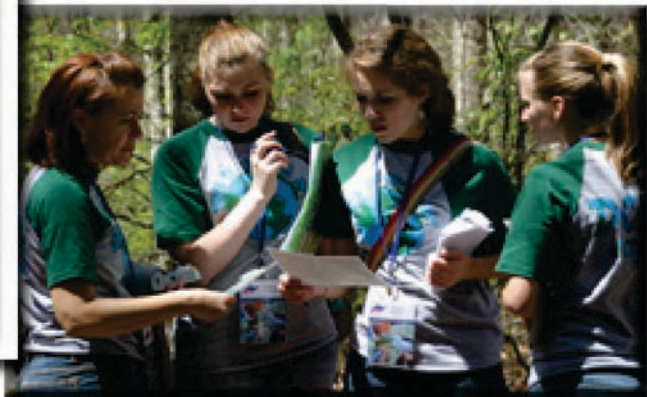
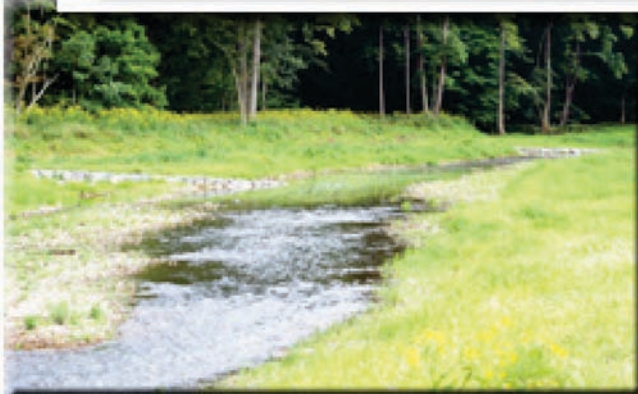
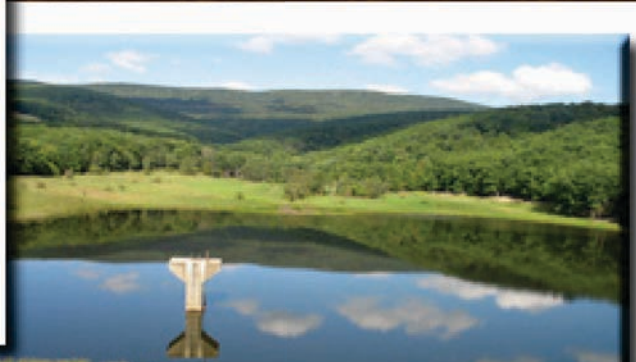


# WEST VIRGINIA



# CONSERVATION AGENCY



2010 ANNUAL REPORT





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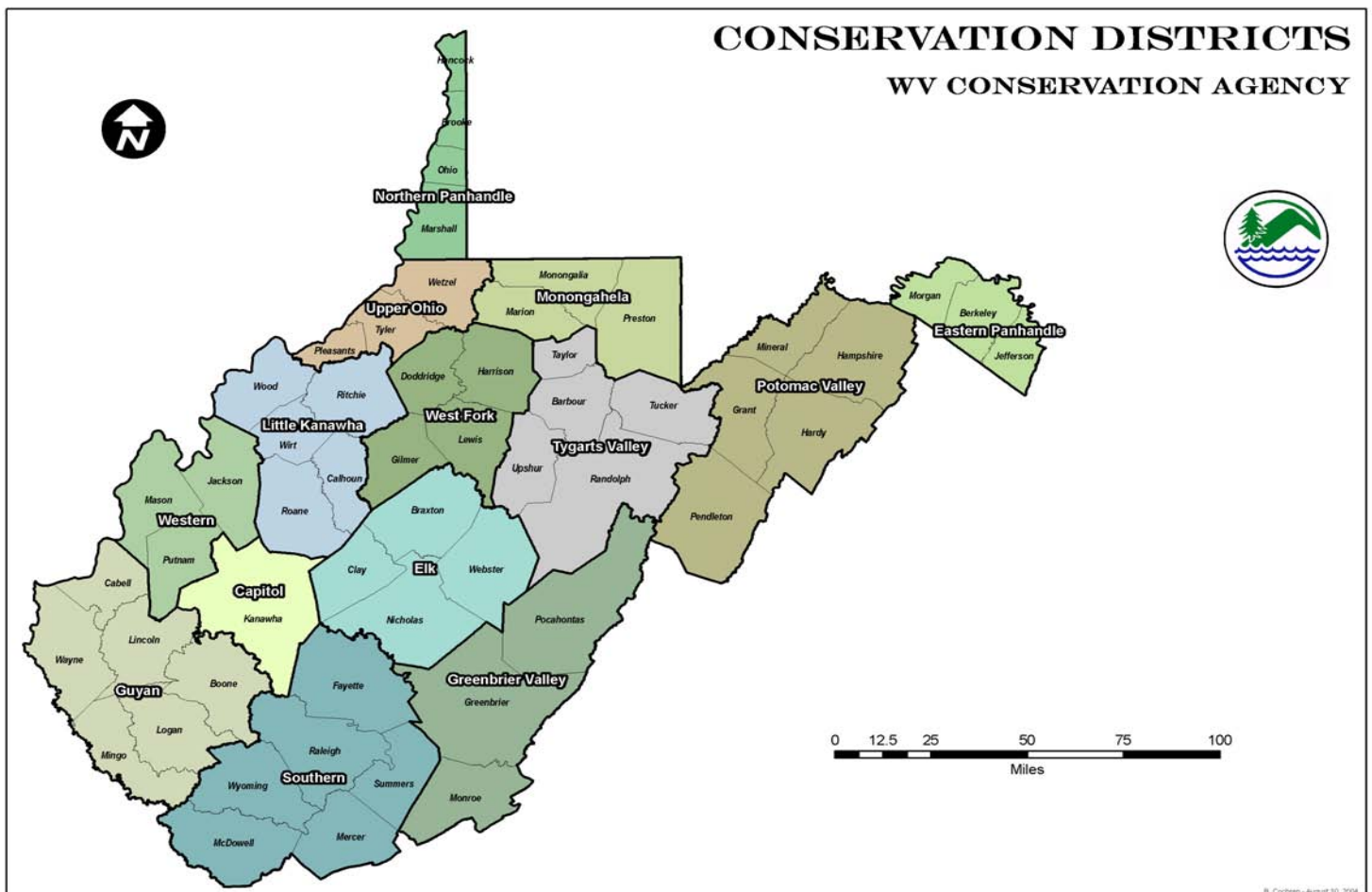
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# West Virginia State Conservation Committee

## *Our History...*

In the early 1930's, the nation was experiencing an unparalleled ecological disaster known as the Dust Bowl. Following a severe and sustained drought in the Great Plains, the region's soil began to erode and blow away, creating enormous black dust storms that blotted out the sun and swallowed the countryside. Thousands known as "dust refugees" fled the area to seek better lives.

On Capitol Hill, while testifying about the erosion problem, soil scientist Hugh Hammond Bennett threw back the curtains to reveal a sky blackened by dust. Bennett's testimony moved Congress to unanimously pass legislation declaring soil and water conservation a national policy and priority.

Bennett would found and head the Soil Conservation Service, now known as the Natural Resources Conservation Service (NRCS); which, in 2010 celebrated its 75 anniversary. Since about three-fourths of the continental United States is privately owned, Congress realized that only active, voluntary support from landowners would guarantee the success of conservation work on private land.

In 1937, President Theodore Roosevelt wrote the governors of all the states recommending legislation that would allow local landowners to form soil conservation districts. By referendum, the first conservation district organized was West Fork Conservation District on February 2, 1940. The Eastern Panhandle and Greenbrier Valley Conservation Districts

followed on February 3, 1940. Today, West Virginia has 14 Conservation Districts, each consisting of one to six counties.

West Virginia's State Conservation Committee was formally organized September 22, 1939 to develop and provide assistance to the conservation districts within the state. Ten members make up the committee. Four are appointed by the Governor and six serve ex officio. They are Gus Douglas, Commissioner WV Department of Agriculture; Cameron Hackney, Dean WVU Davis College of Agriculture, Forestry and Consumer Sciences; Randy Huffman, Director WV Department of Environmental Protection; David Miller, Associate Provost and Director WVU Extension Service; Randy Dye, Director WV Division of Forestry; Bob Baird, President Western Conservation District. In addition, Kevin Wickey, State Conservationist for the U.S. Department of Agriculture Natural Resources Conservation Service serves as an advisory member. Terms of appointed members are four years and the Committee meets quarterly.

As set forth in the West Virginia State Code, the State Conservation Committee may employ an administrative officer and support staff which is known as the West Virginia Conservation Agency (WVCA). The WVCA is broken up into an executive support section that provides the administration and support and a series of technical and operational sections that plan, coordinate and deliver program implementation to the 14 Conservation Districts and citizens of West Virginia.



*Dust storms, also known as "black blizzards," were caused by extensive farming without proper erosion control techniques. This dust storm was photographed in Prowers County, Colorado, 1937*



*Hugh Hammond Bennett (right) founded and headed the Soil Conservation Service, now known as the Natural Resources Conservation Service.*



# West Virginia Conservation Agency

## *Our Mission...*



•Provide state funding for conservation programs, education and support activities.

•Assure proper operation and maintenance of flood control structures and properties.

•Provide administrative, technical and financial assistance to citizens of West Virginia through the 14 conservation districts.

•Secure the assistance of various federal government agencies for cost-share programs.

•Coordinate with federal agencies during flood emergencies.





# Conservation Outreach and Education



*A team from the WV Envirothon, work together to answer questions regarding aquatics, soils, forestry and wildlife.*



*A Conservation Specialist speaks to a brownie troop about stream biology.*

The WVCA and the Conservation Districts continue to work with federal and state agencies as well as citizen organizations in an effort to promote conservation education. Many districts serve as a resource by providing financial support and technical expertise to local citizen groups concerned with erosion control and water quality for their local streams.

Conservation Districts continued their support and encouragement of conservation education throughout West Virginia. Districts were responsible for a multitude of unique, conservation themed programs made available to West Virginia teachers, students and citizens. These programs ensure that future generations make informed decisions about keeping our air, soil and water clean for future West Virginians.

More than 3,000 students and adults from across West Virginia attended a variety of field days, pasture walks, outdoor classrooms, tree seedling giveaways and agriculture workshops; all with the common theme of conservation. Many districts also offered teacher training in programs related to conservation by sponsoring workshops such as Project Learning Tree, Save Our Streams and the Wonders of Wetlands. These programs serve to educate teachers on the resources available to them and offer a wealth of hands on activities that stimulate students to think about the wise utilization of our natural resources.

Alongside our partnering organizations and the Conservation Districts, the WVCA continues to support and organize the West Virginia Envirothon competition to help high school students develop critical thinking skills and learn the value of natural resources and the environment. This annual event continues with strong support and participation. A total of 24 teams from across the state took part in the 2010 event held at the Greenbrier County Youth Camp near Lewisburg. The top five teams received a share of scholarships totaling \$13,000, and the winning team, Jefferson FFA, went on to represent the state at the North American Canon Envirothon, in California.

The WVCA Web site, [www.wvca.us](http://www.wvca.us), is another key tool in connecting people with information concerning their local conservation districts and the available conservation and education programs each district offers. The site features an education section to help teachers, students and community members learn more about key programs the WVCA supports. Samara, WVACD Photo Contest, WVACD Auxiliary Poster Contest and college scholarships are just a few of the programs you can learn more about. Additionally, each conservation district has a page to publish news and program information targeted specifically to those residents within the districts.





*Volunteers at the 2010 Spring Run CommuniTree program planted a variety of trees and shrubs. This helped provide a riparian buffer to support aquatic habitat in the stream.*

*At the 2010 Envirothon, a total of 24 teams from across the state were challenged in Aquatics, Soils, Forestry, Wildlife and a current environmental topic.*



*Located at Camp Caesar, in Webster County, the WV Conservation Camp strives to raise awareness among the youth about the state's natural resources and instructs them in the wise use and management of those resources.*



# Grassland Programs



*This roofed feeding pad with manure storage structure allows for fewer pollutants to enter streams and groundwater.*



*In order to prevent soil erosion and contamination of water supplies, it is important to fence livestock out of ponds.*

The West Virginia Conservation Agency (WVCA) and the fourteen conservation districts worked with several partners on improving pastures in West Virginia. This is accomplished through on-farm demonstrations, educational meetings and by providing technical assistance to producers. Improving vegetative cover on grasslands through establishment and enhancement provides reduced erosion rates and decreases sedimentation and runoff within the watersheds. The WVCA and CDs work together with the West Virginia Grazing Lands Steering Committee, West Virginia University Cooperative Extension Service and the Natural Resources Conservation Service to develop and implement programs affecting grasslands across West Virginia.

The WVCA and the conservation districts along with other conservation partners, sponsored the annual West Virginia Grassland Evaluation Contest. The purpose of the contest was to improve participants' knowledge of grassland management in West Virginia. High School level students were tested on grassland condition, soil interpretation, wildlife and plant identification. Each of these factors were used in the evaluation process to help the students learn the wise use of natural resources and to make good land management decisions.

Ten teams participated at this year's grassland contest, held at Jackson's Mill, April 9, 2010. The first place team was Clay County FFA, with each team member receiving a \$500 scholarship. The second place team, Ravenswood FFA Green received \$250 scholarships for each member. The highest scoring individual received a \$500 scholarship sponsored by the Capitol Conservation District, in memory of Ted Baciu. This year's highest scoring individual was Logan Ramsey from the Clay County FFA team. Clay County FFA and Ravenswood FFA Green

represented West Virginia in the Mid-American Grassland Competition held in Springfield, Missouri, in June. Clay County FFA placed first in the FFA division and overall high scoring team. Megan Prater was second place high scoring individual and Megan Moore was fourth place high scoring individual. There were 12 FFA teams and 11 4-H teams at the contest.

The West Virginia Agriculture Enhancement Program (AEP) is a pilot program administered by the WVCA through local conservation districts to increase farm productivity by conserving soil and making wise use of agricultural resources and to improve water quality in the state's streams and rivers. The program offers technical and cost-share assistance as an incentive to implement selected best management practices (BMPs). The basis of the program is to increase farm profitability and sustainability and encourage the voluntary installation of agricultural BMPs. This program could also be used to supplement other programs in meeting West Virginia's non-point source pollution water quality objectives.

The AEP pilot program provides opportunities for the demonstration of site-specific agricultural BMPs and the education of agricultural operators about innovative management and conservation methods. Overall program objectives include the reduction of nutrients (nitrogen and phosphorus) and sediment in the state's streams and rivers and increasing farm profitability and sustainability.

Each conservation district has the ability to modify the program to address specific issues in their area. Partnering with other state and federal programs is encouraged. A state AEP committee has been established to oversee the program and





*Well-maintained pastures result in an increase of farmer profitability, by providing cattle with high quality legumes and grasses.*



*Well-developed water sources are important to the production and health of livestock.*

provide administrative and technical assistance. Conservation districts and their chairpersons establish the district AEP committees to administer the program. The committees are actively involved in all aspects of the program including selection of approved BMPs per program year, advertising, developing the application form, ranking/evaluation of applications and contract administration.

Through an agreement, the WVCA/SCC sends funds to conservation districts to provide cost-share funding. In 2010, four conservation districts participated in the pilot program. These are the Greenbrier Valley Conservation District (GVCD), Monongahela Conservation District (MCD), Eastern Panhandle Conservation District (EPCD) and the Northern Panhandle Conservation District (NPCD). Practices completed include ponds, exclusion fencing, fence, water development systems, greenhouses, rain collection systems, animal feeding facility with manure storage, manure irrigation gun, nutrient management, reseeding, frost seeding, wood-chip pad, lime for cropland, cover crops, reseeding, frost seeding, poultry litter, stream protection and mortality composting. Contracts in the four pilot districts total over \$400,000.00.



*It is essential to fence livestock out of wooded areas and streams to prevent soil erosion, damage to woodland and contamination of the water.*



*As a part of AEP this property has been reseeded with barley.*

# Lime Incentive Program



*By applying lime to his field, this district cooperator can increase production of grasses and legumes.*



*Cattle graze on a well-maintained pasture in West Virginia.*

The West Virginia Association of Conservation Districts and the West Virginia Conservation Agency, in cooperation with the Natural Resources Conservation Service, Farm Service Agency and the West Virginia University Cooperative Extension Service are working together to assist farmers in improving their grasslands.

The Lime Incentive Program reimburses eligible farmers a portion of the cost for applying lime to areas with permanent grasses and legumes, in accordance to the program guidelines. This program is funded by the West Virginia Legislature.

The purpose of this program is to provide incentive to local farmers for the maintenance of permanent grasses and/or legumes on grassland, to provide soil and watershed protection by reducing erosion on grassland and to help reduce water, air and soil pollution from non-point sources on grasslands.

Grassland forage is the most prevalent agricultural product in the majority of West Virginia counties, and is vital to sustain animal agriculture production. Established grasses provide the public an available supply of food and fiber as well as clean air and water. Other benefits include habitat for wildlife, healthier riparian areas and improved aquatic habitat through reduction of soil erosion. This makes a major impact on economic and social stability in rural communities. The program also allows conservation districts to provide technical assistance to landowners and further the conservation message.

West Virginia Conservation Districts are united in support of the Lime Incentive Program to help landowners revitalize grasslands. Many conservation districts offer rental equipment to meet the needs of local farmers.

## Eligibility Requirements:

- 1) Applicant must be the landowner or operator, and must sign-up to be a Conservation District Cooperator.
- 2) Apply this practice to land that needs maintenance, improvement or protection. This will be the recommendation of the State Technical Committee.
- 3) Land must be established permanent grasses and/or legumes.
- 4) Land must be used for agricultural purposes in a grazing system.
- 5) A current soil test must be filed with the conservation district. The test is current if it has been taken within three years.
- 6) The requirement for lime application rate will be determined by the certified soil test sample.
- 7) Land shall not have been planted in an annual row crop for a minimum of five years prior to the practice application.
- 8) If the field that the practice is being requested is under contract for cost-share under another program for lime, that field is ineligible for the West Virginia Lime Incentive Program.



**The Lime Incentive Program is one of the most beneficial and requested programs offered by the conservation districts. Many conservation districts have increased their rental equipment to meet the demands of local farmers.**



*This West Virginia field has been carefully maintained by applying lime according to regular soil tests.*

## **West Virginia Legislative Funds at Work**

**2010 Annual Lime Allocation: \$600,000**

**Since 2005, the Lime Incentive Program Has:**

**Treated 60,275 Acres with Lime**

**Applied 158,120 Tons of Lime**



# Emergency Watershed Protection



*One of the many stream blockages experienced by landowners in southern West Virginia.*



*This debris removal crew, contracted by the Guyan Conservation District, works quickly to remove debris from a stream following flooding in Logan County in June, 2010.*

The Emergency Watershed Protection Program (EWP) is only used during a State or Federal Emergency Declaration in response to a sudden disaster. The EWP program funds are only used during the duration of the declaration set by either the President of the United States or the Governor of the State of West Virginia. These emergency funds may only be allocated to situations arising from sudden, devastating storm events for recovery and removal of blockages causing a 75 percent obstruction to stream flow and cannot be used for maintenance issues such as removing trash, raising banks, dikes or preventative dredging.

On June 12, 2010, flooding struck southern West Virginia. A State Emergency Declaration was proclaimed by Governor Joe Manchin III in four counties consisting of two conservation districts. Logan and Mingo County, located in the Guyan Conservation District, and Wyoming and McDowell County, located in the Southern Conservation District, were affected by the flooding.

The WVCA Watershed Division staff responded immediately with site assessments to determine eligibility and worked with county officials to prioritize those eligible sites. The WVCA completed work on 64 sites with debris removal contracts totaling \$589,058.99.

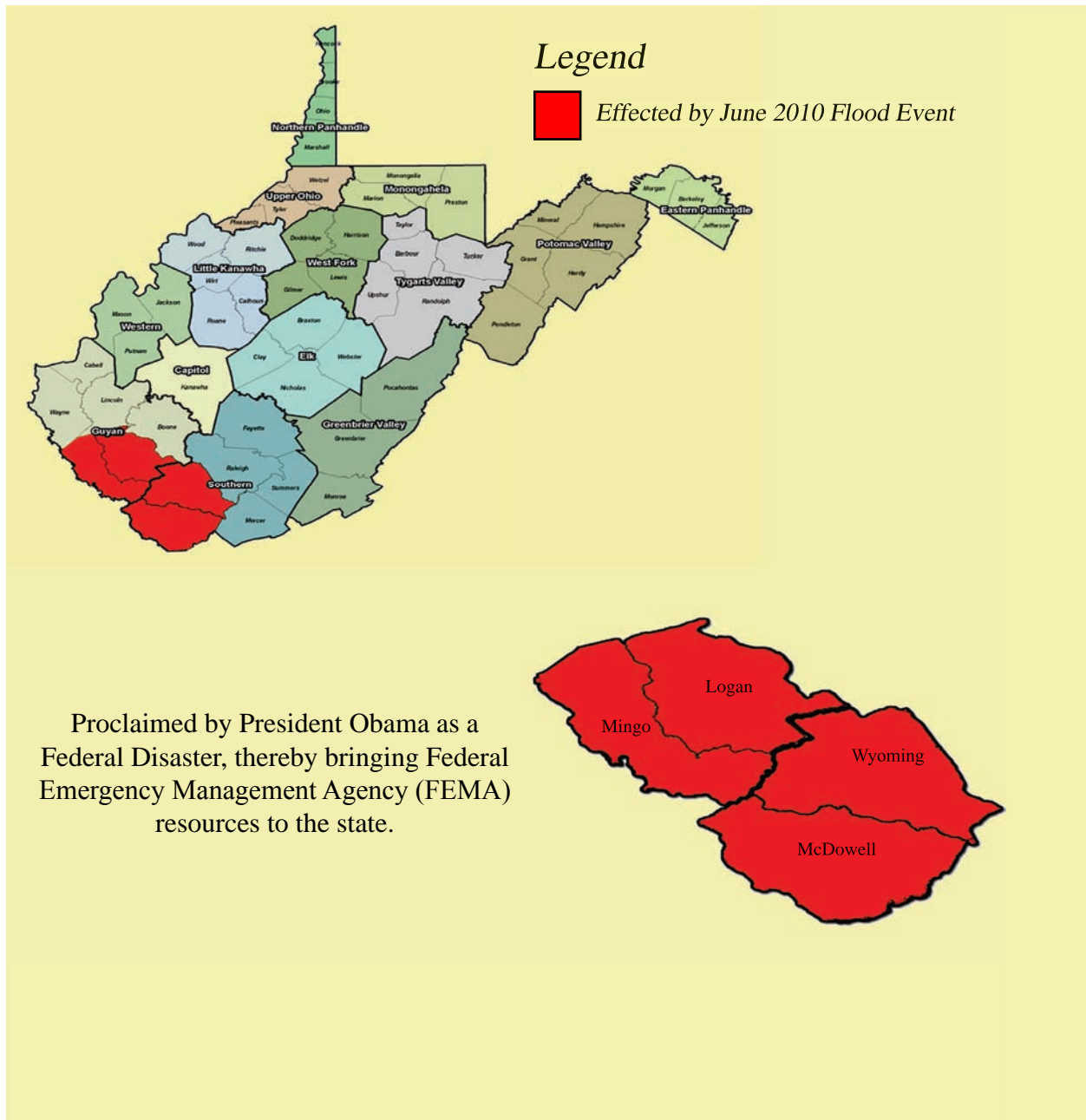


*Removing debris caused by flooding is crucial in allowing for the return of proper stream flow.*



*WVCA stream staff worked diligently to clear debris and assist WV Landowners.*





*Contractor crews are selected through open bidding practices by the conservation districts.*



*Stream blockages similar to this, were common during the June flood event.*



# Watershed Division Stream Section



*The Stream Access Permit Program assists landowners in managing the overall integrity of a stream.*



*This stream restoration project is located on Little Grave Creek in Marshall County.*

The West Virginia Conservation Agency's (WVCA) Stream Section is actively involved in conservation and flood recovery projects statewide. The WVCA Watershed Division/Stream Section employs one Watershed Management Director, one Assistant Watershed Management Director, two Watershed Managers, two Watershed Office Coordinators, two Watershed Design Specialists, two Monitors and six Watershed Technicians.

Water quality is protected and the likelihood of flooding is reduced when people use proper techniques and materials to prevent or decrease erosion along streams as well as remove debris or deposits in streams on their property. For these reasons, the Landowner Stream Access Permit Program is very important. The Permit Program helps individuals by coordinating stream access permit activities with the United States Army Corps of Engineers (USACE) and by providing follow-up technical assistance.

The Landowner Stream Access Permit Program is a partnership with the WVCA, Conservation Districts (CD), WV Public Lands Corporation, WV Division of Natural Resources, WV Department of Environmental Protection (WVDEP), U.S. Fish and Wildlife Service and USACE. The program is designed to help landowners follow an approved stream plan to remove debris and rock or silt deposits from established stream channels. The program also allows landowners to manage stream bank erosion in a way that protects the overall integrity of the stream. In FY10, the WVCA and CD processed 185 applications in the Landowners Stream Access Permit Program.

The WVCA uses the Stream Protection and Restoration Program (SPRP) to cover situations that fall outside the realm of Emergency Watershed Protection (EWP). This work is considered a non-emergency situation and these projects are evaluated for

eligibility then placed on a working list to complete as other projects come off the list.

There are two areas under SPRP that the WVCA categorizes its projects. The first is blockage removal from Legislative Contact Reports (LCR) and Citizen Contact Reports (CCR). The second is a planned project using Natural Stream Restoration methodologies. This natural stream technique uses structures such as rock veins, j-hooks and root wads to stabilize streambanks, improve habitat and maintain the stream channel's natural velocity for efficient sediment transport.

The WVCA Watershed Division staff responded to 46 LCRs and 544 CCRs. The staff conducted site assessments to determine eligibility and worked to complete these projects in a timely manner. Planned Projects are of greater complexity and require additional time to complete. This is due to the permitting process required by the USACE and WVDEP.



*The restoration of floodplains helps to reduce the damages of floods. Restoration on this floodplain along Island Creek in Logan County has been completed and is functioning properly.*

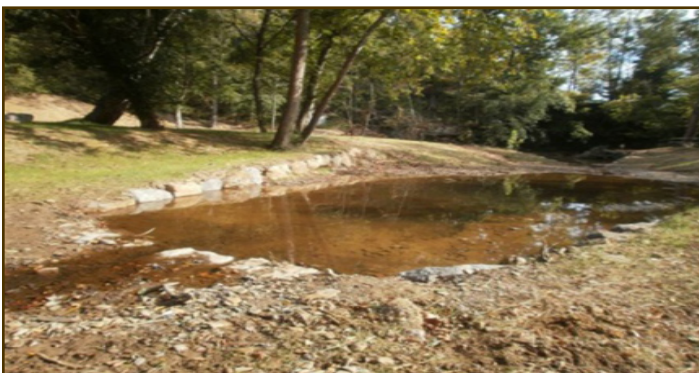


## Stream Blockage Removal (Multi-Sites) Completed in FY 2010

Upper Ohio Conservation District	Wetzel and Tyler Counties	\$91,972
Northern Panhandle Conservation District	Marshall, Brooke, Hancock and Ohio Counties	\$64,112
Southern Conservation District	Fayette, McDowell, Raleigh, Summers, Mercer and Wyoming Counties	\$58,519
Capitol Conservation District	Kanawha County	\$54,427
Little Kanawha Conservation District	Wood County	\$51,888
Western Conservation District	Jackson, Putnam and Mason Counties	\$14,503
Greenbrier Valley Conservation District	Greenbrier, Pocahontas and Monroe Counties	\$12,354
Elk Conservation District	Braxton, Clay, Nicholas and Webster Counties	\$6,648
Eastern Panhandle Conservation District	Berkeley County	\$4,896
<b>TOTAL</b>		<b>\$359,319</b>

## SPRP Planned Projects Completed in FY 2010

Middle Grave Creek	Northern Panhandle Conservation District	Marshall County	\$353,027
Farmington Box Culvert	Monongahela Conservation District	Marion County	\$332,603
Morris Creek	Capitol Conservation District	Kanawha County	\$259,669
North Fork of Short Creek	Northern Panhandle Conservation District	Brooke County	\$88,824
Stream Obstruction Removal	Monongahela Conservation District	Marion County	\$75,734
Stream Obstruction Removal	West Fork Conservation District	Lewis County	\$59,248
Weston City Park	West Fork Conservation District	Lewis County	\$52,076
Smokey Hollow	Tygarts Valley Conservation District	Tucker County	\$35,211
Buffalo Creek	Monongahela Conservation District	Marion County	\$33,205
Rachael Floodplain	Monongahela Conservation District	Marion County	\$23,650
<b>TOTAL</b>			<b>\$1,357,412</b>



*Using natural channel design, natural stream restoration restores and corrects streambank erosion. This natural stream restoration project is located on Buffalo Creek in Marion County.*



*The Buffalo Creek stream restoration project cost \$33,205, and benefits many local residents.*

# Water Quality Implementation



*BEFORE: Located in Beech Fork State Park this bank of Beech Fork Lake was severely eroded, increasing sedimentation in the water.*



*AFTER: 1,000 linear feet of the failing bank was stabilized by incorporating rock rip rap.*

The West Virginia Conservation Agency (WVCA) remains the primary entity responsible for the implementation of the West Virginia Agricultural and Construction components of the Section 319 Non-Point Source Program (NPSP) and for coordinating and implementing water-quality improvement projects

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 in conjunction 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 non-point source pollution issues, identifying local stakeholders, partners and funding sources. Additionally, CSs take the lead for Project Teams consisting of community stakeholders to place projects on the ground.

WVCA provided information to 11 Conservation District Cooperators on the control of invasive plants and herbicide use precautions to prevent non-target and water pollution problems. CS provided technical advice to the WV Association of Conservation Districts in regard to the Lime Incentive Program and the Confined Animal Feeding Operation (CAFO) rule.

The WVCA Section 319 Non-Point Source staff participated in the winter meeting of the Nutrient Management

Advisory Committee. At the meeting, CAFO planning, nutrient management planning, software and additional training for CEU's were discussed. Ongoing planning, staff training, Nutrient Management Plan development and outreach will be done at the direction of the committee.

One of the major problems the committee is working on is devising a means of providing nutrient management plans for all those farms that could fall under the CAFO rules. The committee is devising a strategy to provide information and plan development assistance for any farmer asking for technical assistance in utilizing the available planners as well as approved Technical Service Providers (TSPs). The strategy will also help farmers acquire the services of more TSPs.

Conservation Specialists coordinated a meeting for the Monongahela CD to bring together the City of Morgantown, Monongalia County Commission, Friends of Deckers Creek, USDA-NRCS and WVCA to formulate a plan to implement an active treatment system for the largest AMD impairment in the watershed. The meetings resulted in new partnerships, finding new funding opportunities, establishing a timetable for work and helping the CD facilitate cooperative agreements to accomplish the needed work

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 developed and implemented Incremental Grant Projects, designed to remedy or decrease contributions to the impairment of the priority watersheds. Current Incremental Grant Projects are shown on the following page.



The Incremental Grant Projects are provided on a watershed basis, enough funding can be secured to address all concerns necessary to reduce specific pollution loads. From a landowners standpoint, these projects allow them to receive cost share without competing with other farmers for funding. With these factors considered and in an effort to continue aiding farmers with water quality issues, the Greenbrier Valley Conservation District (GVCD) has developed a watershed development committee to provide direction to the WVCA Non-Point Source Program in the development of watershed based plans and Incremental Grant Project proposals. The first watershed based plan developed in the GVCD was for the Second Creek watershed and an Incremental Grant Project has been funded for the Kitchen Creek sub watershed.



*BEFORE: Located on the Lost River in Hardy County, this streambank was selected for a Soil Bio-engineering Project.*

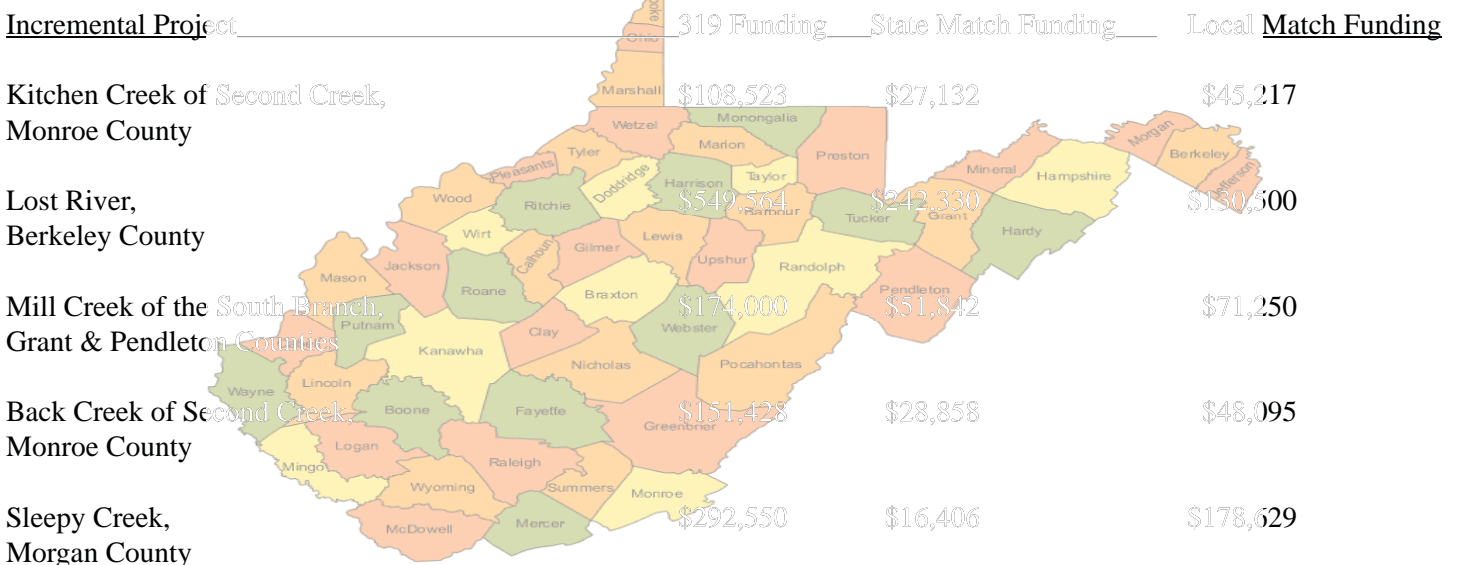
Kitchen Creek, in Monroe County is a small tributary and headwater stream of Second Creek at Gap Mills. This stream is heavily impacted by cattle feeding in close proximity to the stream. Agriculture in this area consists primarily of beef cattle and dairy operations. The goal of this project is to restrict grazing along the stream banks and contain concentrated animal waste, preventing it from entering the body of water. Best Management Practices (BMPs) include riparian buffer development, prescribed grazing, stream crossings, alternative water development, waste storage facilities and nutrient management.



*AFTER: WVCA staff used rolled erosion control matting to hold the soil in place and promote vegetative growth.*

The Second Creek Watershed Based Plan calls for a 73 percent reduction in fecal coliform loadings. In order to meet this reduction, the model used to calculate the load reductions for the Watershed Based Plan proposed 5.8 acres of riparian buffers and three waste storage facilities be installed. Additionally, other practices such as prescribed grazing, water development and stream crossings support the riparian buffer development and waste storage by evenly distributing animals and their manure over pasture fields, as well as providing forage and water lost by excluding livestock from the waterways.

## Incremental Grant Projects



# Chesapeake Bay Program



*Located on the Cacapon River, this fencing project was funded, in part, through West Virginia's Bay Program. Streambank fencing and riparian buffers are two of the most highly efficient BMPs for watershed restoration on agricultural land.*



*West Virginia Project CommuniTree promotes volunteerism and local empowerment for enhanced water quality and community improvements throughout WV's Bay Drainage. CommuniTree logged over 3,200 volunteer hours in 2009.*

The WVCA is one of three lead agencies responsible for working with the United States Environmental Protection Agency (EPA) to coordinate the Chesapeake Bay Program within West Virginia. The agency's Watershed Program Coordinator has been thoroughly involved in planning for the upcoming Watershed Implementation Plan (WIP) which will be the state's recipe to achieve the required pollution reductions to assist in restoring local waters and the Chesapeake Bay. These reductions are anticipated to come from a variety of sectors. This includes point sources such as municipal wastewater treatment plants and industry, as well as non point sources such as agriculture, forestry, urban and suburban land uses.

The actions that will be outlined are expensive and are not part of any regulations. To overcome these hurdles, project teams have begun working in targeted watersheds. These teams build partnerships, gather funding and identify priority projects that are most important to their local communities.

Reducing nitrogen, phosphorus, and sediment in local creeks and rivers will translate to healthier water resources that will be better equipped to sustain tourism, fishing, drinking water supplies and wildlife habitat, among other things. WVCA staff is currently leading three non-point source incremental projects that will directly impact this process. They include projects in Sleepy Creek, Mill Creek of the South Branch of the Potomac and Lost River.

The WVCA's Watershed Program Coordinator is involved in annual Best Management Practices (BMP's) reporting to the Chesapeake Bay Program. WVCA works

alongside our conservation partners to identify and prioritize nutrient and sediment reduction projects. State and federal cost-share opportunities are promoted where appropriate.

The WVCA coordinated and funded a two-day workshop for our partners within the West Virginia Division of Highways (WVDOH) on the latest sediment and erosion technology and applications. Over 260 WVDOH field employees participated in the hands-on training at the District 5 Headquarters. The participants were exposed to the most current and effective sediment reducing applications available for construction and facility management.

Demonstration funds were used in cooperation with the local Conservation District and the Potomac Headwaters Research Conservation and Development Council to demonstrate low impact stormwater control through a bio-retention infiltration feature. This feature provides water quality and quantity control. A bio-retention basin was designed to highlight a more progressive approach to stormwater control. It serves to educate the community about stormwater control on small areas and the importance of groundwater recharge.

A strong empowerment and ownership message is promoted through WVCA's Chesapeake Bay funding. Training opportunities, workshops and supplies were offered within the drainage and resulted in educating over 152 stakeholders on stream sampling methods and local water quality education. The WVCA assisted in funding Cacapon Institute's Stream Scholars Program for the fourth consecutive year. This program is a hands-on exploration of stream ecology and conservation.



The scholars spent the final two days of camp on an overnight trip to the Chesapeake Bay. The WVCA has directly funded four small community improvement grant projects that entailed volunteers installing riparian buffers or providing educational opportunities for small communities. This project resulted in over 250 volunteer hours.

West Virginia Project CommuniTree was formed two years ago by the WVCA and West Virginia Department of Forestry. The program's mission is to "promote urban tree planting and environmental education through volunteerism on a regional scale." It is one of the most successful urban forestry programs in the state. It has been supported in part by Chesapeake Bay Program funding. The program is entirely volunteer based and involves stakeholders in the process by conserving and enhancing riparian areas, resolving stormwater management issues and engaging local leadership in watershed management problems.

Over the past two years, the program has seen the formation of two chapters encompassing six counties. Combined, these chapters have hosted seven large events and delivered hands-on environmental education to nearly 800 volunteers resulting in 3,200 volunteer hours which equates to \$48,000. Project funding has allowed the chapters to procure the necessary tools to host the events and to purchase tree and shrub stock to plant.

The WVCA has been responsible for developing and maintaining the West Virginia Chesapeake Bay Web site, which can be found at [www.wvca.us/bay](http://www.wvca.us/bay). The Watershed Program Coordinator and Information System Specialist have coordinated with our Chesapeake Bay partners to develop a user-friendly site that links multiagency and stakeholder efforts in supporting program goals. Also, a quarterly newsletter is distributed to over 600 stakeholders via the web.

The WVCA has entered into a multi-partner conservation project within the Chesapeake Bay drainage to protect and restore valuable streambank and farmland along the Cacapon River, near Wardensville in Hardy County. With funding from a National Fish and Wildlife Foundation Conservation Innovation Grant, West Virginia University (WVU) and Canaan Valley Institute (CVI) are in the process of stabilizing approximately 3,000 linear feet of streambank property along the Cacapon River. The purpose of the project is to restore stream stability and enhance ecological habitat.

CVI and WVU have identified several potential stabilization sites throughout the watershed. This particular area was identified as a priority site because of its highly eroded conditions and the fact that it allows work on both sides of the stream, allowing for more complete restoration. One side of the restoration site will be protected by an existing conservation easement agreement. The landowner on the other side is working with the Natural Resources Conservation Service and Farm Service Agency to establish a Conservation Reserve Enhancement Program (CREP) project on the site. The CREP contract will include riparian vegetation and fencing of a 35 foot riparian corridor. A strip of warm season grasses is also being



*WVCA staff explains the benefits of implementing natural stream design principles.*



*Natural stream design principles are being implemented along the Cacapon River in Hardy County to deflect flow away from the banks.*

planted beyond the woody buffer. WVCA and WVDEP are also contributing funds through the Chesapeake Bay Program for additional fencing.

CVI is responsible for project design and construction. Natural stream design principles are being implemented including, installation of wood and rock combination structures to deflect flow away from streambanks, construction of bankfull benches, flood prone areas and creating riparian habitat where it is nonexistent or improving it where it is in poor condition.

CVI and WVU have worked with WVCA and ACF Environmental to identify durable materials that can be used to prevent erosion and allow for the establishment of vegetation on these slopes. Coconut and straw erosion control matting are being installed on the bank and benches.

The Cacapon and Lost River Land Trust have served as a liaison between the numerous project partners and the landowners. The project is distinctive in that it features numerous partners working collaboratively to bring together financial and technical resources to protect valuable resources within the Chesapeake Bay watershed.



# Water Resource Development



*BEFORE: A water resource study helped identify the need for the Elkwater Fork Water Supply Structure in Randolph County.*



*AFTER: The Elkwater Fork Structure, located in Randolph County, is complete and will soon begin holding water.*

The West Fork Conservation District and Tygarts Valley Conservation District joined with the WVCA to provide detailed resource assessments and plans that are designed to address the complex and interrelated issues involving population growth and the need for an adequate water supply.

These custom resource studies are essential for maintaining citizen health and improving economic development. Water Resource Studies serve in the development of clean, safe water supplies; improved fire and water protection; and water-related recreation. Local governments can use the plan for infrastructure development adjusted to population growth projections and economic development planning.

As seen above with the completion of the Elkwater Fork Dam the Huttonsville Public Service District is afforded the availability of water service to the Tygarts Valley residents of Randolph County.



# Watershed Structures



*Located in Mineral County, the New Creek Dam provides many benefits to local residents.*



*Wheeling Creek Site 3, located in Marshall County, in the Northern Panhandle Conservation District.*

During FY10, 170 watershed structures and 22 channels were inspected quarterly and repaired as necessary to ensure safe and efficient operation in anticipation of major storm events. Upon completion of these inspections, work plans were developed and implemented with Conservation Districts (CDs) and sponsors. Maintenance contracts for items identified on the annual inspections are underway and ongoing in all conservation districts and associated watershed project areas utilizing private contractors and CD work crews.

Operation and Maintenance (O&M) work is funded through cost-share agreements between the CDs and local sponsors. The WVCA matches all local sponsor funding at a 1:1 rate. WVCA staff assists the CDs when meeting with local sponsors to secure O&M funding.

Emergency Action Plans are current for each structure along with a training program for Watershed Structure Monitors. To provide monitors with the knowledge and skills for emergency situations, the WVCA staff trains them on an individual basis or in small groups. Furthermore, certificates of training and ID cards are provided to each monitor to allow access to structures and accurate reporting during emergency situations.

Construction on the Elkwater Fork Structure in Randolph County is complete. The gate close planning is being processed so that the drain gate can be closed and the structure can begin holding water. The site has a United States Geological System (USGS) flow monitoring gage that is installed, working and on-line with the other electronic gages. Onsite mitigation is complete and a trash rack and safety boom have been installed. Offsite mitigation will be scheduled with the National Resources Conservation Service (NRCS) to be completed in the Upper Shaffers Fork Watershed.

The final design is complete for Lost River Flood Control Structure 16 in Hardy County. Land rights acquisitions continue as the next next phase of project.



*The North fork of the Hughes river is located in Richie County, and is one of only two roller compacted concrete dams in the watershed structure program.*



*Typical for all dams, this shows brush control maintenance being performed on Upper Deckers Site 6 in Preston County.*

# Local Protection Projects

## Island Creek Local Protection Project Guyan Conservation District

Funds Sent From State Conservation Committee to Guyan Conservation District	\$8,114,355
Estimated State Non-Federal Cost Share @ 27.7%	\$11,251,000
Estimated Total Cost	\$41,370,000

The Island Creek Local Protection Project is a joint protection project between the United States Army Corps of Engineers (USACE) and the Logan County Commission (LCC) in cooperation with the Guyan Conservation District. The Project Cooperation Agreement (PCA) was signed between the USACE and LCC on January 25, 2008, authorizing implementation of the project. This project is a three phase project that entails a “Base Phase” with “Options 1 and 2.”

The dimensions of this project shall mean the widening of the Island Creek channel to an 80 foot bottom width, for a distance of approximately 3,600 feet upstream of its confluence with the Guyandotte River. The project consists of post and panel retaining walls to stabilize the creek bank behind adjacent commercial structures and the removal of an existing sandbar.

The LCC understands that the proposed project provides between a 10 and 20 year level of flood protection. The contract for this project has been awarded to Heater Construction of Spencer, West Virginia. Construction of the Base Phase is currently set to begin in the spring of 2011. Property acquisition for Options 1 and 2 continue, with construction to begin for Option 1 following completion of the Base Phase and property acquisition. Option 2 will follow the same guidelines.





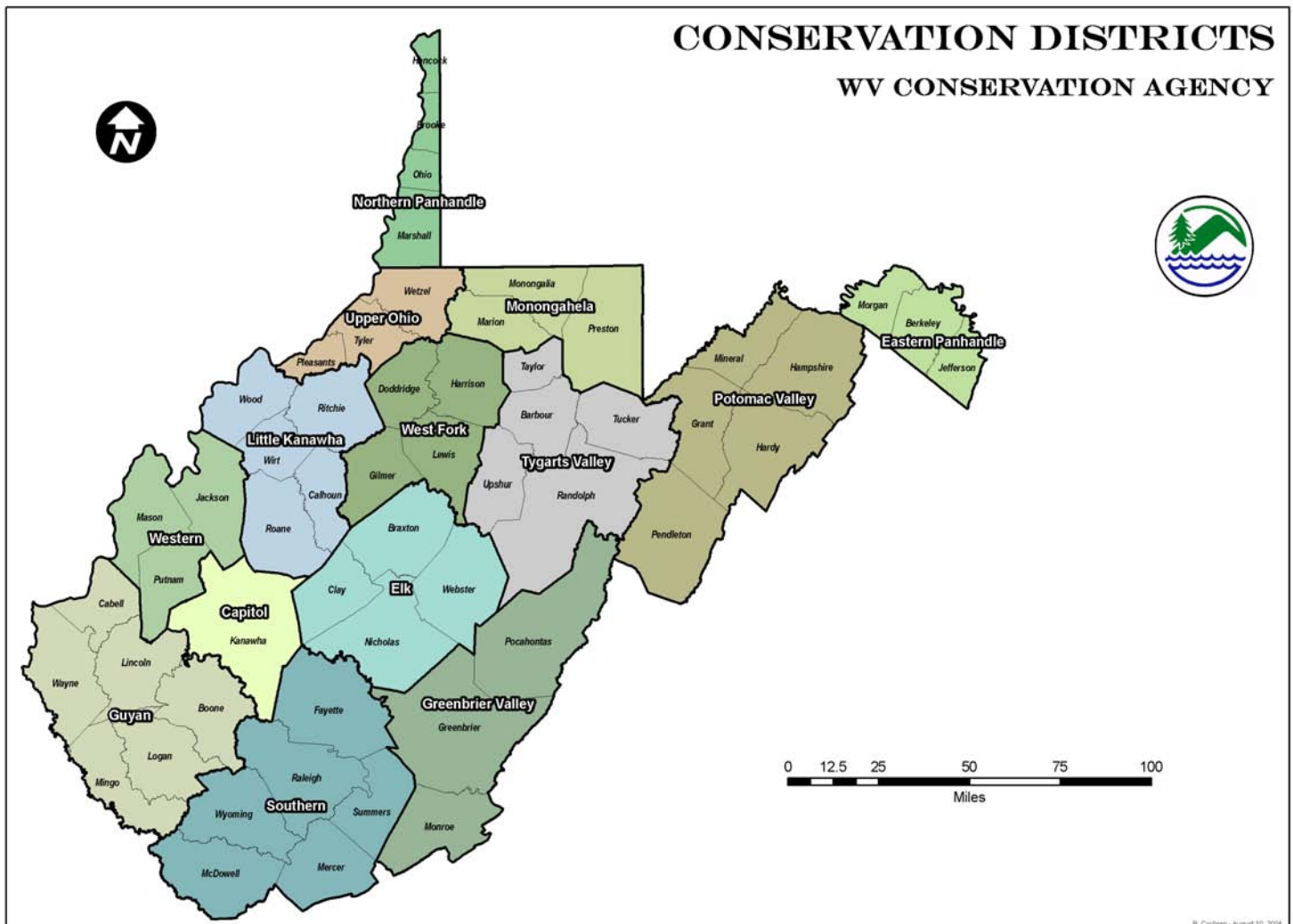
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## Capitol:

Kanawha County  
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Cross Lanes, WV 25313  
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## Northern Panhandle:

Brooke, Hancock, Marshall and Ohio Counties  
1 Ballpark Drive  
McMechen, WV 26040  
Phone: (304) 238-1231  
Fax: (304) 242-7039

## Eastern Panhandle:

Berkeley, Jefferson and Morgan Counties  
151 Aikens Center, Suite 1  
Martinsburg, WV 25404  
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## Potomac Valley:

Grant, Hampshire, Hardy, Mineral and Pendleton Counties  
500 East Main Street  
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Phone: (304) 822-5174  
Fax: (304) 822-3728

## Elk:

Braxton, Clay, Nicholas and Webster Counties  
1336 State Street, Room 200  
Gassaway, WV 26624  
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## Southern:

Fayette, McDowell, Mercer, Raleigh,  
Summers and Wyoming Counties  
463 Ragland Road  
Beckley, WV 25801  
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Fax: (304) 253-0238

## Greenbrier Valley:

Greenbrier, Monroe and Pocahontas Counties  
179 Northridge Drive  
Lewisburg, WV 24901  
Phone: (304) 645-6173  
Fax: (304) 645-4755

## Tygarts Valley:

Barbour, Randolph, Taylor, Tucker and Upshur Counties  
Route 4, Box 501  
Philippi, WV 26416  
Phone: (304) 457-3026  
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## Guyan:

Boone, Cabell, Lincoln, Logan, Mingo and Wayne Counties  
2631 5th Street Road  
Huntington, WV 25701  
Phone: (304) 528-5718  
Fax: (304) 697-4164

## Upper Ohio:

Pleasants, Tyler and Wetzel Counties  
201 Underwood Street  
Middlebourne, WV 26149  
Phone: (304) 758-2512  
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## Little Kanawha:

Calhoun, Ritchie, Roane, Wirt, Wood Counties  
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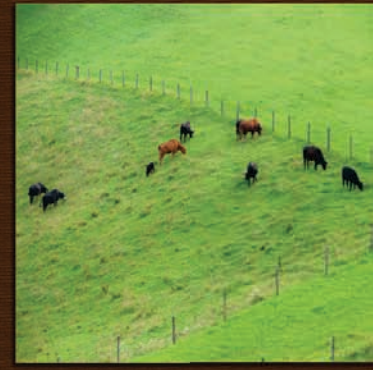
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*"TAKE CARE OF THE LAND AND THE LAND WILL TAKE CARE OF YOU."  
-HUGH HAMMOND BENNETT*

