8/8/2011

West Virginia Conservation Agency

319 Nonpoint Source Program

Water Quality Implementation Section |

Water Quality Implementation

The West Virginia Conservation Agency (WVCA) is the primary entity responsible for the implementation of the West Virginia Agriculture and Construction components of the Section 319 Non Point Source Program (NPSP) and for coordinating and implementing water quality improvement projects in partnership with the 14 conservation districts. The WVCA NPSP takes an interactive approach to improving the state's waters that have been degraded or are threatened with degradation from unregulated sources of water pollution. By working with partners such as other state and federal agencies, watershed associations, businesses and all other stakeholders a comprehensive solution to the problems is the goal.

WVCA's Conservation Specialists (CS) focus on solving these problems through the support of volunteer watershed associations, education of citizens on nonpoint source pollution issues, identifying local stakeholders, partners and funding sources, and taking the lead for Project Teams consisting of community stakeholders to place projects on the ground. Conservation Specialists serve as direct service providers or help coordinate assistance from other sources to watershed organizations and landowners.

Clean Water Act Section 319 Incremental projects provide a unique opportunity for WVCA to address water quality resource concerns with a targeted approach. The WVCA NPSP staff has devoted much of their efforts towards developing and implementing Incremental grant projects. These funds are used to install specific projects designed to remedy or decrease contributions to the impairment of the priority watershed in which the projects are installed. Currently, the WVCA has Incremental grant projects in:

Incremental Project	319 Funding	State Match Funding	Local Match Funding
Kitchen Creek of Second Creek, Greenbrier Valley CD	$108,523.00	$27,132.00	$45,217.25
Lost River I, Potomac Valley CD	$215,682.00	$90,150.00	$30,050.00
Lost River II, Potomac Valley CD	$430,488.00	$150,975.00	$125,037.00
Mill Creek of the South Branch, Potomac Valley CD	$174,000.00	$63,000.00	$71,250.00
Back Creek of Second Creek, Greenbrier Valley CD	$151,428.00	$28,858.00	$48,095.00
Sleepy Creek, Eastern Panhandle CD	$292,550.00	$16,406.40	$115,036.00

During FY11 WVCA submitted Watershed Based Plans (WSBP) for Muddy Creek, Sweet Springs, Elks Run, and James River. WSBP's are currently being written on Milligan Creek, Potts Creek, Sleepy Creek II, and Back Creek.

In 2010, $144,286 of 319 and state matching funds for non-point source protection were spent in the Greenbrier Valley Conservation District. WVCA is currently on track to spend an additional $163,782 in 2011.

Kitchen Creek Incremental:
Kitchen Creek is a headwater stream of Second Creek, a major tributary of the Greenbrier River. TMDL data has indicated that the stream was heavily impaired by agriculture for fecal coliform bacteria. The 319 incremental project on this watershed is providing funding for farmers to implement Best Management Practices (BMPs) such as: waste storage facilities which allow manure to be collected and spread over pasture and crop land preventing it from entering the waterway, livestock watering systems which help evenly disperse grazing to assure adequate ground cover and spread manure away from the waterway, stream exclusion fencing to prevent livestock from loafing near the waterway, and stream crossings which allow livestock to cross the waterway without causing damage to the streambank or riparian area. To date, riparian fencing, 4 stream crossings, 3 waste storage facilities, 8 alternative livestock watering facilities, 1 roofed feeding shed, and waste storage facility are planned to be installed.


Pasture division fence and stable stream crossing


Water reservoir, pipeline, & tire water trough

Back Creek Incremental:
Back Creek is a headwater stream of Second Creek, a major tributary of the Greenbrier River, TMDL data has indicated that the stream was heavily impaired by agriculture for fecal coliform bacteria. This watershed includes some karst geology. The 319 incremental projects on this watershed are providing funding for farmers to implement BMPs. To date, 4 alternative watering systems are currently under construction in the form of ponds and 5 more are planned in the form of a well and pipeline system. Exclusion fence and pasture division fencing is currently under construction.

Lost River I & Lost River II Incrementals:
Lost River, located in Eastern Hardy County, is an unusual river. During periods of low flow, the river sinks into the mountains to reemerge miles downstream as the Cacapon River. The Lost River Incremental Water Quality Project continues to promote buffers, alternative watering systems for livestock and natural stream restoration. Lost River 1 is being zeroed out this month and we are well into Lost River 2 funding. This program cost shares on Agricultural BMPs at a 75/25% rate and a 90/10% rate on natural stream restoration.

To date, 5,500 linear feet of streambank has been restored or is under contract to be restored utilizing natural stream restoration methods. Riparian buffers are required to compliment the projects either thru USDA CREP funding or 319 funds. Under this project we have reached 128% implementation rate towards the plan's buffer goals, 120% on off stream watering with fencing, 90% under stream restoration, 150% under feedlot relocations and 7% under septic upgrades. These figures are inclusive of both 319 and EQIP funding that the program manager has been involved in. WVCA will be focusing on completing the contracted practices this month as

funding for LR 2 ends September 2011. We will be reevaluating the watershed based plan to see what updates are appropriate and additional funds will be sought.

Students from East Hardy FFA participated in planting 300 natives along a 925' buffer on a trib- 2010

Feedlot relocation removing 150 feeder calves from along the stream- 2011

The Mill Creek of the South Branch of the Potomac Water Quality Project continues to promote buffers, alternative watering systems for livestock, fencing, wetland restoration, feedlot improvements, manure management and septic upgrades.

WVCA is working hand-in-hand with NRCS on many projects to promote agricultural BMP's. Many of our visits are made jointly and we then work with the landowner to find the most appropriate program for the individual needs. The greatest success has been laying the foundation with the agricultural producers within this watershed; this started by public meetings and getting on the farm and working with two key landowners. By working with these two community leaders and listening to their particular needs and concerns, we have been able to design projects that effectively reduce the nutrients and sediment from their operation while respecting their production goals. These two projects served as a catalyst for increased signup and participation. These farmers have been gracious enough to host site reviews from EPA and DEP and have been very vocal in their support of this voluntary, 75/25% cost-share program. We have achieved 100% of the goal for feedlot relocations, 50% for barnyard runoff control, 97% for riparian buffers, 20% for streambank fencing, 130% for alternative watering, 0% on wetland restoration, 50% on septic upgrades and 100% on septic pumping. The focus will be on increasing streambank fencing over the next year.

Litter Shed for poultry litter storage 2011

Solar Demo- alternative H2O & rot. Grazing 2010

Tire trough- alt H2O 2010

Rain garden demo- Dorcas Elem 2009

Sleepy Creek Incremental:

In 2006, Sleepy Creek Watershed was placed on the WV 2006 303 (d) list because of violations of the fecal coliform bacteria water quality standard. The fecal coliform TMDL for Sleepy Creek was completed in 2007. Within the watershed, two streams have a TMDL. These streams are Sleepy Creek and Indian Run (WVP-9-G). Both Sleepy Creek and Indian Run are impaired "relative to numeric water quality criteria for fecal coliform levels through implementation of residential, urban and agricultural BMPs. Sleepy Creek (WVP-9, TMDL SWS 9001-9063) watershed is located in Morgan County, West Virginia (87%) and Fredrick County, Virginia (13%) that flows 42 miles north into the Potomac River. Sleepy Creek Watershed makes up 93,000 acres. The watershed ends at the Potomac River at approximately N39*40' latitude and W78*05' longitude.

The Sleepy Creek Project Proposal for fecal coliform impairment was finalized in December 2007. West Virginia Conservation Agency (WVCA) and Morgan County Health Department administers the residential components of the project, WVCA administers the agricultural component and the whole Sleepy Creek Project Team administers the urban component of the project. During 2009-2011 a total of 27 septic systems have been upgraded, 63 septic systems have been pumped. The remainder of upgrades (10) and pumping (60) will be done this Spring / Summer.

On October 2010, 520 trees were planted by 68 volunteers in the Cacapon East and South Subdivisions under the Riparian Buffer Establishment section. The tree planting project occurred in an urban area in Morgan County. Over 24 landowners agreed to participate in the project. The tree planting project is a reforestation effort to restore the native tree population in this area, which has suffered greatly from the invasive emerald ash bore. Additionally, the trees will also help reduce and manage storm water runoff in this development. The holes were augured and all of the trees are potted, which made the planting an easy task for volunteers. Top soil, fencing to protect the trees from deer and other wildlife, and rebar were placed around the trees.

Spring 2011 was a busy time. The planning for the Stormwater Management Practices was developed. Approximately, 2,500 square feet of porous pavement was installed in the Industrial Business Park. The project team was able to display different techniques to control parking lot runoff either at their home or business. This summer the project team plans to install 2,000 feet of fence for a local farm excluding the livestock from Sleepy Creek.

This spring 2011 will be a busy time. The planning for the Stormwater Management Practices is in the development. Approximately 2,500 square feet of porous pavement will be installed in the Industrial Business Park. The project team will be able to display different techniques to control parking lot runoff either at their home or business. This summer the project team plans to install 2,000 feet of fence for a local farm excluding the livestock from Sleepy Creek.

Above: Before tree planting *Above: During tree*

The West Virginia Nonpoint Source program was awarded the 2010 Biggest Loser Award by the Environmental Protection Agency. The award is given to the state that leads the EPA Region 3 in Sediment Load Reductions. Region 3 consists of Virginia, Maryland, West Virginia, Pennsylvania, Delaware and the District of Columbia. The award was presented at the 12th Annual Mid-Atlantic NPS/TMDL/WQS/WQM Training Workshop held May 10-11, 2011 at Rehoboth Beach, DE.

Applying supplemental Nitrogen fertilizer After Pre-side Dress Nitrogen Testing was performed

WVCA provided **technical assistance to 61 agricultural producers** with the development, protection, stabilization and/or maintenance of riparian areas or with resource management advice that protects surface water. A total of **82,171 linear ft. stream was protected resulting in 156,103 tons sediment reduction**. **Conservation plans were developed for 67** farms under Farm Bill Programs. **Nutrient managed plans** were reviewed / revised / and/or written on **95 farms managing 239,87 #N, 295,948.5 #P, 10,051 #K** on a total of **4,036.1 acres**. **Proper nitrogen application** was provided on **75 farms with 190,179 #N managed on 4,097.37 acres.**

WVCA Conservation Specialist (CS) in the GVCD met the qualifications to become a Certified Professional in Erosion and Sediment Control (CPESC). A CPESC designation is given to specialists who have met established standards of expertise, experience and knowledge in soil erosion and sediment control. The WVCA CS is one of only five professionals in the state of West Virginia to meet the standards of a CPESC. Reviews and/or technical advice were provided on **27 sediment control plans** resulting in an estimated **788.79 tons of soil saved**. A total of **94 stations were monitored on 17 streams**. A workshop on "Watershed Planning for Sustainable Water Resources in the Ohio River Basin" was presented at the 2011 EXPO with 60 attendees.

In education and outreach **68 educational programs** were provided to schools, community groups, and others on nonpoint source and water quality issues with **4,854 attending**. WVCA staff organized **9 agriculture**

educational field days with 935 attending. Nonpoint source educational displays and information was exhibited at **13 events** and distributed to **9545 attendees.**

The base grant also supports the WVCA Watershed Resource Center. During FY11 the WRC:

- Provides support to the WVWN through coordination of Watershed Celebration Day Conference, WVWN web site maintenance / announcements, WaterNet newsletter (quarterly).
- Coordinated the WRC workshop and nonpoint source program promotion at the WV Contractor's EXPO with 60 attendees at the workshop and 5,000 attending exposition. Watershed Planning for Sustainable Water Resources in the Ohio River Basin was presented.

2011 Earth Day at the Clay Center

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Presented / displayed nonpoint source educational material at:

- Earth Day at the Clay Center in Charleston, WV. *A plastic bottle water campaign was displayed with information on the effects on the environment along with reusable water bottles for the children. Each child was given a "Recycled Craft Kit" to take home to make their own bird feeders from recycled plastic bottles. Earth Day was attended by over 500 participants in 2011.*
- Camp Virgil Tate – presented the Enviroscape to 50 students / 24 parents teachers

EDUCATION & OUTREACH

Seneca Rocks Fieldtrip with the Baker Run Conservation Society

Flowing Springs Park- Stream Exploration Station

Marcellus Farm Walk Field Day

Cabell Midland HS FFA soils training for Envirothon

Envirothon training Ripley HS Benthics lesson

Eastern Panhandle CD Envirothon Training

WATER QUALITY PROJECTS

Verzich Water Quality Improvement Project
North Fork of the South Branch

Spring fed swale with livestock access – BEFORE

Livestock exclusion fencing installed - AFTER

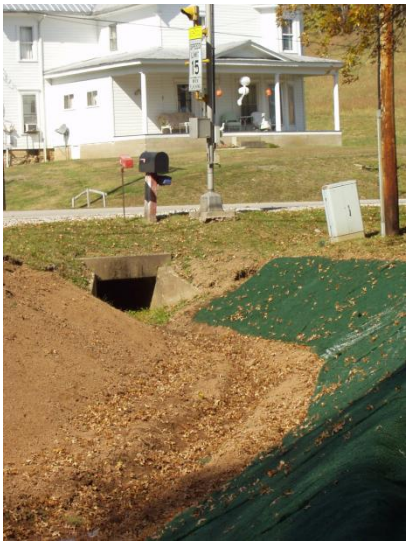
GUYAN CD – COOPER PROJECT

BEFORE

AFTER

WESTERN CD – GILMORE ELEMENTARY SCHOOL PROJECT

BEFORE



AFTER

AFTER