

Clearfield County Conservation District

Project Description: The original proposal for this grant application was for the development and installation of Belt Diversion structures on farm access roads on five farms within Clearfield County. The farms where these projects were located all have highly erosive access roads that have created Critical Runoff Problem Areas (CRPA) , involving channelized and accelerated runoff from agricultural operations. The runoff contributing to the CRPA's on these project sites is originating from a variety of different areas including township roads, fertilized crop fields, feed storage areas, and large machine yards. Not only is the water contaminated from the agricultural operations, it is also contaminated from the road sediment, which is inevitably being transported to nearby waterways. Addressing these runoff issues is a priority for the Clearfield County Conservation District and has been a major point in the Chesapeake Bay watershed restoration efforts. The goal of installing these structures is to divert the nutrient and sediment contaminated water off of farm access roads and into grassed areas where the water is decelerated, dispersed, and allowed to infiltrate into the soil where the nutrients and sediment immobilized. We believe that with the installation of these structures we will have a significant impact on sediment, and nutrient reduction in local watersheds and inevitably the Chesapeake Bay watershed.

Project Goals:

The following immediate environmental results are expected from these projects.

- Significant reduction in sediment loads to nearby streams coming from eroding farm lands
- Reduction of nutrients directly entering waterways that are being washed off animal walkways

Project Results:

Through the grant, we were able to stabilize over 2,400ft of eroding farm lanes, and 550ft of animal walkways on 6 farms in Clearfield County. We were able to use donated used conveyor belting from the Walmart Distribution center in Woodland PA, to install 60 convey belt diversions in the lanes that divert the flow of water, sediment, nutrient off the farm lanes and walkways and into a forested, grassed area where stormwater infiltrates and sediment and nutrients are contained. This project has proven to be a cost-effective way of reducing accelerated erosion from farms and reducing sedimentation to local waterways.

Before



After



Clearfield County Conservation District-Pictures:

Before

After





Project Costs:

The Clearfield County Conservation District was awarded \$39,150 through the Headwaters RC&D Growing Greener Grant. The following is a breakdown of the project expenditures:

Grant Expenditures			Match
Construction	\$38,870.44	Admin – CCCD	\$8,750
CCCD Travel	\$223.65	Conveyor Belts	\$6,750
Total Grants	\$ 39,094.09	Total Match	\$ 15,500

Lessons Served:

This project proved to be an effective and cost-effective way to reduce accelerated erosion from farmlands and animal walkways. This this practice was to be widely adopted it would prove to have significant impacts on water quality throughout the state.

Partners:

This project utilized a coordinated effort of the Clearfield County Conservation District, Walmart (donated conveyor belts), DEP (for funding) and the Headwaters RC&D.

All participating landowners will assist in monitoring and maintaining BMP effectiveness and assist other farmers both within and outside the watershed to reduce water quality problems.

Contact Information:

Clearfield County Conservation District
 6395 Clearfield Woodland Hwy. Suite 2
 Clearfield, PA 16830
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 clfdccd@atlanticbbn.net

McKean County Conservation District

Project Description:

The Boiled Owl Farm is owned and operated by Alan Kinney and is located on Upper Portage Road in Liberty Township. This dairy operation consists of 35 cows, 10 calves, and 10 replacement heifers.

The existing project site consists of a large animal concentration area located upslope of the calf/heifer barn, a barnyard that is made up of a mix of broken concrete, asphalt, and dirt, and a temporary stacking area. The barn cleaner empties to the manure spreader at the northwest corner of the barnyard. Stormwater currently runs off the hillside to the west of the barn, through the animal concentration area, across the barnyard and down the driveway. This allows for nutrient and sediment runoff to leave the site, enter the roadside ditch and potentially enter Allegheny Portage Creek during storm events.

Project Goals:

The following immediate environmental results are expected from these projects.

- Reduction in runoff of contaminated storm water from the farmstead and barnyard.
- Reduction in erosion from heavy use area.

The longer term or indirect benefits from the project will include:

- Increased willingness of other farmers in the target and adjacent watersheds to use a comprehensive planning approach to reduce water quality problems.
- Reduction in NPS pollution from agricultural activities due to better planning by farmers and landowners.

Project Results:

Through the grant, a concrete barnyard and improved heavy use area, and a roofed manure stacking pad were installed. Drip drains were also installed for the manure storage. The purpose of these improvements is to reduce the size of the animal concentration area, reduce the sediment and nutrient runoff, reduce the erosion and soil loss, and to allow for manure storage to eliminate the need for winter spreading of manure.

The installation of spring developments will allow for better pasture management resulting in fewer animal concentration areas and less soil loss due to erosion and sedimentation. A manure management and Ag. E&S plan was also developed for the farm.



Before and After – Kinney heavy use area



Pictures: Before and After – Kinney manure stacking pad

Project Costs:

The McKean County Conservation District was awarded \$57,794.50 through the Headwaters RC&D Growing Greener Grant. MCCD also utilized \$53,445.28 of an existing growing greener grant to complete the project. The following is a breakdown of the project expenditures:

Grant Expenditures

Contractual/Engineering	\$ 11,432.78
Construction	\$ 99,807.00
Total Grants	\$111,239.78

Match

Salary – MCCD	\$ 7,980.62
Travel – MCCD	\$ 243.81
Landowner	\$40,511.21
Construction MCCD	\$ 1,470.00
Total Match	\$50,205.64

Lessons Served:

This landowner is committed to implementing the projects and without this funding as well as being able to use remaining funds from the District’s existing Growing Greener Grant, the landowner would not have been able to implement this project. The original cost estimates for this project were lower than the actual costs, due to prevailing wage.

Partners:

This project utilized a coordinated effort of the McKean County Conservation District, DEP (for funding) and the Headwaters RC&D.

The Participating landowner will assist in monitoring and maintaining BMP effectiveness and assist other farmers both within and outside the watershed to reduce water quality problems.

Contact Information:

McKean County Conservation District
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(814) 887-4025

Sandy Thompson, District Manager, sdthompson@mckeancountypa.org

Elk County Conservation District

PROJECT DESCRIPTION: The Meredith farm has a vastly inadequate manure system for the 4 horses and 6 beef cows they manage. The manure is piled next to a heavy use area with no overhead cover or impervious surface to prevent leaching.

PROJECT GOALS: Reduce the amount of rainwater coming into contact with the manure storage and reduce erosion in the heavy use area.

PROJECT RESULTS: A manure storage structure facility was constructed with concrete walls and flooring. The roof and gutter system installed ensures that the rainwater hitting the area is transported cleanly away from the site. A concrete slab was poured in the heavy use area and stone was placed on the walkway to the heavy use area to reduce soil erosion.



Photos: Meredith Farm, Elk County

PROJECT COST: \$23,935.75

LESSONS LEARNED: Not always is the first idea the best idea in practice.

PARTNERS: Elk County Conservation District, Headwaters RC&D

CONTACT INFORMATION: Elk County Conservation District, Ryan Grimm, rgrimm@countyofelkpa.com