programs.

Great things are happening within the Mill Creek watershed, not just stream restoration efforts. The Land Farmland Trust has been working with several municipalities within the Mill Creek Watershed to get a better handle on the agricultural BMP's needed within the watershed to achieve agricultural compliance and improved water quality. This includes farm visits, preservation efforts, and other options. Local municipalities are also stepping up to the plate to improve the watershed through their most recent Pollution Reduction Plans (PRP) as part of their MS4 permits. While this is a regulatory requirement, the Mill Creek watershed municipalities see the value of doing not just their PRP planned projects but assisting with other projects throughout the watershed. Finally, the conservation district has been working throughout the county with agricultural compliance visits. Many of these visits have taken place within the Mill Creek watershed so these efforts have been proactive at improving the watershed as a whole and will continue for several more years.

B. Please explain how the proposed project supports the implementation and completion of the Watershed Implementation Plan (WIP) in question.

The Mill Creek Tributary Focus project is ideally suited for EPA Section 319 Nonpoint Source Pollution Prevention grant funding because of the Mill Creek Watershed Implementation Plan created in 2006, by the Land County Conservation District and currently being updated by the District with Section 319 funding. His proposal addresses high and medium priority riparian buffer, streambank fencing, and livestock crossing issues in tributary streams of the Mill Creek, all of which are listed on the Mill Creek WIP. Besides implementing the 319 WIP, the project has the co-benefit of implementing the Chesapeake Bay Phase 3 WIP in the Land Countywide Action Plan with action items 1.2 - Agriculture - Livestock Access Management and 1.3 - Buffers - Buffer Implementation.

II. Program v. Watershed Project

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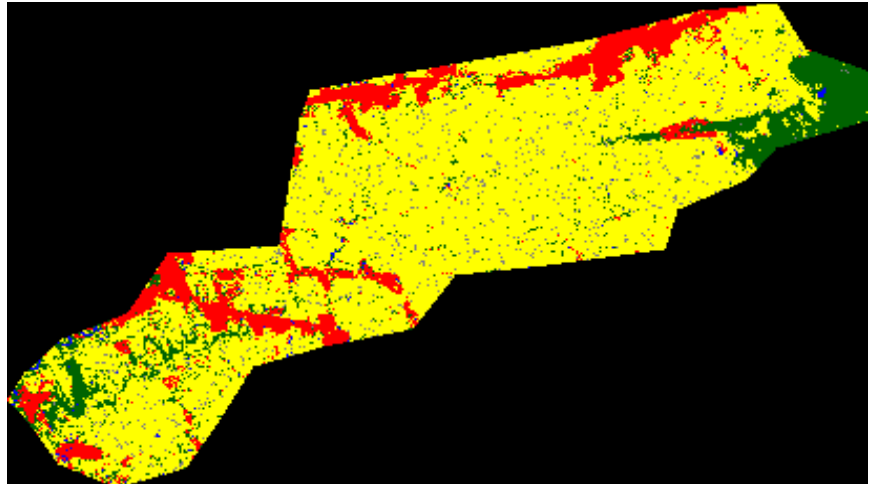
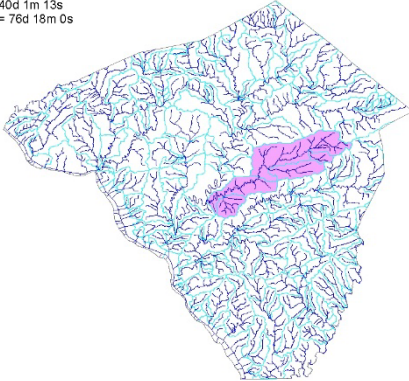
III. Content

A. Problem/Need Statement

The Mill Creek Watershed in Land County, Pennsylvania encompasses ten municipalities and drains 56.4 square miles (36,134 acres) of mostly agricultural land. The watershed is in sub-basin 07J and is included in HUC Area 2050306-Lower Susquehanna River, a Category I-FY99/2000 Priority watershed. Major tributaries of the Mill Creek Watershed include: Muddy Run, Groff Run, and Big Spring Run.

Map Legend
Yellow – Ag Areas
Red - Developed Areas
Green - Forested Tracts
Yellow - Agricultural Lands
Blue – Water Features

40d 1m 13s
= 76d 18m 0s



Watershed & land use within the Watershed

Mill Creek Watershed is comprised of 67.5% cropland, 9.6% residential, 7.9% woodland, 7.2% commercial/industrial, 3.2% open space, and 4.6% pastureland/farmsteads. (Figure 1) Old Order Amish and Mennonite families who follow traditional farming methods own many of the farms in the upper and mid reaches of the Mill Creek Watershed.

Due to a large section of the Amish community living within the Mill Creek Watershed, the Land County Conservation District (LCCD) and Natural Resource Conservation Service (NRCS) set up a satellite Office to work with the plain sect to implement Agricultural Best Management Practices (BMP's) and improve overall water quality back in 1990's. Locating the office within their watershed provided local farmers a clearinghouse of information and solved the access issues for horse and buggy traffic.

This office oversaw most of the implemented BMP's in the Mill Creek watershed. The staff spent numerous years cultivating working relationships within the Mill Creek Watershed community, specifically our plain sect neighbors. Though our Smoketown office has since been consolidated, we strive to maintain these valuable relationships. We know that new, innovated BMP techniques can be difficult to establish in reticent, close-knit communities like those existing in this particular watershed; therefore, we often call upon prominent community members to exemplify BMP's on their properties, encouraging others to accept them, though there is still considerable need for traditional BMP's

Environmental Degradation & Priorities:

The watershed is subjected to a variety of non-point source pollutants including organic enrichment and siltation from agriculture, on-lot septic systems, **stream bank erosion and lack of stabilization.**

It can also be observed that little to no riparian zone exists along the streams in the watershed.

Impairment Listings

According to the Pennsylvania Department of Environmental Protection’s (PA DEP) 2022 Integrated Water Quality Report on the 303(d) list (Integrated List for non-attaining streams or Integrated List of Waters) stream sections within the Mill Cr. Watershed (Table 1) are impaired by agricultural practices and are in the greatest need of agricultural best management practices, such as; **cattle exclusion, stream bank stabilization, and restoration of riparian buffers.**

Table 1: Impairment Listings for the Mill Creek Watershed (DEP’s Section 303(d)/305(b) Report

Stream	Stream Code	Drainage Area Square Miles	Miles Impaired	Miles Attained	Sources/Causes/Comments
Mill Creek	07957	56.4	16.74 main stem; 17.22 of 14 UNTs	9.84 main stem; 8.18 of 5 UNTs	Nutrients & siltation from Agriculture/grazing and crops; Road runoff, Land development

The conservation district has successfully managed and implemented other 319 and Growing Greener projects within the Mill Creek Watershed, including 319 projects 1417, 1714, 1715, 1610 along with the current project number 1810. Additionally, the district has successfully implemented five Mill Creek Watershed Agricultural BMP implementation projects funded through the Growing Greener Grants Program. Although no COMID/Assessment unit within this watershed has been totally improved to date (delisted), with all of the current projects in this watershed and these future ones, the water quality is improving and the goal is to have a success story for DEP and the Mill Creek Watershed Association within the next several years.

Bottom line, these projects will increase water quality while simultaneously meeting the property needs of the Mill Creek Watershed community by improving various sections of impaired tributary creeks.

B. Goals and Objectives

- Between 25-30 acres of riparian buffer created
- Approx. 4,000 ft. of streambank fencing installed
- Approx. 4-6 livestock crossings installed
- Aquatic benthic and terrestrial community enhanced through stream corridor improvements

The Chesapeake Bay Countywide Action Plan BMP Implementation form is included with the proposal, however the project would help to implement the Land County Countywide Action Plan, including action number 2.28 – 25 – 30 acres of forest buffers (agriculture sector); 2.25 – 4-6 (approx.) livestock crossings (agriculture sector), and 2.27 – 4,000 (approx.) ft. streambank fencing (agriculture sector).

All nutrient and sediment pollutant load reductions will be submitted with the final report.

C. Project Description

Executive Summary

The Land County Conservation District in partnership with the Mill Creek Watershed Association is applying for a 2023 DEP/EPA Section 319 Nonpoint Source Pollution Prevention Program Grant. The Mill Creek Tributary Focus Project consists of targeting high and medium priority WIP projects that call out the need for riparian buffer installations, streambank fencing and livestock crossings on various tributaries in the Watershed. These projects will be targeted for their high impact and rapid delisting capabilities on headwater tributaries of the Mill Creek. The current Mill Creek WIP does not

have priority tributaries listed in the plan but the WIP update will have some priority tributaries listed in it. This grant will try and focus in on these priority tributaries especially if buffers, fencing, and crossings are highlighted BMP's in these priority tributaries. Traditional and non-traditional (multi-functional) buffers will be explored with interested property owners. Streambank fencing will be installed on projects where it is needed and currently where little to none exists. Finally, if livestock crossings are needed on these projects these will also be implemented to complete the tributary corridor improvements. An average 35-foot riparian buffer will be the goal of any new buffer established on these tributary sections.

Description

The project the Land County Conservation District is submitting focuses on adding an additional 25-30 acres of riparian buffers on tributary streams within the Mill Cr. Watershed. The District would target new buffer areas and solicit property owners through a series of letters, educational events, and door-to-door outreach. Currently, through a much smaller 319 grant this same approach is seeing overwhelming success so this project is building on that success. In this very close-knit community word of mouth at church and weddings are the best way conservation is being sold. Traditional federal and state cost-share programs that pay for buffers are not accepted in this watershed so this would be another option for landowners. Through this outreach we feel we can reach targeted riparian buffer goals in tributary streams of the Mill Creek Watershed.

In the process of assessing any new tributary properties and their buffer potential we will also be evaluating if other conservation practices like streambank fencing and/or livestock crossings will be needed. It only makes sense to bundle these practices in an overarching stream corridor improvement package. If these practices are needed funding and implementation will be used from this grant to pay for those BMP's. If additional on farm BMP's are needed on agricultural operations these will be directed to our District's ag staff or NRCS technician and funding these folks have. These off-stream BMP's will not be paid through this grant but could be used as match for the overall project.

While no specific landowner/projects are listed in this proposal, we are fully confident with the past successes in this watershed that we will have folks interested in participating in this grant. For this reason, we have no landowner commitment letters to date but landowner agreements with any property we would work with during this project would be vetted with DEP prior to any work starting and a formal landowner agreement would be obtained before work was started on any BMP. The district has done this procedure in the past for previous 319 grants and feel it is appropriate for this grant round as well.

The contractor for the buffer installation aspect of this project will be through the District's Watershed Resource Technician. The technician has a pesticide applicator license, runs our volunteer buffer maintenance trailer program, and has done countless buffer projects throughout the county. He will work with volunteers, companies, school groups, churches, and others to implement these buffer projects. With this experience and numerous planting seasons to install these buffers implementation should not be a drawback for this project.

Justification for Funding

The buffer projects we are proposing should be considered a priority for a couple of reasons. First, as stated earlier we have another smaller Section 319 grant focusing in on buffer implementation and are seeing an overwhelming response from landowners to this initiative. The reason for this response is that landowners in this watershed are less likely to participate in state and federal buffer programs because of religious beliefs and customs. Even though 319 funds flow through a state and federal source they look at the Conservation District as a non-profit and are much more open to accepting these funds from groups like ours in this case. Also, some of the requirements for federal programs, like no mowing or 50 ft. wide setbacks are not ideal for smaller properties that like a neat or manicured appearance to their lands. This funding allows for some flexibility where currently there is none.

Secondly, in the completed **Mill Creek Watershed Implementation Plan (2006)** riparian buffer projects on small headwater tributaries were noted as **High Priority** locations for their ease of implementation and their benefits for local water quality. If all a small headwater stream needs to potentially have it removed from the states impaired list is a riparian buffer this is considered low hanging fruit in the conservation arena and something that this project could quickly and easily address.

This project proposes to fix known sediment and nutrient enrichment issues on headwater tributaries in hopes of increasing water quality while addressing community concerns. It focuses in on areas where riparian buffer and livestock exclusion fencing are the only stream corridor improvement needed to “fix” that section of broken stream. Riparian buffer establishment was an element of the **Mill Creek Watershed Implementation Plan (2006)**.

These projects would help us reach the following goal (see *Table 2*).

Table 2: Existing/Future Planned BMP's in the Mill Creek Watershed

<u>Agricultural Practices</u>					
	<u>Existing*</u>	<u>Future</u>		<u>Existing*</u>	<u>Future</u>
<i>Stream Bank BMP's</i>					
Stream Miles w/ Vegetative Buffer Strip	0.3	24.0	Miles of Stream Bank Stabilized	0.4	10.0

**-existing period ends June 2000 (Assessment Date)*

D. Monitoring

Post construction buffer monitoring will follow to evaluate the results of the project. The Conservation District, the Water Quality Volunteer Coalition (Garden Spot Village), and the Mill Creek Watershed Association will perform this visual assessment monitoring. This monitoring will take place until the completion of the grant funding and afterwards. No Section 319 grant monies will be used for water quality monitoring.

E. Quality Assurance Project Plans

N/A

F. On-Site BMPs/BMP Efficacy/Load Reductions

In addition to post construction monitoring, computer modeling of the installed BMP's will be used to account for load reductions. The final report for this project will include final estimated load reductions for the as-designed and as-built BMPs using the Mapshed model in Model my Watershed load reduction estimator tool within the Wikiwatersheds program and these can then be included in GRTS. The conservation district has used this tool in the past and is comfortable continuing to use this tool after BMP implementation. By using this model with some on-the-ground water quality data, we hope to achieve an accurate account of load reductions. We have run this model with some preliminary BMP numbers projected in this proposal and have come with; over 1,100 tons of sediment, nearly 22 tons of nitrogen, and nearly two tons of phosphorous being reduced annually from the implementation of BMPs listed in this proposal. The majority of tributary stream reaches are primarily impaired by excessive sediment loadings from stream banks and lack of vegetative cover on the stream banks. The Mill Creek main stem does not have a TMDL, but the work this project will undertake will have significant improvements to the overall watershed ecosystems and downstream because we are working on the tributaries that feed the mainstem. All BMPs implemented will be documented including acres of riparian forest buffer and length of streambank fencing installed which will be reported in the final report. The Final Report for this project will be attached in GRTS upon

project completion will include final estimated load reductions for the as-designed and as-built BMPs and describe how they were estimated (i.e. Model My Watershed). Since no specific projects are identified in this workplan presently the District will provide to DEP all assessment unit ID's and latitude and longitude coordinates prior to any work started on any BMP's for this grant. These identifiers will also be noted in quarterly reports and the final report as well. The final estimated load reductions, along with how the load reductions were estimated (model used) will be summarized in the final report, and DEP will upload into GRTS supplied by the subgrantee upon project completion.

G. Sub-grantees

LCCD will work with the following sub-grantees:

- Native Plant Nursery (6,000 trees and shelters for riparian buffer plantings)
- Fencing Contractor (streambank fencing installation)
- Excavator (BMP installation)

H. Partner Contributions

Please note that all final partnership contributions and match will be documented and captured in the Final Report Document. All partner contributions or match will be captured in the final report, and DEP will upload into GRTS supplied by the subgrantee upon project completion.

Match/Partners & Roles

In-Kind Match for these projects will come from varying sources.

1. The Mill Creek Watershed Association will be assisting with the riparian buffer establishment on various projects with volunteers they have within their group. Some of the operation and maintenance associated with the projects will be carried out by the Preservation Association as well. Approximate value of contribution equals \$1,000.
2. All landowners involved in this project will be required to provide the operation and more importantly the maintenance of these projects over their lifetime. This stipulation will be in the landowner agreement each property owner will have to sign before work is started on their project. This work would involve mostly riparian buffer maintenance which can be a timely endeavor. Approximate value of this contribution equals \$5,000/project.
3. The Land County Conservation District will be donating their travel and time in the administrative aspects of the projects. Our roll will also involve overall oversight of all aspects of these projects. Approximate value of contribution equals \$3,000.
4. Finally, local Trout Unlimited chapter has a local tree and shrub nursery and will be donating some plants needed for these projects that might not be in our planting plan for the buffer projects. In addition, local volunteers will be installing these native trees and shrubs during several volunteer workdays. Approximate value of the Trout Unlimited and volunteer planting equals \$2,000.

I. Education/Outreach

The District's Educational Coordinator will assist in the outreach effort for this project due to her extensive history of reaching this close-knit plain sect community in new and unique ways. This will be through handouts, educational events, and even plain sect school outreach to tap into the younger generation.

J. Urban/MS4 Activities

N/A

K. Operation, Maintenance and Repair/Replacement Plans

Operation and Maintenance of these projects would fall primarily to the property owners. The Conservation District and the Mill Creek Watershed Association would assist in this endeavor as per property owners' request. The majority of the maintenance will involve riparian buffer care which the

property owners are well equipped to handle. A general or draft OM&R plan will be developed for this project and included within the final report.

L. Competitive Bid

Project sponsors will abide by the Commonwealth of Pennsylvania’s Procurement Code.

M. Contingency Plan (AMD only)

N/A

N. Project Deliverables

Project deliverables will be included with the final report, and DEP will upload into GRTS supplied by the subgrantee upon project completion.

#	<u>Deliverable</u>	<u>Tasks</u>	<u>Responsible Party</u>
1.	Landowner Outreach Efforts	Send letters, conduct education events, and door-to-door outreach efforts	LCCD Watershed Resource Technician and Education Coordinator
2.	Stream Corridor BMP Installations & Operation Maintenance Plans	Riparian Buffer Implementation, Streambank fencing, and livestock crossing install	LCCD, Mill Creek Watershed Association, volunteers, & others
3.	Quarterly & Final Reports	Completed Reports submitted	LCCD

O. Project Schedule/Timeline

Project Start Date: October 1, 2024 Project End Date: *no later than June 30, 2027*

Task	Start and Completion Dates
Landowner Outreach Efforts-- Send letters, conduct education events, and door-to-door outreach efforts	October 1, 2024 – Fall 2024
Stream Corridor BMP Installations & Operation Maintenance Plans-- Riparian Buffer Implementation, Streambank fencing, and livestock crossing install	July 1, 2025 – Spring 2026
Quarterly & Final Reports *All Landowner Agreements & O&M Plans will be included with the final report upon project completion and included in GRTS-- Completed Reports submitted	Quarterly throughout the grant June 30, 2027

P. Budget Summary

Please note that since the grant request is below \$250,000, the federal Buy America, Build America Act does not apply.

Task 1: Landowner Outreach Efforts

Item	Task	Responsible Party	Grant Requests	Match	Total
Salary	Project Mgmt.	LCCD	\$10,000.00		\$10,000.00
Administration	Invoicing	LCCD		\$500.00	\$500.00
Travel	Travel to sites	LCCD		\$2,000.00	\$2,000.00
Equipment and Supplies					
Contractual	Design				
	Permitting				
	Construction Management				
Construction	Materials				
	Labor				
	Earthwork				
Other					
Total			\$10,000.00	\$2,500.00	\$12,500.00

Task 2: Stream Corridor BMP Installations

Item	Task	Responsible Party	Grant Requests	Match	Total
Salary	Planting Prep				
Administration					
Travel	Travel to sites	LCCD		\$500.00	\$500.00
Equipment and Supplies					
Contractual	Design				
	Permitting				
	Construction Management				
Construction	Materials (Buffer Plants)	Native Plan Nursery (6,000 trees and shelters)	\$60,000.00	\$2,000.00	\$62,000.00
	Streambank Fencing	Fencing Contractor	\$10,000.00		\$10,000.00
	Livestock Crossings	Excavator	\$20,000.00		\$20,000.00
	Labor	LCCD	\$20,000.00		\$20,000.00
	Earthwork				
Other	Volunteer Time			\$6,000.00	\$6,000.00
Total			\$110,000.00	\$8,500.00	\$118,500.00

Task 3: Final Report

Item	Task	Responsible Party	Grant Requests	Match	Total
Salary	Final Report	LCCD	\$1,000.00		\$1,000.00
Administration					
Travel					
Equipment and Supplies					
Contractual	Design				
	Permitting				
	Construction Management				
	Materials				
Construction	Labor				
	Earthwork				
Other					
Total			\$1,000.00		\$1,000.00

Q. Maps and Photos

Location and site maps, along with aerial and site photos, will be submitted to DEP with the landowner-grantee agreements before construction starts on any project.

R. Landowner

Landowner-grantee agreements for all projects will be submitted to DEP both before construction starts on any project.

S. AMD Treat

N/A

No 319 funding will be used to supplement or cover any LCCD staff salary already paid for by the CD Allocation Program, Growing Greener Watershed Specialist or any other funding sources.