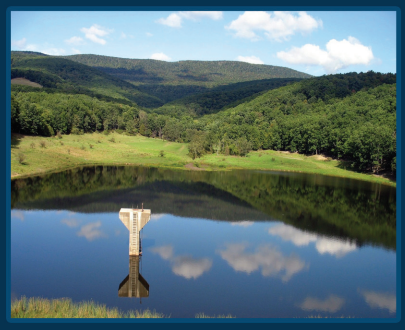

2011 ANNUAL REPORT

West Virginia Conservation Agency

www.wvca.us

West Virginia Conservation Agency

2011 Annual Report

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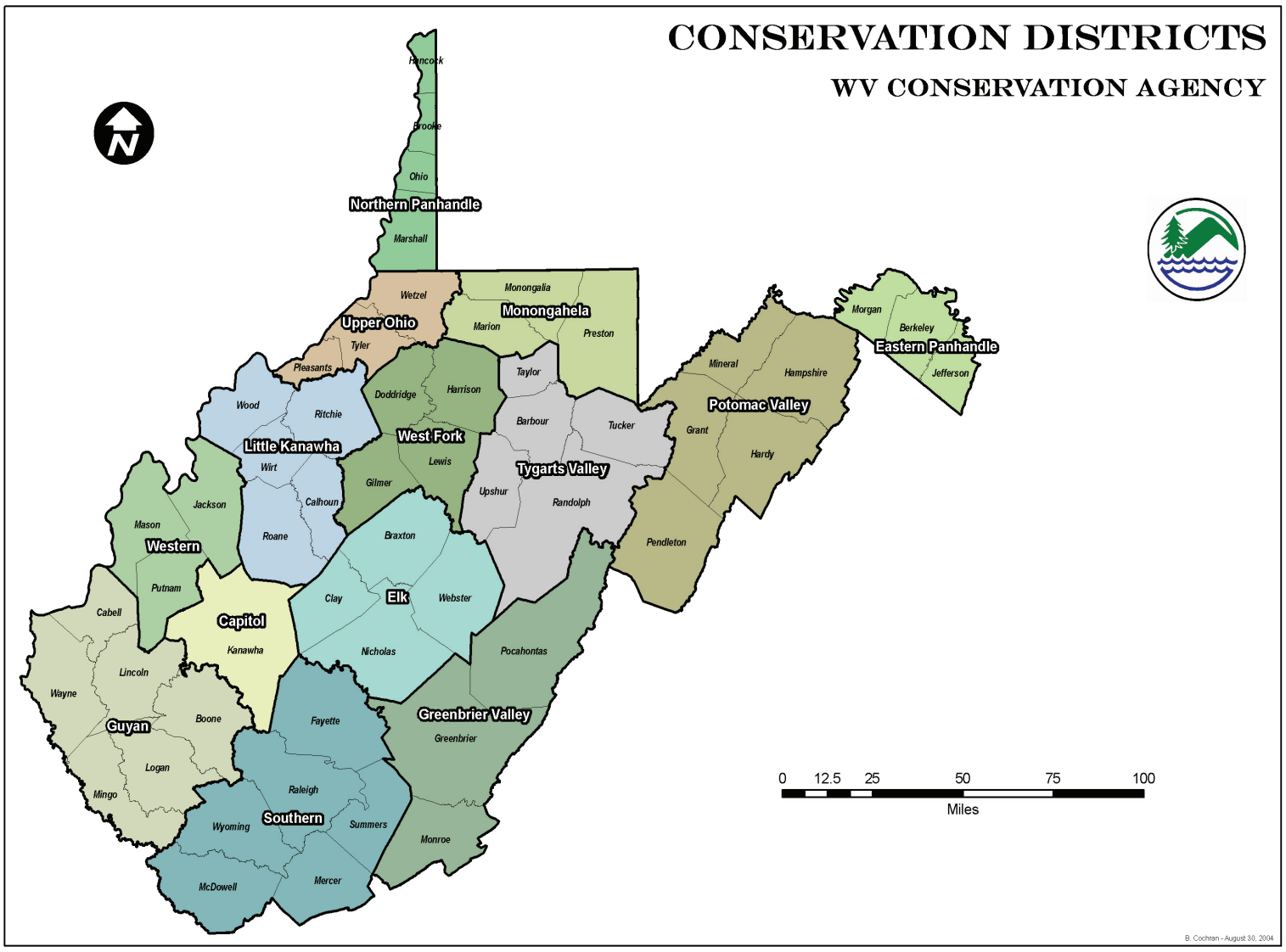


Our Mission

Preserving West Virginia's natural resources by working with partners to promote soil and water conservation.

Through the guidance of the West Virginia Conservation Agency (WVCA) and its partnership, resources are brought to local communities and land users to address a range of priority conservation issues. This cooperative, grassroots approach is proving to be an effective method for solving the natural resource management issues we face in West Virginia. The West Virginia Conservation Partnership is working with community leaders, local landowners and government agencies to build a productive State that exists in harmony with its environment.

The West Virginia State Conservation Committee is the board of directors for the WVCA. It consists of 10 members (four serving Ex Officio) and includes the Director of the West Virginia University State Cooperative Extension Service, the Dean of the WVU College of Agriculture and Forestry, the Director of the West Virginia Division of Environmental Protection, the President of the West Virginia Association of Conservation Districts, the Director of the West Virginia Division of Forestry and the Commissioner of the West Virginia Department of Agriculture, who also serves as the committee's chairman. In addition, the Governor appoints four representative citizens to the Committee. The State Conservationist of the USDA-Natural Resources Conservation Service serves as an advisory member.

Outreach & Education

WV Envirothon: Teaching the Next Generation

100 WVDOH personnel attended a two-day workshop hosted by the WVCA on the latest sediment and erosion control technology.

Education and Outreach is an important function of the West Virginia Conservation Agency (WVCA) and the 14 conservation districts. Many conservation districts serve as a resource by providing financial support and technical expertise.

In 2011, the WVCA and the 14 conservation districts provided a variety of conservation-themed programs to West Virginia teachers, students and citizens. The programs included: Rain barrel and agriculture workshops, field days, pasture walks, outdoor classrooms and tree seedling giveaways. These programs were attended by more than 3,000 children and adults throughout West Virginia. They also ensure that future generations make informed decisions about keeping our air, soil and water clean for future West Virginians.

Students at Moorefield Elementary School get tested on their knowledge of trees.

Several 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 workshops serve to educate teachers on the resources available to them and to offer a wealth of hands on activities that encourage students to think about the wise use of our natural resources.

Establishing and enhancing vegetative cover on grasslands provides reduced erosion rates and decreases sedimentation and runoff within watersheds. The WVCA and districts work with the West Virginia Grazing Lands Steering Committee, West Virginia University Cooperative Extension Service and the USDA-Natural Resources Conservation Service to develop and implement outreach programs throughout the State to assist landowners in improving their grasslands.

The 2011 Appalachian Grazing Conference was held March 4-5, 2011, at the Waterfront Place Hotel and Event Center in Morgantown. The conference was a major success with 375 people in attendance from 13 states. The conference objective was to help producers improve their productivity and profits considering the specific issues in the Appalachian Region. In addition to the many speakers, the event also featured live animal demonstrations and vendor exhibits. To increase attendance, many conservation districts provided scholarships to students and district cooperators.

The 14 conservation districts and the WVCA, along with other conservation partners, sponsored the annual West Virginia Grassland Evaluation Contest at Jackson's Mill on April 8, 2011. During the contest, high school students were tested on their knowledge of pasture conditions, soil interpretation, wildlife habitat and plant identification. The contest is designed to improve the knowledge of grassland management in West Virginia in order to improve water quality, maintain healthy and productive land and maximize profits.

The WVCA Watershed Resource Center provided 68 educational programs to 4,854 students, citizens and professionals on non-point source and water quality issues. WVCA staff organized nine agricultural field days with a total of 935 people in attendance.

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 control technology and applications. More than 100 of WVDOH's engineering and inspection staff participated in the hands-on training at the District 5 Headquarters and along Corridor H. Participants were exposed to the most current and effective sediment reducing applications available for construction and facility management.

The WVCA website, www.wvca.us, plays an important part in connecting the public with information concerning their local conservation districts and the available conservation education programs offered by each district. In early 2012, the WVCA will unveil a new website designed to be user friendly and more interactive. The new website will feature social media tools, a search engine and more information on WVCA programs and ways to get involved.

The Shady Spring Enviromongers won first place at the 2011 West Virginia Envirothon.

The Hampshire County Home School Envirothon team from left to right: Adam Sine, Julia Rogers, Sarah Sine, Madison Draper and Katie Allen.

In April of 2011, 26 teams from across West Virginia competed in the 15th annual West Virginia Envirothon in Flatwoods. The participants were tested on five subject areas: forestry, soils, aquatics, wildlife and the 2011 environmental topic, The Mississippi Delta Estuary. Each test occurred outdoors, allowing students a chance to work and learn in a real world setting, guided by environmental professionals.

A team looks over a soils map during the 2011 West Virginia Envirothon.

The Envirothon is a conservation education program and competition for students in grades 9 through 12. The competition encourages students to work as a team to acquire natural resource knowledge and critical thinking skills. By participating in the Envirothon, students learn about West Virginia's diverse ecosystem and how they can help conserve and protect it for future generations.

"It educates the kids about the environment," said Sarah Sine, a member of the Hampshire County Home School Envirothon team. "A lot of kids our age don't know that much about the environment or just don't care. So when you have a competition like this, I think it teaches them and makes them aware. It interests them."

Not only does the Envirothon teach the participants valuable lessons about the environment, it can also help them further their own goals.

"I like the wildlife section because I like animals. I want to be a vet and I think this competition helps me learn about the science," said Madison Draper, Sarah's teammate on the Hampshire County team.

"A lot of kids our age don't know that much about the environment or just don't care. So when you have a competition like this, I think it teaches them and makes them aware."

Sarah Sine, student

At the end of the competition, the top five teams are awarded college scholarships totaling $13,000. The scholarships can be used at a school of their choice. The first place team is also eligible to represent West Virginia in the Canon Envirothon where they compete with teams from across the nation. This year's first place team was the Shady Spring Enviromongers, advised by Kelly Sponaugle. The team was awarded a $5,000 scholarship and represented West Virginia at the Canon Envirothon in New Brunswick, Canada.

The West Virginia State Code charges the WVCA to protect and promote the safety and general welfare of the people. When we teach our children and each other that we can all help to conserve the State's natural resources we are protecting not only the land, but also our futures. In 2012, the West Virginia Envirothon will take place April 18-19 in Flatwoods.

Lime Incentive Program

Rick Hart Farm: The Grass is Always Greener

Eligibility requirements:

1. Applicant must be the landowner/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 with the recommendation of the State Technical Committee.

3. Land must be established in permanent grasses and/or legumes.

4. Land must be used for agricultural purposes.

5. A current soil test must be filed with the conservation district. The test is considered current if it has been taken within three years. Soil tests must be completed through a certified lab.

6. The requirement for application will be determined by the certified 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 which 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 West Virginia Lime Incentive Program provides up to a 50 percent cost-share reimbursement to farmers for the purchase of agricultural lime to improve their grasslands.

The Lime Incentive Program began in 2005, and it provides cooperators with a 50 percent cost-share reimbursement.

Program objectives include:

- 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.
- To help reduce water, air and soil pollution from non-point sources.

Grassland forage is the most prevalent agriculture 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; in addition to clean air and water.

Other benefits include habitat for wildlife, healthier riparian areas and improved aquatic habitat through the 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.

All 14 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.

The Rick Hart Farm is located in Braxton County in the Elk Conservation District.

By applying lime to his field, Rick Hart has increased production of grasses and legumes. Hart has participated in the Lime Incentive Program since 2005.

In FY 2011, a total of 183,983 tons of lime was applied on 69,693 acres.

In FY 2011, a total of $393,401 was expended for the Lime Incentive Program.

Rick Hart is a fourth generation farmer. His farm is located in Braxton County and is approximatley 300 acres, with 195 of that in pasture. Hart runs a cow/calf operation with 20 head of cattle.

Several years ago, Hart began to expand his farming business and noticed that his pasture land was not in the best condition.

"I've been expanding and working on farms that needed help. The pH levels were way down on all of the land," said Hart.

Applying lime was the answer to this problem and Hart knew it. That's when he decided to participate in the West Virginia Lime Incentive Program. To him it was a no-brainer. Since its inception in 2005, the Lime Incentive Program has become one of the most popular programs offered through the conservation districts.

"My family has run cattle for a long time. It's pretty simple. You gotta have nutrients to raise cattle," said Hart.

The Lime Incentive Program has helped numerous landowners improve the quality of their pastures. The Elk Conservation District (ECD) offers a 50 percent cost-share reimbursement to eligible individuals for the cost of applying lime. Many producers fail to apply lime because of the high initial cost. Lime application, however, is an investment in the productivity of the land and lasts about three growing seasons. ECD also provides Lime Incentive Program participants the opportunity to rent a lime spreader. In the past, Hart has taken advantage of this. Now he uses his own equipment to spread the lime.

"My family has run cattle for a long time. It's pretty simple. You gotta have nutrients to raise cattle."
Rick Hart, ECD farmer

As part of the Lime Incentive Program, cooperators must have a current soil test. A soil test is considered current if it has been taken within three years of the date the practice is being requested.

Hart has noticed improvements since implementing the program and has recommended it to several other farmers in the area. Hart also stressed that his experience with the program and working with ECD and West Virginia Conservation Agency staff has been good.

The Rick Hart Farm is an excellent example of how the Lime Incentive Program has helped farmers since its inception in 2005. This 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.

Watershed Division Stream Section

Gilmore Elementary: Assisting a Community

Emergency Watershed Protection

Emergency Watershed Protection is only used during a State or Federal Emergency Declaration in response to a sudden disaster. Funds may only be used for the removal of blockages causing a 75 percent obstruction to stream flow and not for maintenance issues such as removing trash, raising banks, dikes or dredging.

This stream blockage, near Chapmanville, in Logan County, was the result of severe storms that rolled through the area in April 2011.

On April 11, 2011, Gov. Earl Ray Tomblin declared a state of emergency for four southern West Virginia counties. Boone, Lincoln, Logan and Mingo counties all saw severe storms accompanied by hail and heavy rain. The storms that rolled through the area caused widespread power outages, mudslides and downed trees as well as road and stream blockages.

The West Virginia Conservation Agency responded immediately with site assessments to determine eligibility and worked with county officials to prioritize eligible sites. The WVCA completed work on six Emergency Watershed Protection sites with debris removal contracts totaling $91,498.

A downed bridge at the North Fork of Big Creek in Logan County. The storms destroyed a total of 14 bridges in southern West Virginia.

A contractor crew works to remove debris from a stream at Stone Branch in Logan County.

Stream Protection & Restoration Program

The Stream Protection and Restoration Program (SPRP) is used to cover non-emergency situations that fall outside of the Emergency Watershed Protection program. The WVCA categorizes SPRP projects into two areas: blockage removal from Legislative or Citizen Contact Reports; and planned projects using Natural Stream Restoration designs.

Stream Blockage Removal Completed in FY11

1st Congressional District	$197,399
2nd Congressional District	$38,942
3rd Congressional District	$93,146
TOTAL	**$329,487**

SPRP Planned Projects Completed in FY11

1st Congressional District	$137,924
2nd Congressional District	$6,067
3rd Congressional District	$29,673
TOTAL	$173,664

An excellent example of a Stream Protection and Restoration Program planned project is the Gilmore Elementary School site. Gilmore Elementary School is located in Jackson County in the town of Sandyville.

The Gilmore Elementary Parent Teacher Organization saw that the Sandyville community was in need of an outdoor recreational and educational site. Cinda Francis, President of the Gilmore Elementary Parent Teacher Organization, proposed the development of a Nature and Fitness Trail at the school. Francis then acquired the support of numerous local groups such as 4-H clubs, Boy and Girl Scouts and the Western Conservation District.

The Gilmore Elementary Nature and Fitness Trail project is a multiyear, multiphase project involving a number of local, state and federal organizations. However, there were major problems that needed to be addressed before the development and construction could begin on the trail. The problem was that the drain carrying water from the culvert under Route 21 to the stream was very steep and not accessible, nor could it be crossed safely.

Erosion problems along this stream bank had to be fixed before construction could begin on the Nature and Fitness Trail.

"It was definitely a safety hazard. The kids weren't even allowed in that area." Cinda Francis, parent

"It was definitely a safety hazard. The kids weren't even allowed in that area," said Francis.

The erosion was due to the stream's inability to access the floodplain. This made the drain a source of sediment during rain events, as well as a safety hazard for the students.

Francis contacted the Western Conservation District to seek technical and financial assistance for this phase of the project. The Western Conservation District was able to assist in financing this phase of the project using SPRP funds. Additionally, the West Virginia Conservation Agency provided a Conservation Specialist for technical assistance.

The solution was to widen the floodplain by twice its width to increase its holding capacity during high flow events. It involved reshaping the unstable bank by following the meanders already established by the stream and installing a high performance turf mat. The total cost of Phase 1 was $6,067 and took two days to complete.

"The work went quickly and I was very pleased," said Francis. The stream bank restoration was necessary before the school could begin work on its Nature and Fitness Trail. Having the trail at the school will provide community residents with a recreational space.

"There is no park or community area to exercise. The trail will be like our community park," said Francis.

This is just one example of the many people throughout the state of West Virginia who have received help through the Stream Protection and Restoration Program planned projects.

Water Quality Implementation
Windspring Farm: Two Programs, One Goal

Non-Point Source Program

The West Virginia Conservation Agency is the primary entity responsible for the implementation of the West Virginia Agriculture and Construction components of the Section 319 Non-Point Source Program and for coordinating and implementing water quality improvement projects with the 14 conservation districts.

Windspring Farm is located in Monroe County in the Greenbrier Valley Conservation District.

Agriculture Enhancement Program

The Agriculture Enhancement Program is administered by the WVCA through conservation districts to increase farm productivity by conserving soil, making wise use of agricultural resources and improving 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.

Windspring Farm is a small family operated dairy farm in the heart of the Sweet Springs Valley of Monroe County near Gap Mills. The farm commenced operations in April 2008, milking approximately 60 head and operating out of an existing dairy with limited resources, such as inadequate manure handling facilities, limited equipment storage, no commodity sheds, and limited free stalls.

In 2009, the owners of Windspring Farm, Doug and Tracy Dransfield, started working with a West Virginia Conservation Agency (WVCA) conservation specialist and the Greenbrier Valley Conservation District's (GVCD) grassland technician to address some of these issues. The first issue addressed was the limited manure storage. The issue was addressed by building a manure lagoon. A Clean Water Act Section 319 Incremental Grant was obtained to assist with funding this project.

During the planning process, the Dransfields were approached with an opportunity to purchase the cows from an adjacent dairy farm to increase their herd to 120.

This manure lagoon was funded through a Section 319 Incremental Grant.

Not only did the manure lagoon project help make this acquisition and increased production possible, but it also helped alleviate a resource concern on the adjacent farm by moving the cattle to a location with adequate manure storage. To help manage this increased herd, the grant also provided funds for stream exclusion fencing, stable stream crossings, and alternative watering systems to allow the cattle to evenly graze throughout their pastureland without impacting the nearby trout stream.

"The creek crossings, water troughs, stream fencing, lagoon project, and commodity shed have enhanced our ability to minimize the negative environmental impacts dairies may have."
Doug Dransfield, GVCD farmer

In addition to these projects, the Dransfield's built a commodity shed using the GVCD's Agriculture Enhancement Program (AEP). The commodity shed is used for increased feed storage, which can save the landowner money by buying feed in bulk.

With financial assistance provided by the 319 Incremental Grant and the AEP, the Dransfields were able to use their limited funds to address other resource concerns such as limited equipment storage and free stall space. Doug Dransfield felt good that he was helping to improve his production while at the same time addressing environmental concerns.

"Not only is it a benefit to me, but to the people down stream and in other areas," said Dransfield.

In a letter addressed to the GVCD, Dransfield emphasized his satisfaction and gratitude in working with the WVCA and GVCD staff to help achieve these goals.

"The creek crossings, water troughs, stream fencing, lagoon project, and commodity shed have enhanced our ability to minimize the negative environmental impacts dairies may have," wrote Dransfield.

While dairy farms are vital for food production in our country, they can contribute to non-point source pollution. With the technical and financial assistance provided by the WVCA and GVCD, Windspring Farm is now in a situation where it can be managed properly and affordably with a significant reduction in pollution to the stream than it had prior to the installation of these conservation practices.

Current Section 319 Incremental Grant Projects

Clean Water Act Section 319 Incremental Grant Projects provide an opportunity for West Virginia Conservation Agency (WVCA) to address water quality resource concerns with a targeted approach. The WVCA Non-Point Source Program staff has devoted much of its efforts toward developing and implementing incremental grant projects. These funds are used to install specific projects designed to decrease contributions that impair the priority watershed in which the projects are installed. These grants can also assist the WVCA in implementing its portion of the Chesapeake Bay Program.

Incremental Project	319 Funding	State Match Funding	Local Match Funding
Kitchen Creek, Monroe County 3rd Congressional District	$108,523	$27,132	$45,217
Lost River 1, Hardy County 2nd Congressional District	$215,682	$90,150	$30,050
Lost River 2, Hardy County 2nd Congressional District	$430,488	$150,975	$125,037
Mill Creek, Grant & Pendleton counties 1st & 2nd Congressional Districts	$174,000	$63,000	$71,250
Back Creek, Monroe County 3rd Congressional District	$151,428	$28,858	$48,095
Sleepy Creek, Morgan County 2nd Congressional District	$292,550	$16,406	$115,036

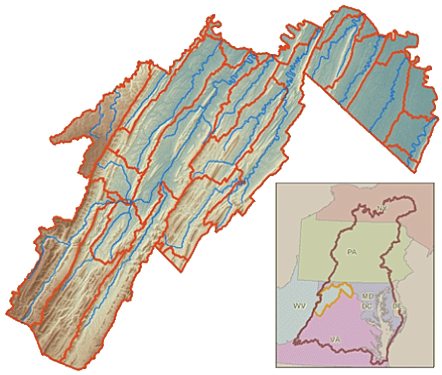
Agriculture Enhancement Program

Agriculture Enhancement Program funds expended in FY11 totaled $327,965

In 2011, five conservation districts participated in the AEP pilot program. They are the Eastern Panhandle Conservation District, Greenbrier Valley Conservation District, Northern Panhandle Conservation District, Monongahela Conservation District and the Potomac Valley Conservation District. Overall program objectives include the reduction of nutrients (nitrogen and phosphorous) and sediment from entering the State's streams, rivers, and ultimately the Chesapeake Bay. The program is also designed to increase farm profitability and sustainability.

Chesapeake Bay Program

Windspring Farm is an excellent example of the different programs the West Virginia Conservation Agency (WVCA) is using to address water quality problems. In addition to these programs, the WVCA is one of three lead agencies responsible for working with the U.S. Environmental Protection Agency to coordinate the Chesapeake Bay Program within West Virginia. Along with the West Virginia Department of Environmental Protection and the West Virginia Department of Agriculture, the WVCA's Watershed Program Coordinator has been involved in planning for the upcoming Phase 2 Watershed Implementation Plan (WIP). This will be the State's recipe to achieve the required pollution reductions, which will assist in restoring local waters and the Chesapeake Bay.



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. Training, workshops and supplies were offered within the Bay drainage and resulted in educating more than 200 stakeholders on stream sampling methods and local water quality education.

The WVCA, in cooperation with the Potomac Valley Conservation District, sponsored a one-day nutrient management training workshop for 90 West Virginia and Virginia certified planners on the latest research and applications in managing nutrients and sediment on the farm. West Virginia Project CommuniTree continues to be one of the most successful urban forestry programs in the Bay drainage. It has been supported in part by Chesapeake Bay Program funding. The program is entirely volunteer based and involves stakeholders in the process of conserving and enhancing riparian areas, resolving stormwater management issues and engaging local leadership in watershed management problems. The WVCA is responsible for developing and maintaining the State's Chesapeake Bay website which can be found at www.wvca.us/bay.

Watershed Dams

New Creek 14 : Rehabilitating a Dam

Operation & Maintenance

The West Virginia Conservation Agency (WVCA) Watershed Division is responsible for the inspection and Operation and Maintenance (O&M) of 170 watershed structures and 22 channels throughout West Virginia.

Operation and Maintenance (O&M) work is funded through cost-share agreements between the conservation districts and local sponsors. The WVCA matches all local sponsor funding at a 1:1 rate. Emergency Action Plans are prepared for each structure along with a training program for Watershed Structure Monitors.

Brush control maintenance being performed on Upper Deckers Creek Site 6 in Preston County.

During FY11, 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. Maintenance contracts for items identified on the annual inspections are ongoing in all conservation districts and associated watershed project areas using private contractors and district work crews.

The estimated cost to rehabilitate the 35 watershed dams with an expired service life ranges from $23,234,360 to $160,219,616

Watershed Dam Rehabilitation

The West Virginia Conservation Agency is also responsible for the rehabilitation of aging watershed dams. Currently, there are 35 watershed dams in West Virginia with an expired service life, and an additional 38 will expire in the next five years.

In 2011, the USDA-Natural Resources Conservation Service (NRCS) conducted Rehab Assessments of 100 watershed dams in West Virginia. The dams were then ranked by risk index. Several factors were taken into consideration to formulate the risk index such as: population at risk, service life span of the structure and structural deficiencies.

Service Life by Congressional District

Description	Congressional District			Total For WV
	1	2	3	
Dam with expired Service Life	18	13	4	35
Dam with Service Life to expire within next 5 years	14	18	6	38
Dam with Service Life to expire within the next 5 to 10 years	17	10	3	30
Dam with remaining Service Life greater than 10 years	42	20	5	67

*Data taken from USDA-NRCS Rehab Assessment Reports

In FY11, the WVCA began the first watershed dam rehabilitation project in West Virginia at New Creek 14 in Grant County. Three additional sites are in the rehabilitation review process. They are Salem Fork 11 and 11A in Lewis County and Upper Deckers Creek 1 in Preston County.

New Creek Site 14, in Grant County, is the first rehabilitation site in the state of West Virginia.

Upon completion, the rehabilitation of New Creek Site 14 will have a 100 year service life and cost approximately $10,350,160.

The New Creek 14 watershed dam, built in 1963, is located on Linton Creek, a tributary to New Creek, in Grant County. The dam was built for a service life of 50 years and sits 14 miles upstream of the town of Keyser. It was built as a flood control and water supply structure. In fact, it is the only water supply source for the residents of Keyser.

"New Creek 14 is imperative to our water source," said Keyser Mayor Randy Amtower.

New Creek 14 has also provided residents with recreational opportunities such as fishing and boating.

In March 2006, the USDA-Natural Resources Conservation Service (NRCS) conducted a rehab assessment of the New Creek 14 site. The assessment showed that the structure no longer met current NRCS design criteria and performance standards. This coupled with other factors such as population at risk and how "construction ready" the project was were the reasons New Creek Site 14 was chosen as West Virginia's first rehab site.

"A dam failure would be just as devastating as having no water supply, perhaps even worse."
Mayor Randy Amtower

When the dam was constructed in 1963 it was given a high hazard classification due to, among other things, the population at risk if the dam were to fail.

"A dam failure would be just as devastating as having no water supply, perhaps even worse," said Amtower.

With a large population at risk, if the dam failed, and a rapidly approaching end of service life it is easy to see why this site was chosen.

As the lead state agency for the rehabilitation of watershed structures, the West Virginia Conservation Agency (WVCA) was heavily involved in the planning process. WVCA staff is responsible for acquiring land rights through coordination with the Potomac Valley Conservation District (PVCD). The WVCA and its local partners obtained the necessary local, State and Federal permits needed for construction. In addition to acquiring the land rights and permits, the WVCA must also update the Emergency Action Plan for the site prior to rehabilitation and, along with the PVCD, is responsible for the dam's operation and maintenance. NRCS drafts the design for the repair of the structure and secures the contract.

When completed the dam will feature a concrete paparet wall on the top of the dam embankment to prevent overtopping during a storm event, installation of a new intake riser, lining the principle spillway pipe, installing an impact basin, an embankment surface drainage system and mitigating the temporary elimination of the lake's fishery.

The estimated rehabilitation cost is $10,350,160. The project is a cost-share with NRCS on a 65-35 Federal/State share.

After the completion of the rehabilitation, the structure will have a service life of 100 years.

This is just one example of the work involved in rehabilitating West Virginia's aging watershed dams. Several of these dams are nearing the end of their service life and the need for rehabilitation is rapidly approaching.

These dams provide valuable resources for the surrounding communities; ensuring that they operate safely and at optimal performance is the primary goal of the WVCA.

NRCS Rehab Assessment

Ranking by Risk Index	Dam Name	County	Congressional District	Population At Risk	*Estimated Cost ($)	End of Service Life
1	Wheeling Creek 25	Marshall	1st	3750	2,400,000/6,800,000	2077
2	Brush Creek 14	Mercer	3rd	1820	500,000/3,900,000	2017
3	Brush Creek 9	Mercer	3rd	1618	70,000/590,000	2014
4	New Creek 17	Mineral	1st	1143	150,000/8,600,000	2010
5	Brush Creek 15	Mercer	3rd	1833	1,800,000/5,900,000	2017
6	New Creek 12	Grant	1st	1448	1,900,000/7,800,000	2018
7	Wheeling Creek 23	Marshall	1st	1500	2,400,000/6,200,000	2078
8	Patterson Creek 15	Mineral	1st	1163	2,700,000/17,900,000	2015
9	New Creek 5	Mineral	1st	805	653,000/14,224,000	2008
10	Polk Creek 13	Lewis	2nd	945	800,000/3,300,000	2017
11	New Creek 9	Mineral	1st	910	1,200,000/4,500,000	2013
12	Brush Creek 12	Mercer	3rd	515	650,000/700,000	2015
13	South Fork 13	Pendleton	2nd	503	150,000/6,500,000	2010
14	Brush Creek 10	Mercer	3rd	915	1,000,000/2,500,000	2013
15	New Creek 7	Mineral	1st	620	1,137,000/9,820,000	2008
16	Patterson Creek 38	Mineral	1st	200	1,200,000/6,200,000	2016
17	New Creek 16	Mineral	1st	488	2,500,000/7,000,000	2010
18	Patterson Creek 20	Mineral	1st	725	150,000/2,100,000	2017
19	Polk Creek 7	Lewis	2nd	715	400,000/2,500,000	2017
20	Brush Creek 5	Mercer	3rd	813	600,000/2,100,000	2012
21	Lunice Creek 9	Grant	1st	610	300,000/9,200,000	2067
22	New Creek 1	Mineral	1st	465	600,000/2,000,000	2007
23	Lunice Creek 11	Grant	1st	593	1,000,000/6,400,000	2068
24	Saltlick Creek 9	Braxton	2nd	588	1,600,000/3,500,000	2017
25	New Creek 10	Mineral	1st	605	1,300,000/5,400,000	2018
26	Patterson Creek 28	Mineral	1st	565	900,000/8,600,000	2023
27	Polk Creek 9	Lewis	2nd	493	N/A	2015
28	South Fork 27	Pendleton	2nd	558	150,000/4,200,000	2010
29	Patterson Creek 46	Mineral	1st	508	N/A	2015
30	Brush Creek 4	Mercer	3rd	843	N/A	2012
31	Patterson Creek 26	Mineral	1st	425	100,000/2,300,000	2017
32	Salem Fork 14	Harrison	1st	350	632,000/3,145,000	2008
33	Warm Springs Run 2	Morgan	2nd	168	400,000/700,000	2006
34	Salem Fork 9	Harrison	1st	398	587,000/3,033,000	2005

**Min/Max Estimated Cost Alternatives*

NRCS Rehab Assessment

Ranking by Risk Index	Dam Name	County	Congressional District	Population At Risk	*Estimated Cost ($)	End of Service Life
35	South Fork 18	Pendleton	2nd	415	2,551,000/6,339,000	2018
36	Polk Creek 8	Lewis	2nd	465	1,000,000/2,700,000	2013
37	Patterson Creek 13	Grant	1st	390	2,300,000/8,100,000	2014
38	South Fork 4	Hardy	2nd	358	4,200,000/13,800,000	2015
39	Patterson Creek 12	Grant	1st	390	2,800,000/16,200,000	2019
40	Saltlick Creek 8	Braxton	2nd	283	1,900,000/6,400,000	2015
41	Marlin Run 1	Pocahontas	3rd	233	70,000/4,100,000	2011
42	Polk Creek 6	Lewis	2nd	308	834,000/2,899,000	2015
43	Upper Grave Creek 5	Marshall	1st	248	100,000/1,400,000	2012
44	South Fork 37	Pendleton	2nd	268	100,000/5,600,000	2016
45	Saltlick Creek 4	Braxton	2nd	208	600,000/5,400,000	2017
46	Patterson Creek 22	Mineral	1st	390	1,400,000/9,100,000	2015
47	Saltlick Creek 7	Braxton	2nd	240	1,100,000/3,000,000	2016
48	Upper Grave Creek 1	Marshall	1st	225	2,215,000/7,609,000	2009
49	Dave's Fork Christian's Fork 2	Mercer	3rd	248	623,000/1,965,000	2009
50	Warm Springs Run 5	Morgan	2nd	190	658,000/2,888,000	2005
51	Daves Fork Christians Fork 1	Mercer	3rd	335	364,730/2,151,195	2009
52	Polk Creek 4	Lewis	2nd	253	65,000/1,400,000	2014
53	Upper Deckers Creek 5	Preston	1st	238	1,237,000/6,685,000	2067
54	Salem Fork 13	Harrison	1st	365	330,000/2,116,000	2004
55	Patterson Creek 37	Mineral	1st	193	1,237,000/7,107,000	2022
56	Warm Springs Run 6	Morgan	2nd	193	484,000/2,511,000	2008
57	Patterson Creek 52	Mineral	1st	225	600,000/1,800,000	2018
58	Upper Grave Creek 9	Marshall	1st	193	1,026,000/2,060,000	2013
59	Patterson Creek 24	Mineral	1st	58	600,000/3,200,000	2013
60	Polk Creek 5	Lewis	2nd	215	952,000/1,961,000	2017
61	South Fork 36	Pendleton	2nd	190	150,000/3,200,000	2018
62	Salem Fork 15	Harrison	1st	293	347,000/1,851,000	2006
63	Saltlick Creek 6	Braxton	2nd	178	900,000/1,800,000	2014
64	South Fork 16	Pendleton	2nd	235	1,600,000/4,900,000	2011
65	Salem Fork 12	Harrison	1st	218	569,000/1,907,000	2005
66	Warm Springs Run 3	Morgan	2nd	155	980,000/3,148,000	2005
67	Upper Grave Creek 7	Marshall	1st	198	715,000/3,004,000	2009
68	Brush Creek 6	Mercer	3rd	853	600,000/2,100,000	2012
69	Upper Grave Creek 8	Marshall	1st	160	914,000/2,257,000	2009
70	Polk Creek 1	Lewis	2nd	220	958,000/2,549,000	2014
71	Warm Springs Run 7	Morgan	2nd	165	646,000/2,203,000	2006
72	South Fork 2	Hardy	2nd	175	800,000/6,500,000	2012
73	Warm Springs Run 1	Morgan	2nd	145	509,630/1,906,421	2008
74	Salem Fork 11	Harrison	1st	688	Assessment N/C	2006
75	Warm Springs Run 4	Morgan	2nd	140	731,000/3,657,000	2011
76	North & South Mill Creek 3	Grant	1st	45	1,300,000/5,700,000	2082
77	Patterson Creek 27	Mineral	1st	40	600,000/2,200,000	2020
78	Upper Grave Creek 4	Marshall	1st	135	905,000/2,366,000	2008
79	South Fork 21	Pendleton	2nd	133	100,000/4,900,000	2016

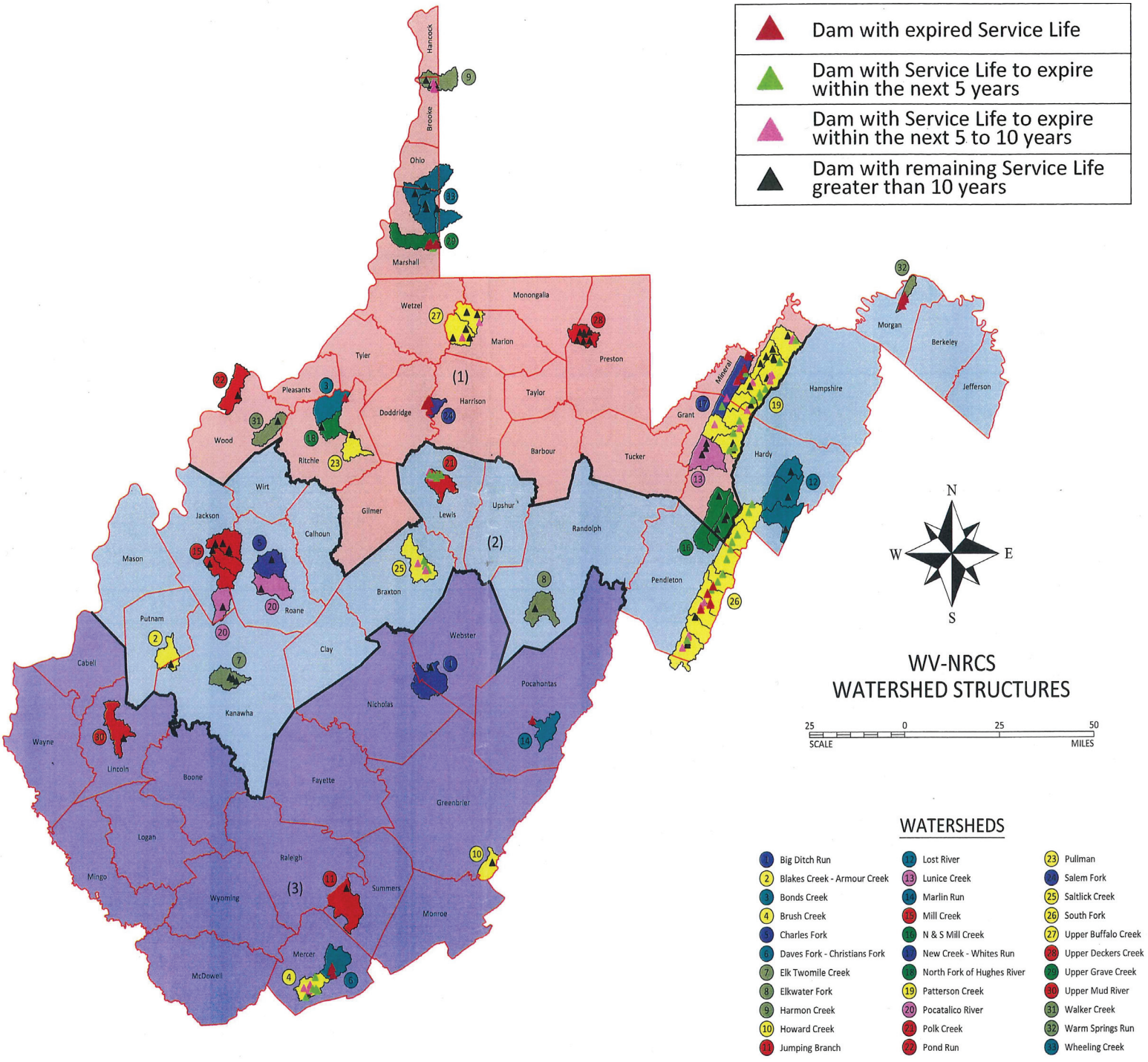
Min/Max Estimated Cost Alternatives

NRCS Rehab Assessment

Ranking by Risk Index	Dam Name	County	Congressional District	Population At Risk	*Estimated Cost ($)	End of Service Life
80	Warm Springs Run 9	Morgan	2nd	115	522,000/2,440,000	2007
81	Patterson Creek 1	Grant	1st	83	200,000/3,000,000	2016
82	Upper Grave Creek 3	Marshall	1st	88	960,000/1,723,000	2008
83	South Fork 6	Pendleton	2nd	120	3,400,000/9,200,000	2013
84	Dave's Fork Christian's Fork 3	Mercer	3rd	570	462,000/11,914,000	2008
85	South Fork 32	Pendleton	2nd	90	50,000/1,200,000	2012
86	Upper Deckers Creek 2	Preston	1st	93	420,000/4,900,000	2065
87	South Fork 10	Pendleton	2nd	105	1,400,000/6,000,000	2010
88	South Fork 9	Pendleton	2nd	80	1,800,000/7,100,000	2013
89	Patterson Creek 4	Grant	1st	50	2,100,000/12,000,000	2016
90	Patterson Creek 6	Grant	1st	45	2,200,000/15,100,000	2017
91	Bonds Creek 1	Ritchie	1st	65	1,000,000/2,800,000	2011
92	South Fork 11	Pendleton	2nd	65	2,200,000/5,800,000	2012
93	South Fork 12	Pendleton	2nd	80	1,200,000/5,300,000	2010
94	Patterson Creek 14	Mineral	1st	50	1,610,000/6,000,000	2020
95	South Fork 1	Hardy	2nd	85	1,000,000/8,800,000	2013
96	Pullman 1	Ritchie	1st	68	65,000/1,500,000	2068
97	Upper Deckers Creek 4	Preston	1st	149	535,000/5,000,000	2065
98	South Fork 35	Pendleton	2nd	25	400,000/2,600,000	2018
99	South Fork 5	Hardy	2nd	20	4,550,000/8,622,000	2015
100	Patterson Creek 47	Mineral	1st	20	450,000/1,300,000	2015
101	Big Ditch Run 1	Webster	3rd	125	270,000/2,700,000	2068
102	Patterson Creek 49	Grant	1st	83	800,000/15,000,000	2016
103	Upper Deckers Creek 7	Preston	1st	63	102,000/5,364,000	2068
104	Upper Deckers Creek 3	Preston	1st	25	113,000/2,924,000	2068

Min/Max Estimated Cost Alternatives

NRCS Rehab Assessment



ANNUAL WATERSHED PROGRAM BENEFITS BY CONGRESSIONAL DISTRICT

BENEFITS	CONGRESSIONAL DISTRICT			TOTAL FOR WV
	(1)	(2)	(3)	
MONETARY	$28,922,063	$18,672,883	$15,139,616	$62,734,562
PEOPLE	360,605	628,808	62,883	1,052,296
WATER SUPPLIES	101	6	2	109

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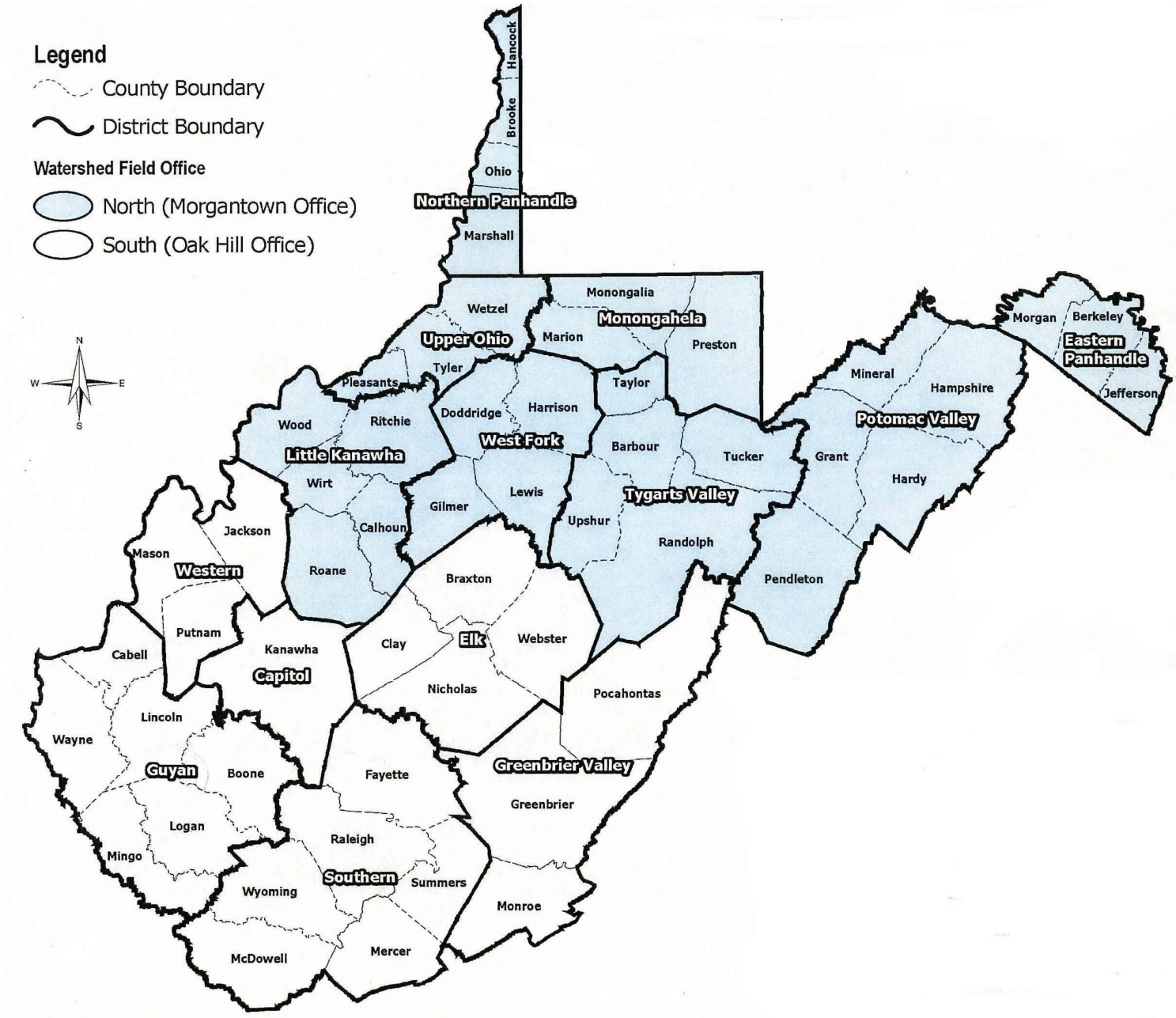

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