



# **ARMSTRONG CONSERVATION DISTRICT**

## **2021 Annual Report**

### **Directors**

**Andrew Kimmel** – Chairman  
**Spurgeon Shilling** – Vice-Chairman  
**Jerry Longwell** – Secretary/Treasurer  
**Jason Renshaw** – Commissioner  
**DeJay Claypoole**  
**Dennis Hawley**  
**Michelle Hickman**

### **Associate Directors**

**John Linkes**  
**Ben Kimmel**  
**Rocco Ali**  
**Mike Daquilante**  
**Patricia Gerheim**

### **County Commissioners**

**Don Myers**  
**Pat Fabian**  
**Jason Renshaw**

### **Staff**

**Holly Laird** – District Manager  
**Jessica Schaub** – Resource Conservationist – ACT/NM  
**Kodie Rearick** – Resource Conservationist – E&S  
**Maria Sorce** – Resource Conservationist – Watersheds  
**Gregg Smith** – Dirt, Gravel and Low Volume Roads Specialist  
**Laura Sue Stewart** – Mobile Environmental Display Coordinator  
**Dave Rupert** – Armsdale Building Coordinator

**District Manager****Holly Laird – [halaird@co.armstrong.pa.us](mailto:halaird@co.armstrong.pa.us)****Phone: 724.545.3626****COVID/STAFFING:**

The past year proved to be a very dynamic year between staffing changes and pandemic related challenges. COVID-19 continued to be an obstacle for District activities but we never skipped a beat through the pandemic and district staff was happy to completely return to in-person work in late February. Staff has been participating in several virtual training events, conducting hybrid meetings, and has held events outdoors as much as possible. District Board meetings continue to be offered both in person and via Zoom.

After 28 years with the District, Office Manager Cindy Vranka retired in April. Over the years, Cindy kept the office running by maintaining all District records and handling various administrative tasks. She also assisted with outreach events including the Envirothon, Fall Elected Officials Tour, Legislative Breakfast, and workshops for all programs. The District will miss Cindy, especially her organizational skills, but wishes her well in her retirement.

In August of 2021, I was selected by the ACD Board of Directors to succeed Dave Rupert as the new District Manager. Prior to accepting this position, I was the Resource Conservationist – E&S for four years. I am very excited about this new role and am anxious to see what is in store for the Armstrong Conservation District.

The District continued to participate in the AmeriCorps program in 2021. Two Corps Members assisted in District operations throughout the year. Kodie Rearick, a Penn State graduate, spent a year and a half as an AmeriCorps member with the District prior to being selected as the new Resource Conservationist - E&S in October. Kodie is looking forward to her career with the District. Jacob Kennedy, a graduate of Waynesburg University, managed the GeoTrail, accompanied District staff on inspections, and helped with several agricultural projects. Jacob also spent time with the Armstrong Trails to maintain existing trail through Armstrong and Clarion counties. Jacob accepted a full-time position with PACD in December of 2021 as a Conservation Technician in the Clarion Area Office.

Despite the pandemic, our Mobile Environmental Display (MED) was showcased at twelve events throughout Western PA. Laura Sue Stewart, MED Coordinator, worked diligently to accommodate the needs of schools, festivals, fairs, and libraries to ensure the MED was utilized in 2021. The total number of people that went through the MED in 2021 approached 4,000 attendees.

As outlined in the 2017 strategic plan, a long-term priority action of the District was to procure a site to construct the future home of the Armstrong Conservation District. This goal really started to gain traction in 2020 when the District received the property of the former Armsdale Administration Building from Armstrong County and demolition of that building was completed. The next step was to begin the design phase of the building, access road, utilities, and

surrounding area as well as apply for and obtain all the necessary permits which was completed in late 2020. Phase 1 of the sanitary sewer replacement was completed in April 2021. Two applications were made to Redevelopment Capital Assistance Program (RCAP) to secure funding for the new building as well as a portion of the infrastructure costs associated with the new facility for Orphans of the Storm animal shelter. Grant awards have not yet been announced for the RCAP grants. An application was also submitted to PennVest to address stormwater concerns and to implement green infrastructure on site. PennVest announced funding in October of 2021 that granted a 50% grant/ 50% loan for the proposed updates. The PennVest funding offer will include the installation of a multi-functional riparian forest buffer, vegetated swale, rain gardens, and native plants in 2022. Former District Manager, Dave Rupert, has been retained by the District Board to continue working on the Armsdale project on a part-time basis to secure funding for the new Armsdale Center for Agriculture and Conservation.



Armsdale Center for Agriculture and Conservation

Despite the pandemic restrictions, the District was able to hold the annual Fall Elected Officials Tour in person again. Representatives from Congressman GT Thompson, Senator Joe Pittman, and Representative Abby Major's offices attended. We visited a farm that recently completed several agricultural BMP projects through a Growing Greener Grant. A streambank stabilization project that prevents tons of sediment from entering Cowanshannock Creek along a popular walking trail was also completed utilizing a Growing Greener Grant and money donated by Armstrong County. Multiple DGLVR projects were visited that include stream crossings demonstrating Aquatic Organism Passage and stormwater management techniques. Two projects were visited that demonstrate stormwater mitigation and education; a green parking lot at the ACD office and storm drain murals in Apollo Borough.

The Armstrong Conservation District is looking forward to more in person events, more education, and more conservation in 2022. Should you have any questions about the annual report, or any of the District Programs, please stop by our current office location at 120 S Grant Avenue, Suite 2, Kittanning, PA, call me at 724.545.3626 or email me at [halaird@co.armstrong.pa.us](mailto:halaird@co.armstrong.pa.us) Please visit our webpage at [www.armstrongcd.org](http://www.armstrongcd.org) or like us on Facebook.

**Resource Conservationist – Erosion and Sedimentation**

**Kodie Rearick – [klrearick@co.armstrong.pa.us](mailto:klrearick@co.armstrong.pa.us)**

**Phone: 724.548.3737**

My name is Kodie Rearick and I started as the District's Erosion & Sediment Control Technician in October 2021. If I seem familiar that's because I was ACD's AmeriCorps Service Member from September 2019 to May 2021. I graduated from Penn State University in 2016 with a BS Degree in Wildlife & Fisheries Science. When I'm not at the office administering and learning the E&S program you can usually find me outside doing something, whether it be hunting, taking care of my vegetable garden, playing with our Australian Shepherds or any of the other numerous tasks that come with owning 43 acres.

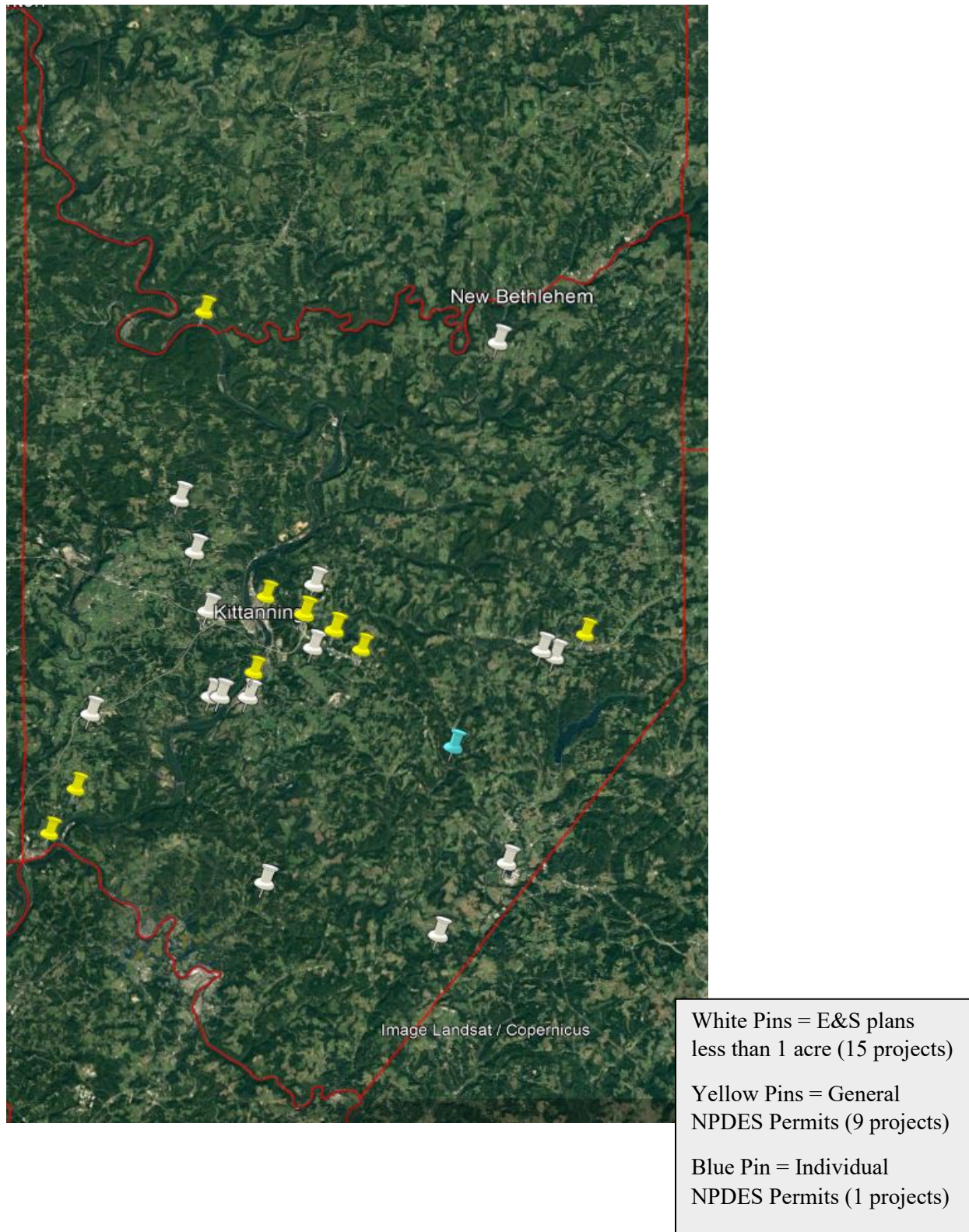
The Armstrong Conservation District has Level III delegation from the PA Department of Environmental Protection (DEP) to administer the erosion and sediment pollution control program. PA Code, Title 25, Chapter 102 of the Pennsylvania Clean Streams Law requires that steps be taken to control erosion during regulated earth disturbance activities. Under this delegation agreement, the Armstrong Conservation District administers the National Pollutant Discharge Elimination System (NPDES) Program, reviews E&SPC plans for adequacy to prevent accelerated erosion, provides technical assistance, conducts site inspections, reviews plans, and holds education workshops for plan preparers and the regulated community.

The accomplishments over the past year include:

1. E&SPC plan reviews were conducted on 25 plans.
2. E&S plan reviews were conducted on 57 total acres and 52 disturbed acres.
3. NPDES permits were received, processed, and reviewed for 9 General permits.
4. Received and investigated 10 complaints pertaining to erosion and sedimentation.
5. Technical assistance was provided to 50 people during the year.
6. To ensure that E&SPC plans were properly implemented and maintained, 33 site inspections were conducted.
7. Notice of Termination requests for 8 sites were approved.
8. Seven news releases were provided to the public. These news releases took the form of social media posts via Facebook and Instagram in addition to Newspaper articles published by the Leader Times.
9. One workshop was held in 2021 for contractors on November 9<sup>th</sup>, 2021.



10. In 2021, review fees received totaled \$11,800; NPDES permit fees totaled \$4,500; and DEP disturbed acre fees totaled \$1,800.



### DEP/Program Updates:

Over the last few years DEP has been working on PAG-01 permitting for people to apply for a faster and simpler NPDES permit for projects under 5 acres. In 2021 everything has come together and training has been provided for both consultants and program staff, with the anticipation that it will go live in early 2022. In January 2021 Chapter 102 e-permitting went live. At this time, permits may still be submitted using hard copies, but the option is now there for electronic submissions.

### Training Events:

While in-person training events were still limited in 2021 due to COVID-19, staff was still able to attend 27 training events throughout the year. Clean Water Academy (CWA) continued to be DEP's main resource for training E&S program staff. Staff completed 18 different training modules on CWA, and attended virtual trainings on agriculture and soils.

### Outreach Efforts:

On November 9<sup>th</sup>, 2021 ACD partnered with Jefferson CD, Clarion CD, Elk CD, Indiana CD, PennDOT and DEP to hold a Contractors workshop in Clarion, PA. Topics discussed included Act 167 (MS4) stormwater requirements, PennDOT requirements, chapter 105 permitting and ponds, chapter 102 permitting, creating an E&S plan and Best Management Practices and common problems. There were fourteen contractors in attendance.



Shaun Wessell, Jefferson County Conservation District Manager, presents on Act 167 Stormwater requirements.

### Butler County Community College:

Butler County Community College applied for and obtained a General NPDES Stormwater Construction Activities Permit for construction at the site of the former Ford City High School. They are constructing a new junior college and parking lot.



### McKean Street Housing:

At the site of the former Kittanning Middle School a General NPDES Stormwater Construction Activities Permit has been obtained, and construction has started on a new multi-unit senior housing facility and parking lot. The building will contain approximately 30 1 to 2 bedroom units, at an affordable price.

### Watters Landing:

A General NPDES Stormwater Construction Activities Permit has been issued for the Watters Landing Development. This is a multiphase project in Washington Township along the Allegheny River, that's actively working on Phase 1. In Phase 1 nine lots are being subdivided for private home construction, and Phase 2 consists of the final lot being developed into a community area.

### Future Plans for 2022:

ACD plans to continue working with the Armstrong County Planning Commission and municipalities to develop a county-wide Act 167 plan. In addition, we will continue to work with municipalities to enter into new Memorandum of Understanding (MOU). MOUs aid ACD in helping the municipality promote the conservation of natural resources. In 2021 ACD entered into an MOU with Manor Township.

In 2021 ACD worked with the Apollo-Ridge Education Foundation and IUP ArtsPath to educate Apollo-Ridge High School art students on why only stormwater should be going down stormdrains. The students created multiple murals to put on the sidewalks around Apollo Borough to educate the public. ACD has received a grant to install a Tourmate Solar Eco-Post. This will have prerecorded information about the murals around Apollo to help educate the public about them. With the success of the Apollo project ACD is in the process of obtaining funding to put stormdrain murals in Kittanning Borough. This would be done with the help of IUP artist-in-residence Bernie Wilke.



Stormdrain mural installed next to the stormdrain on First Street in Apollo, PA. Photo Credit: Joyce Hanz, Tribune Review

## Resource Conservationist – Watersheds

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Phone: 724.548.3237

ACD addresses water quality issues through our Watershed Conservation and Restoration Program. ACD receives Growing Greener funds from the DEP for a Watershed Specialist to focus on water quality improvement through District and grassroots initiatives. The Watershed Specialist/Resource Conservationist provides Watershed Associations with assistance such as technical support but also works with municipalities, sportsman's clubs, Trout Unlimited, and any other groups that carry out water quality projects throughout the county.

### Watershed Projects:

This past year was a busy construction season for watershed projects. In 2021, ACD was able to substantially complete construction on four watershed projects:

- Biblical Life Institute Streambank Restoration

Streambank stabilization in South Buffalo Township on a UNT to Pine Run in the Buffalo Creek Watershed was completed in September 2021. The right streambank was severely eroded, threatening the integrity of Biblical Life Institute's pond and adding sediment pollution to the watershed. Approximately 200ft of streambank was stabilized using concrete bin blocks and live stakes. J-hooks were placed in the stream to push the flow away from the bank while creating fish habitat. Additional phases may be constructed to address the rest of the eroded bank.



*Restored bank at BLI*



- ACD Green Parking Lot

ACD's gravel parking lot was replaced with two types of permeable pavers to serve as a stormwater demonstration project. Permeable pavers allow water to infiltrate the parking lot while filtering out sediments and other pollutants. Construction of the 1,800 square foot lot was completed in October 2021. A workshop is planned for April 2022 for municipal officials to learn about stormwater, installation and maintenance of BMPs, and tour the demonstration site.



*AmeriCorps Member, Jake Kennedy, reading the sign in front of the new permeable parking lot*

- Big Run Buffer Phase II The second and final phase of the Big Run Multifunctional Riparian Buffer was completed in the spring of 2021. Trees were planted on Big Run, a tributary to the Allegheny River, in South Buffalo Township to stabilize the bank, add habitat, filter out pollutants, and provide berries and nuts for the landowner. The second phase included 700 trees on 1.9 acres along 800ft of streambank. In total, 1,005 trees on 3.2 acres along over 1,000ft of streambank.



*Planting Phase II of the buffer*

- Cowanshannock Creek Streambank Stabilization  
We stabilized approximately 60ft of streambank along Cowanshannock Creek below the Cowanshannock Trail where a large washout was threatening the integrity of the trail and adding sediment pollution into the watershed. Concrete bin blocks were used to stabilize the bank and create rock vanes and a low flow channel block. Rip rap was used to fill in the remainder of the bank. Volunteers will plant live stakes in March 2022 alongside the rip rap to further stabilize the bank.





*Cowanshannock Creek before construction*



*Cowanshannock Creek after construction*

### **Education and Outreach:**

ACD continued our robust education and outreach to schools, local organizations, and any other group that contacts us about an educational event. I presented on various watershed topics for the following organizations/events:

- Penn State Master Watershed Stewards
- PA Master Naturalists
- Kittanning Rotary Club
- Apollo Ridge High School art class for stormwater murals
- Envirothon macroinvertebrate training for Armstrong Jr/Sr High School
- Accompanied the MED to 9 events

We continued to increase our presence on social media as it has proved to be a great resource during the pandemic to remain as active as possible in the community. I made 25 informational posts on our Facebook page.



I also created a 2022 ACD Myrtle Calendar showcasing projects that we have completed in the county over the last year with Myrtle edited in to explain the project. The calendars were a big hit and we are planning a 2023 calendar to highlight this year's projects.



Myrtle makes sure the vanes placed in Cowanshannock Creek are directing the flow towards the center of the stream and away from the bank. The Cowanshannock Creek Streambank Stabilization project used large blocks to create the vanes and to secure the bank along a severely eroded section of the creek along the Cowanshannock Creek Trail.

*Example month from the 2022 ACD Myrtle Calendar*

### **Technical Assistance:**

Technical assistance is a major part of all of our programs. This year, I continued attending meetings, writing grants and newsletter articles, and providing general assistance for the following watershed and conservation organizations: Armstrong County Sportsmen and Conservation League, Arrowhead Chapter of Trout Unlimited, Cowanshannock Creek Watershed Association, Crooked Creek Watershed Association, Kiskiminetas Watershed Association, Penn's Corner RC&D, Roaring Run Watershed association, and Western Pennsylvania Coalition for Abandoned Mine Reclamation. I provided technical assistance to over 15 landowners regarding flooding, stream and pond health and erosion, and stormwater problems. Several other landowners are working with me with potential projects.

### **Other 2021 Accomplishments:**

- Replaced batteries in the 3 old dataloggers, deployed them with the PA Master Naturalists for the summer and fall, bought 3 more dataloggers for use in the upcoming year
- Continued to check in on previous projects to make sure they are functioning correctly and still in good condition

- Received the following grants for a workshop and project taking place in 2022:
  - o PACD Bonus Round NPS Educational Mini-Grant – Rain Barrel and Stormwater Management Workshop
  - o PACD Multi-functional Riparian Buffer Sub-Grant – Rearick Riparian Buffer
- Continued to attend various trainings and workshops for professional development and to learn other district programs

### **Future Plans for 2022:**

We will continue providing assistance to local conservation and watershed organizations, working with schools and local communities to provide environmental education, and holding workshops to educate homeowners and municipal workers. Much of the focus for 2022 will be on stormwater and non-point source pollution with several landowner and municipal workshops planned as well as a demonstration backyard bioswale. Construction on Huling Run AMD Phase II will take place this spring. Another multifunctional riparian buffer will be planted in Burrell Township. As usual, we have several projects lined up for grant applications for the upcoming year.

### **Resource Conservationist – Agricultural Conservation / Nutrient Management**

**Jessica Schaub – [jjschaub@co.armstrong.pa.us](mailto:jjschaub@co.armstrong.pa.us)**

**Phone: 724.545.3628**

I coordinate the Armstrong County Agricultural Land Preservation Program, review Nutrient Management Plans, and perform fieldwork as an Agricultural Conservation Technician. I also coordinate the Armstrong County Envirothon, Annual Tree & Seedling Sale, and the Annual Fall Conservation Tour. You can contact me by phone at 724-545-3628 or email me at [jjschaub@co.armstrong.pa.us](mailto:jjschaub@co.armstrong.pa.us)

### **Nutrient Management**

Armstrong County has 6 agricultural operations that have current Act 38 approved Nutrient Management Plans for a total of 2,570.8 managed acres.

A farm is required to get an Act 38 Nutrient Management Plan if they are a Concentrated Animal Operation (CAOs). CAOs are defined as operations where the animal density exceeds two animal units per acre on an annualized basis (AEU). An AU is defined as 1,000 pounds of animal live weight. However, farms with less than 8AEUs are not required under this law to have an approved Act 38 Nutrient Management Plan regardless of the animal density on the farm.

### **Manure Management**

Every farm in Pennsylvania that land applies manure, whether they generate the manure or import it from another operation, is required to have a written Manure Manual Plan. For farms not defined

as Concentrated Animal Feeding Operations (CAFOs) or Concentrated Animal Operations (CAOs), Manure Management Plans can be prepared by the farmer. Manure Management Plans do not have to be submitted for approval but must be kept on the farm and made available upon request to DEP or the local county conservation District.

Pennsylvania Chapter 91.36 addresses pollution control and prevention at agricultural operations. Chapter 91.36 refers to the DEP Manure Management Manual (MMM) as containing standards for development of a Manure Management Plan. The MMM is available to assist farmers to develop a written Manure Management Plan.

The Armstrong Conservation District will continue to work individually with farmers to create Manure Management Plans and hold workshops in the County as needed.

### **ACT Program**

I work with the NRCS staff at the Conservation District to assist producers and landowners with implementing Best Management Practices on their land. Funds from the PA Growing Greener Program, REAP, and other federal programs have provided cost-share incentives to farmers wishing to install Best Management Practices.

### **REAP Program**

The Armstrong Conservation District helped 4 farmers fill out REAP applications in 2021 for a total of \$75,622 in tax credits. The Resource Enhancement and Protection (REAP) Program allows farmers and businesses to earn tax credits in exchange for “Best Management Practices” (BMPs) on agricultural operations that will enhance farm production and protect natural resources.

REAP is a first-come, first-served program – no rankings. The program is administered by the State Conservation Commission (Commission) and the tax credits are awarded by the Pennsylvania Department of Revenue. Eligible applicants receive between 50% and 75% of project cost in the form of State tax credits for up to \$250,000 per operation in a 7-year time-frame. The tax credits can be used incrementally (as needed) for up to 15 years to pay PA state income tax. Farmers and landowners can elect to sell the tax credits after 1 year.

### **Growing Greener Grants**

The Armstrong Conservation District is continuing to help farmers install best management practices (BMPs) through DEP Growing Greener Grants. In 2021, the Armstrong Conservation District applied for a DEP Growing Greener Grant (Mahoning-Redbank Creek AG BMP Grant).

The Armstrong Conservation District’s goal through this grant is to protect agricultural lands and lifestyles while encouraging sustainable practices and to improve herd health and decrease sedimentation through the implementation of best management practices to improve water quality. The Armstrong Conservation District will work with Shirey Farms and the Justin Yeany Farm to



implement agricultural BMPs on their operation to improve water quality in the Mahoning and Redbank Creek Watersheds.

The Justin Yeany Farm is a beef cow/calf operation located in Redbank Township, Armstrong County. Mr. Yeany will install a roofed heavy use protection area (HUA) for the brood cows to use during the winter months and a manure stacking structure for storage of the manure. He will install a prescribed grazing system. Prescribed grazing systems are a combination of practices installed and managed to protect the forage resources to reduce erosion, improve water quality, improve air quality, conserve energy, and improve wildlife habitat.

Shirey Farms is one of the largest dairy operation in Armstrong County. The operation spans across Armstrong, Jefferson, and Clarion Counties. The farm operation headquarters is located in Redbank Township. This project will install agricultural BMPs to address any areas of erosion and improve water quality on the Shirey Farm. Some of the practices include the following: lined waterway, stream crossing, and animal trails and walkways. Shirey farms will also install a prescribed grazing system to protect forage resources to reduce erosion, improve water quality, improve air quality, conserve energy, and improve wildlife habitat.

The Armstrong Conservation District plans to continue working with the agricultural community and partnering with Watershed Associations on future projects to help them meet their goals of improving water quality and protecting the natural resources within the watershed through technical assistance and applying for cost-share for BMP installation.

### **The Regional Conservation Partnership Program (RCPP): Buffalo Creek Watershed Conservation Alliance**

The Armstrong Conservation District is proud to partner with Audubon Society of Western Pennsylvania, the Western Pennsylvania Conservancy, the American Chestnut Foundation, and the Butler Conservation District to carry out conservation planning, implement conservation practices, and purchase easements to support the long-term goal of delisting Buffalo Creek, currently designated as an impaired water body. The RCPP program is administered by the USDA's Natural Resources Service (NRCS).

The Armstrong Conservation District is looking to join with agricultural producers and non-industrial forest managers to undertake conservation projects to address natural resource concerns and deliver environmental benefits.

Some of the Benefits Include:

- Reduction of contamination from agricultural sources, such as animal feeding operations.
- Improve cattle and pasture management.
- Enhance wildlife and pollinator habitat.
- Develop and implement forest management plans.



- Provide streambank stabilization and riparian buffer projects.
- Incorporate management practices such as cover crops and no-till farming to support healthy soils and cropland sustainability efforts.



Interested producers and landowners of agricultural land and non-industrial private forestland located in the Buffalo Creek Watershed should visit their local Conservation District or USDA Service Center for information on how to enter into conservation program contracts to receive financial assistance under the RCPP partnership agreement.

### **Armstrong County Agricultural Land Preservation Program**

The Armstrong County Agricultural Land Preservation (ACALP) Board consists of seven board members that reside in Armstrong County; Bill Kronen, John Bennett, Paul Stubrick, Spurgeon Shilling, Terry Bowser, Marlene Kammerdiener, and Troy Goldstrohm.

The purpose of the program is to protect viable agricultural lands by obtaining agricultural conservation easements, which prohibit the development or improvement of the land for any use other than agricultural production. This program provides up to \$2,000/acre compensation to landowners in exchange for them to voluntarily give up the right to develop their private property.

The ACALP Board and the County Commissioners purchased 7 agricultural conservation easements from the following landowners; Suzanne and Edgar Bruce (Burrell Township), Meredith Patterson (Kiskiminetas Township), Scott Morrison (South Buffalo Township), George and Marsha Kepple (Sugarcreek Township), Richard Shirey (Redbank Township), and Clayholm Farms (West Franklin Township) for a total of 688 preserved acres. The ACALP Board is currently working on purchasing an additional agricultural conservation easement from Clayholm Farms located in West Franklin Township.

### **Annual Fruit Tree and Seedling Sale**

As a service to the area landowners, the Armstrong Conservation District conducts an annual fruit tree and seedling sale in April. The fruit trees and seedlings offered each year are dependent on the availability at the nurseries. We sold 287 fruit trees and 5,350 seedlings in 2021. We would like to thank Rayburn Township Municipal Building for letting us host our event there.

In 2021, the Armstrong Conservation District partnered with the Armstrong Center for Community Learning to provide a donation of evergreen seedlings to all 3<sup>rd</sup> and 4<sup>th</sup> grade students in Armstrong County. These total over 1,800 seedlings distributed.

If you would like to receive an order form or if you would like to offer any purchase suggestions for next year, please contact Jessica Schaub at the Armstrong Conservation District Office at 724-545-3628.

**Dirt, Gravel & Low Volume Roads Specialist**

**Gregg Smith – [agsmith@co.armstrong.pa.us](mailto:agsmith@co.armstrong.pa.us)**

**Phone: 724.545.3610**

The Dirt, Gravel & Low Volume Roads Program (DGLVR) is a statewide program passed into law in 1997, as Section 9106 of the PA Vehicle Code. The program is to reduce sediment and dust pollution by utilizing Environmentally Sound Maintenance (ESM) practices generated by unpaved roads. A local Quality Assurance Board (QAB) consisting of members from the PA Fish & Boat Commission, USDA Department of Conservation and Natural Resources (NRCS) and the District review and score project proposals received from the road owning entities and recommend which projects the District should fund. The District makes grants to the municipalities to perform ESM work on their roads. In 2015, the Program was expanded to allow paved or tar and chipped roads that have an average daily traffic count of less than 500 vehicles become eligible for funding as well. The DGLVR Program funded 25 projects throughout Armstrong County during the 2021 construction season.

The Dirt Gravel & Low Volume Roads Specialist is responsible for administering the Dirt, Gravel & Low Volume Roads (DGLVR) Program within the County. I have a degree in Civil Engineering Technologies and certified as a DGLVR Specialist through multiple trainings and workshops. I work with applicants to develop plans for projects and assist with the logistics of project work whenever possible. I am responsible for keeping all records of projects and maintaining an inventory of all completed and current work sites using a GIS system. As part of my outreach efforts, I provide municipality's technical assistance with their day to day road maintenance issues. This service lets me include environmentally sensitive road maintenance techniques in these solutions as well. Multiple project inspections take place to design a project prior to work beginning, then during the construction process, and after site work is complete to evaluated functionality.

**DGLVR Lend/Loan Program**

A portion of the annual DGLVR Program funding allows the District to provide training & education to road owning entities. These funds allow the District to purchase equipment for the municipalities to borrow and perform environmentally sensitive road maintenance techniques.



Currently the District provides a Plate Tamper and a Jumping Jack Tamper for the ESM certified road owning entities. The workers use the machines to provide proper compaction when installing their drainage pipes.



Common municipal ditch cleaning procedures are to use a grader which cuts the earth and pulls it onto the roadway to be picked up and hauled away to be dumped at another location. This practice allows for increased erosion and soil deposits into the streams. Workers may also inadvertently increase the spread of invasive species when dumping the material at another location. The District's Buffalo Turbine Leaf and Debris Blower is used to clean the road ditches without disturbing the vegetation and earth in the ditch by directing strong air currents to push the debris away from the drainage system.

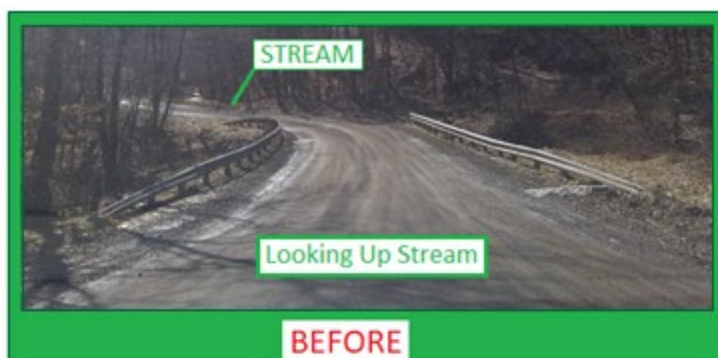


Pictured below is the District's newest addition to the DGLVR Lend/Loan Program, a seeding & mulching machine to stabilize the disturbed earth areas the municipalities create when working on their projects. The even distribution of the seeder/mulcher provides a more efficient way to stabilize these disturbed areas allowing for maximum germination and vegetative growth rates. This machine can be converted to a leaf vacuum during the fall to remove leaves from the drainage ditch system.



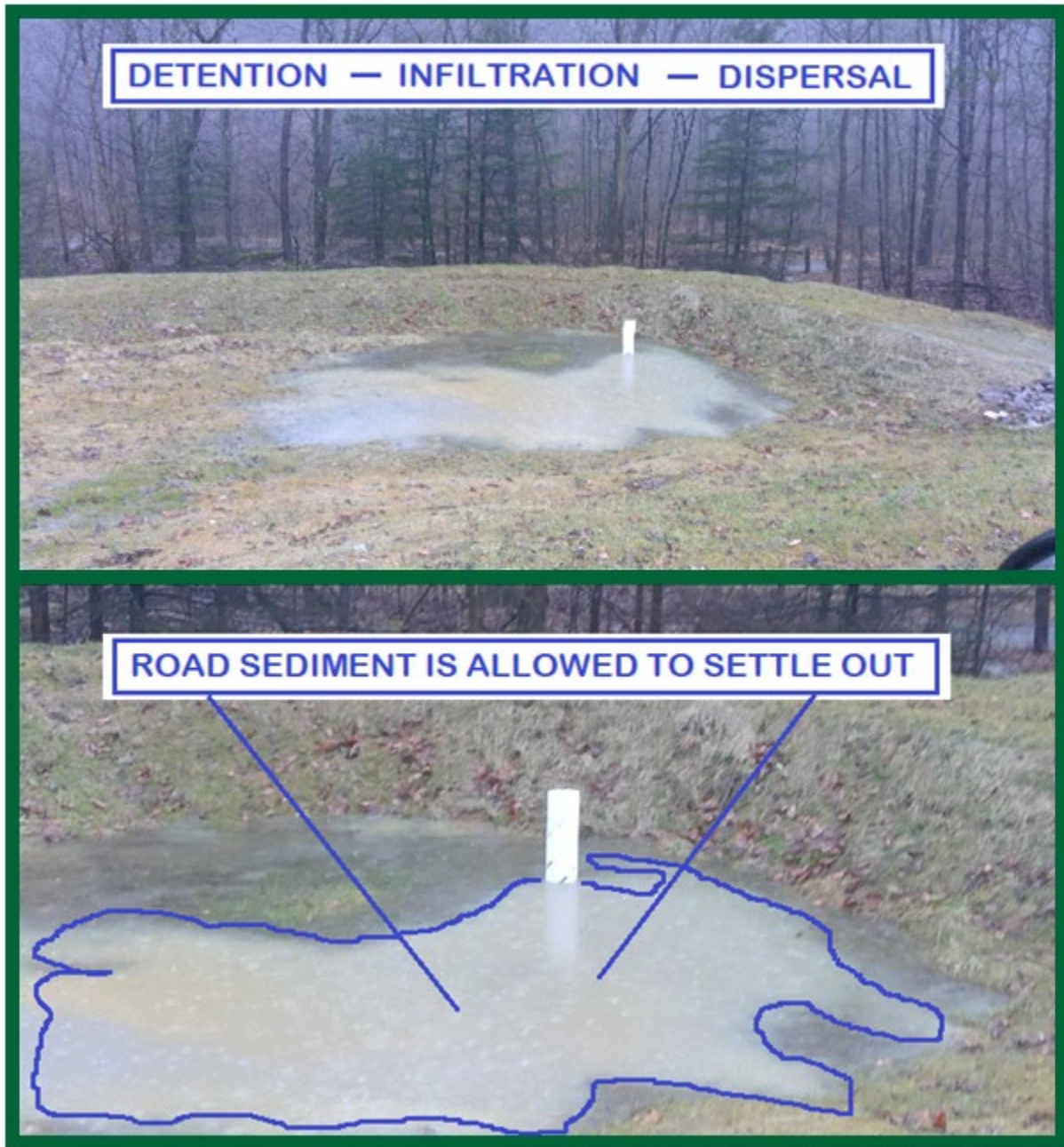
. Currently, the DGLVR Program has been focusing much of its efforts toward the funding of entrenched road fill projects. After years of vehicle travel and municipalities using road graders

to maintain their dirt roads, the roadways can become entrenched. Entrenched roads do not allow drainage to escape which causes road and ditch erosion to occur. By filling the roadway up to the surrounding profile, water can sheet flow off the road, this reduces erosion damage and keeps sediment from entering our streams. Municipalities use aggregate from local quarries to fill in these entrenched roadways providing a cost effective method to add 75 to 100 years to the life of the road and provide economic benefits to the regional economy. Rinker Road in Kittanning Township shown below is an example of filling in an entrenched road. During high water events, Rinker Road would also flood and have to be closed to traffic which created problems for the local school buses to be able to get the students to their homes. The raised road profile eliminated these flooding problems.





The District is now focusing some of our DGLVR education and outreach efforts to show the municipalities how the DGLVR Program can assist them with current and future Municipal Storm Water (MS4) obligations. Dirt & Gravel Road Program objectives and MS4 Goals can be achieved by designing road projects to include storm water infiltration, detention and dispersal ESM techniques. These storm water structures capture the sediment from the storm runoff, then slowly release the water to reduce erosion damage. These structures continue working after the storm has ended and provide a means for the municipalities to reach their MS4 required goals.



Other District DGLVR Program Education & Outreach efforts include hosting Environmentally Sensitive Maintenance (ESM) trainings for municipal officials and road workers. These ESM trainings qualify the municipalities to apply for grant funding. Smaller “Lunch & Learn” and “Coffee Break Trainings” are also used throughout the year to highlight specific ESM techniques and remind the attendees to use the ESM manuals they receive at these five year trainings to find ideas to address problem road drainage issues when they occur. The DGLVR Program has invested over \$9.2 Million disconnecting road drainage from the streams while improving Armstrong County roads since being founded in 1997 and provided successful results for the environment and the municipalities.