



2011 ANNUAL REPORT



WEST VIRGINIA
CONSERVATION AGENCY

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Brian Farkas
Executive Director

1900 Kanawha Blvd., E
Charleston, WV 25305-0193

Phone: 304-558-2204

Fax: 304-558-1635

www.wvca.us

Table of Contents

Our Mission..... 1

Outreach and Education..... 2-3

Lime Incentive Program..... 4-5

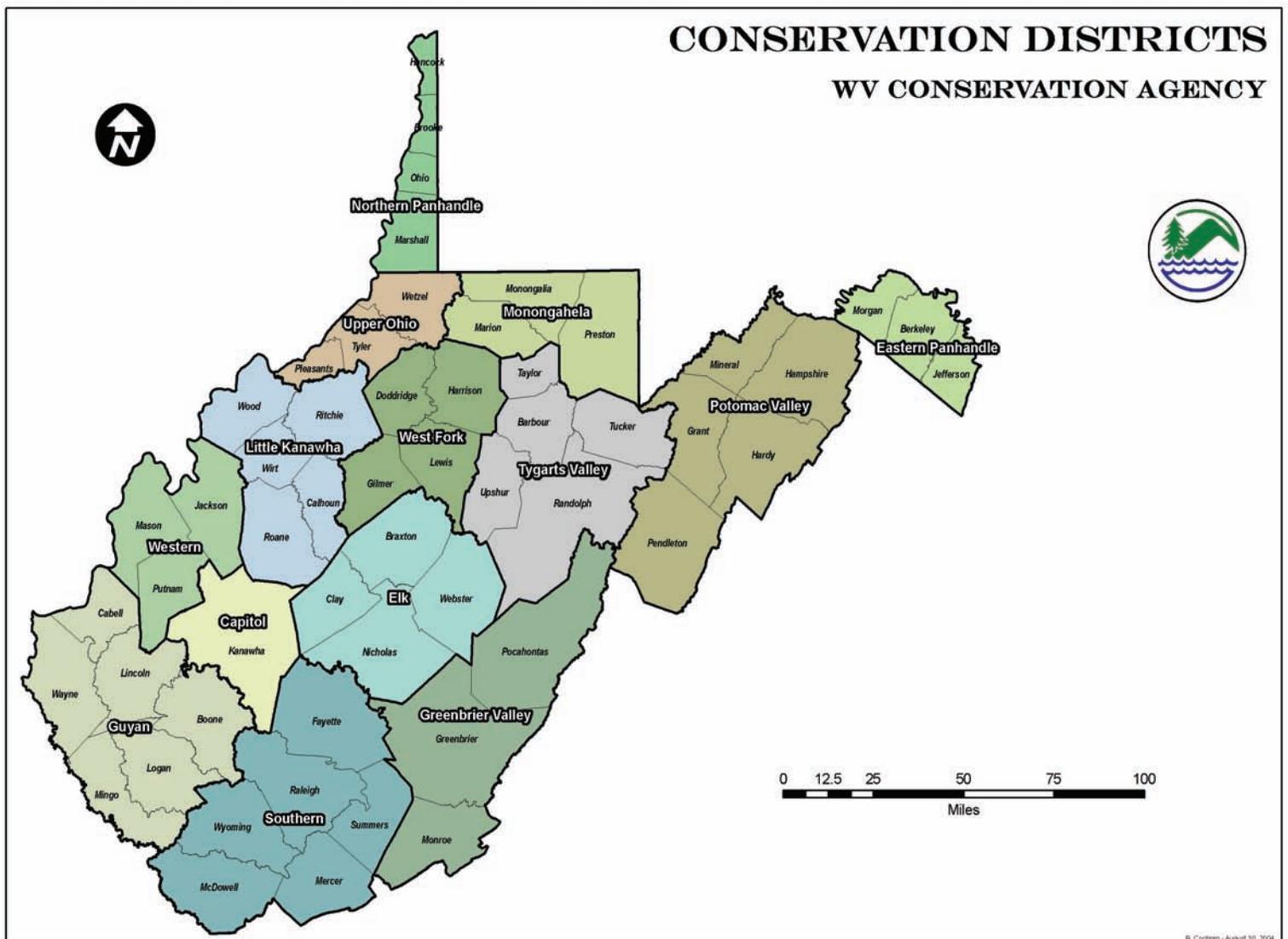
Watershed Division Stream Section..... 6-7

Water Quality Implementation..... 8-9

Watershed Structures..... 10-11

Contact Information..... 12-14

Appendix..... 15-17



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 land-owners 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 ten 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 serves as chair. In addition, the Governor appoints four representative citizens to the Committee. The State Conservationist of the U.S.D.A. Natural Resources Conservation Service serves as an advisory member.

Outreach & Education

WV Envirothon: Teaching the Next Generation



Over 100 WVDOH personnel attended a two-day workshop hosted by the WVCA on the latest sediment and erosion 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. Some of these include: 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. These programs ensure that future generations make informed decisions about keeping our air, soil and water clean for future West Virginians.

Several district's 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 to offer a wealth of hands on activities that stimulate students to think about the wise use of our natural resources.

Improving vegetative cover on grasslands through establishment and enhancement provides reduced erosion rates and decreases sedimentation and runoff within watersheds. The agency and districts work with the West Virginia Grazing Lands Steering Committee, West Virginia University Cooperative Extension Service and USDA Natural Resources Conserva-

tion Service to develop and implement programs throughout the state affecting 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 provide scholarships to students and district cooperators.

The West Virginia Conservation Districts and the West Virginia Conservation Agency, 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 are tested on their knowledge of pasture conditions, soil interpretation, wildlife habitat and plant identification. The purpose of the contest is 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 approximately 4,854 students, citizens and professionals on non-point source and water quality issues. The 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 technology and applications. Over 100 of WVDOH's engineering and inspection staff participated in the hands-on training at the District 5 Headquarters and along

Corridor H. They 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 each district offers. 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 will provide more information on WVCA programs and ways to get involved.





The Shady Spring Enviromongers were the winners of 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 this year's 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.

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. Next year

"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

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 test 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.

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, and 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.

All 14 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.

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



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 approximately 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

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

Rick Hart, ECD Farmer

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.

As part of the Lime Incentive Program, cooperators must have a current soil test. A soil test is considered current if it is less than 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 the Elk Conservation District and West Virginia Conservation Agency staff has been very 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 storm's 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 (SPRP) 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 (PTO) saw that the Sandyville community was in need of an outdoor recreational and educational site. Cinda Francis, President of the Gilmore Elementary PTO, 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, just to name a few.

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.

"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 WVCA provided a Conservation Specialist for technical assistance.

The solution was to widen the flood plain 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 that have been helped through Stream Protection and Restoration Program planned projects.

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



Erosion problems along this stream bank had to be fixed before beginning work on the Nature and Fitness Trail.

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 business in April of 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, Inc., Doug and Tracy Dransfield, started working with the West Virginia Conservation Agency's 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. This was done 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 milk cows.

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 size, the same 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



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

nearby trout stream.

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 downstream and in other areas," said Dransfield.

In a letter addressed to the GVCD, Dransfield empha-

sized 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 due to the expense of implementing Best Management Practices (BMP). 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 WVCA to address water quality resource concerns with a targeted approach. The WVCA NPSP staff has devoted much of their efforts toward 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. 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

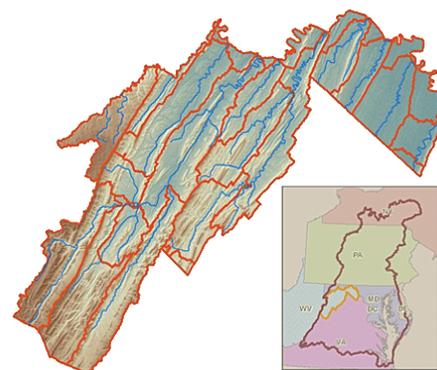
In 2011, five conservation districts participated in the AEP pilot program. They are the Eastern Panhandle Conservation District, Greenbrier Valley Conservation District, Northern Panhandle Conservation District, Monongahela Conservation District and the Potomac Valley Conservation District. Overall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

Chesapeake Bay Program

Windspring Farm is an excellent example of the 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 WV 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), which will be the State's recipe to achieve the required pollution reductions to 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. Trainings, workshops and supplies were offered within the drainage and resulted in educating over 202 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 Dam's

New Creek 14 : Rehabing 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 current for each structure along with a training program for Watershed Structure Monitors.

The WVCA Watershed Division currently employs two Watershed Structure Monitors. Emergency Action Plans are current for each structure along with an emergency training program for Watershed Structure Monitors. 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 underway and ongoing in all conservation districts and associated watershed project areas utilizing private contractors and district work crews.



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

The estimated cost to rehabilitate the 35 watershed dam's with an expired service life is \$23,234,360/\$160,219,616

Watershed Dam Rehabilitation

The WVCA is also responsible for the rehabilitation of aging watershed dam's. Currently, there are 35 watershed dam's 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 dam's in West Virginia. The dam's were then ranked by risk index (Appendix 1). 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, just to name a few.

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.

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



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 \$9,651,570.

The New Creek 14 watershed structure, built in 1963, is located on Linton Creek, a tributary to New Creek, in Grant County. The structure 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 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.

When the dam was constructed in 1963 it was given a high hazard classification because of, among other things, the population at risk.

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

With a large population at risk 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 WVCA was heavily involved in the planning process. WVCA staff is responsible for

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

acquiring land rights through coordination with the Potomac Valley Conservation District (PVCD). The WVCA and its local partners obtain 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 operation and maintenance. NRCS drafts the design for the repair of the structure and secures the contract. The project is a cost-share with NRCS on a 65-35 Federal/State share.

When completed the dam will feature a concrete parapet 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 and embankment surface drainage system and mitigating the temporary elimination of the lake’s fishery.

The estimated rehabilitation cost is \$9,651,570 with NRCS paying \$6,273,520 and the WVCA & local sponsors paying \$3,378,049.

After the completion of the rehab, 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 dam’s. Several of these dam’s are nearing the end of their service life and the need for rehabilitation is rapidly approaching.

These dam’s provide valuable resources for the surrounding communities; ensuring that they operate safely and at optimal performance is our primary goal.

WEST VIRGINIA STATE CONSERVATION COMMITTEE

Ex Officio Members

Chairman:
Gus R. Douglass, Commissioner
West Virginia Department of Agriculture
4720 Brenda Lane, Building 1
Charleston, WV 25312
Phone: 304-558-3550
Fax: 304-558-0451
douglass@ag.state.wv.us

Dr. Rudolph Almasy, Interim Dean
Davis College of Agriculture, Natural Resources & Design
West Virginia University
P.O. Box 6108
Morgantown, WV 26506
Phone: 304-293-2395
Fax: 304-293-3740
rudy.almasy@mail.wvu.edu

Randy Dye, Director/State Forester
West Virginia Division of Forestry
347 Gus R. Douglass Lane, Building 13
Charleston, WV 25312
Phone: 304-558-2788
Fax: 304-558-0143
c.randy.dye@wv.gov

Randy Huffman, Cabinet Secretary
West Virginia Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304
Phone: 304-926-0440
Fax: 304-926-0446
randy.c.huffman@wv.gov

Robert Baird, President
West Virginia Association of Conservation Districts
P.O. Box 711
Gallipolis Ferry, WV 25515
Phone: 304-675-6873
baird89@gmail.com

Steve Bonanno, Interim Director
WVU Cooperative Extension Service
817 Knapp Hall, P.O. Box 6031
Morgantown, WV 26506
Phone: 304-293-5691
Fax: 304-293-7163
SCBonanno@mail.wvu.edu

Appointed Members

Mary Lee Hines, Supervisor
West Fork Conservation District
3268 Jones Run Road
Lumberport, WV 26386
Phone: 304-783-4460

Boyd Meadows, Supervisor
Guyan Conservation District
P.O. Box 549
Milton, WV 25541
Phone: 304-743-8373

James Ash, Supervisor
Upper Ohio Conservation District
HC 69, Box 8
Alma, WV 26320
Phone: 304-758-2498

Eli McCoy
2020 Piper Circle
Charleston, WV 25311
Phone: 304-342-1400

Advisory Member

Kevin Wickey, State Conservationist
USDA-Natural Resources Conservation Service
1550 Earl Core Road, Suite 200
Morgantown, WV 26505
Phone: 304-284-7545
Fax: 304-284-4839
kevin.wickey@wv.usda.gov

WEST VIRGINIA CONSERVATION DISTRICTS

Capitol:

Kanawha County
418 Goff Mountain Rd., Suite 102
Cross Lanes, WV 25313
Phone: 304-759-0736
Fax: 304-776-5326

Eastern Panhandle:

Berkeley, Jefferson and Morgan counties
151 Aikens Center, Suite 1
Martinsburg, WV 25404
Phone: 304-263-4376
Fax: 304-263-4986

Elk:

Braxton, Clay, Nicholas and Webster counties
1336 State St., Room 200
Gassaway, WV 26624
Phone: 304-364-5105
Fax: 304-364-5434

Greenbrier Valley:

Greenbrier, Monroe and Pocahontas counties
179 Northridge Dr.
Lewisburg, WV 24901
Phone: 304-645-6173
Fax: 304-645-4755

Guyan:

Boone, Cabell, Lincoln, Logan,
Mingo and Wayne counties
2631 5th Street Rd.
Huntington, WV 25701
Phone: 304-528-5718
Fax: 304-697-4164

Little Kanawha:

Calhoun, Ritchie, Roane, Wirt and Wood counties
91 Boyles Ln.
Parkersburg, WV 26104
Phone: 304-422-9088
Fax: 304-422-9086

Monongahela:

Marion, Monongalia and Preston counties
201 Scott Ave.
Morgantown, WV 26508
Phone: 304-296-0081
Fax: 304-285-3151

Northern Panhandle:

Brooke, Hancock, Marshall and Ohio counties
1 Ballpark Dr.
McMechen, WV 26040
Phone: 304-238-1231
Fax: 304-242-7039

Potomac Valley:

Grant, Hampshire, Hardy, Mineral and Pendleton counties
500 East Main St.
Romney, WV 26757
Phone: 304-822-5174
Fax: 304-822-3728

Southern:

Fayette, McDowell, Mercer, Raleigh,
Summers and Wyoming counties
483 Ragland Rd.
Beckley, WV 25801
Phone: 304-253-0261
Fax: 304-253-0238

Tygarts Valley:

Barbour, Randolph, Taylor, Tucker and Upshur counties
Rt. 4, Box 501
Philippi, WV 26416
Phone: 304-457-3026
Fax: 304-457-6927

Upper Ohio:

Pleasants, Tyler and Wetzel counties
201 Underwood St.
Middlebourne, WV 26149
Phone: 304-758-2512
Fax: 304-758-5007

West Fork:

Doddridge, Gilmer, Harrison and Lewis counties
Rt. 2, Box 204-E
Mt. Clare, WV 26408
Phone: 304-627-2160
Fax: 304-624-5976

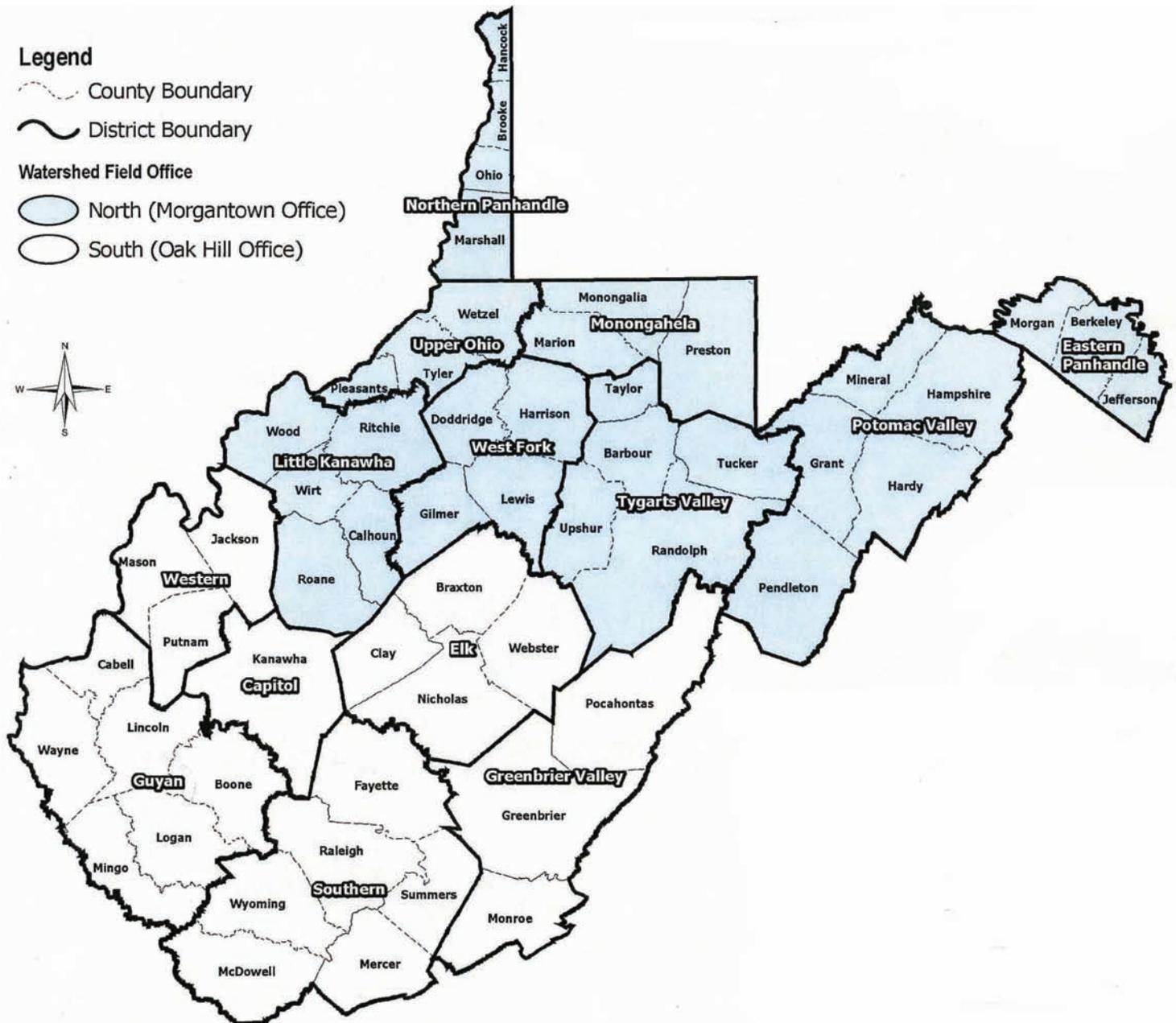
Western:

Jackson, Mason and Putnam counties
224-C First St.
Pt. Pleasant, WV 25550
Phone: 304-675-3054
Fax: 304-675-3054

WEST VIRGINIA CONSERVATION AGENCY WATERSHED FIELD OFFICES

Morgantown Field Office
 201 Scott Avenue
 Morgantown, WV 26508
 Phone: 304-285-3118
 Fax: 304-285-3128

Oak Hill Field Office
 219 Maple Avenue
 Oak Hill, WV 25901
 Phone: 304-469-6415
 Fax: 304-469-6416



Appendix 1

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

From NRCS Rehab Assessment Reports 4/4/11

**Min/Max Estimated Cost Alternatives*

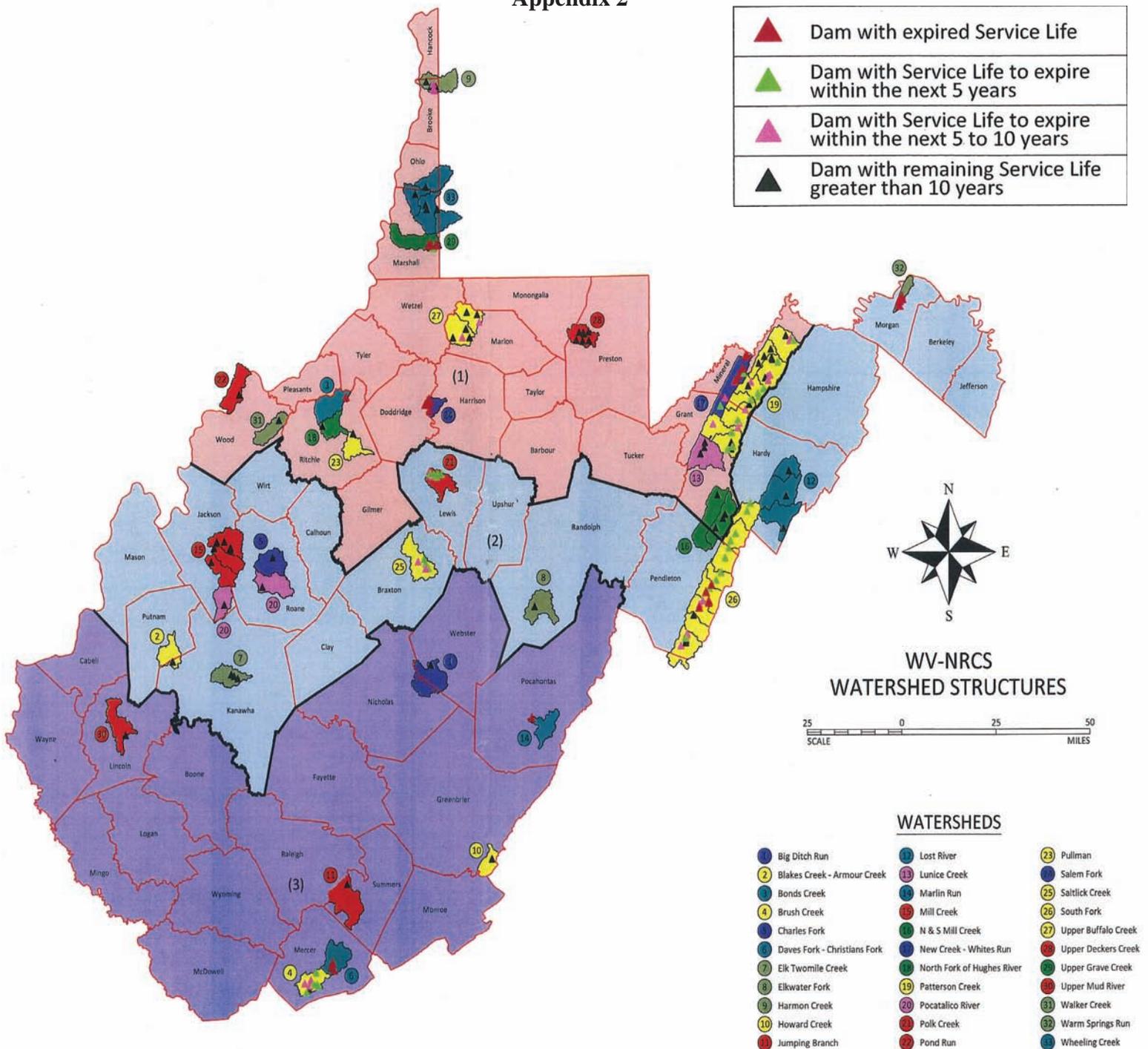
Appendix 1 continued

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

Appendix 1 continued

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

Appendix 2



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

**From NRCS Rehab Assessment Reports 4/4/11*



West Virginia Conservation Agency
Brian Farkas, Executive Director
1900 Kanawha Boulevard., East
Charleston, West Virginia 25305
304-558-2204
www.wvca.us