INTRODUCTION

West Virginia has a proven track record of success utilizing a voluntary approach for the installation of best management practices and protecting water quality. This remains a vital part of improving and protecting water quality in the state, as well as reducing nutrient loading to the Chesapeake Bay. We respectfully request that you evaluate West Virginia's success with our existing approach and consider additional funding to provide more support to the agriculture community both programmatically and with staffing. This will allow for the continuation of agricultural water quality improvements as the Bay Program moves forward.

The eastern panhandle counties of Berkley, Jefferson and Morgan contain the lower reaches of the Cacapon River, the Direct Drains (including Opequon, Sleepy and Back creeks), and the Shenandoah River. Approximately 48% of the region is forested, 28% is agriculture, 7% is urban and 17% is mixed open. This area is predominantly characterized by broad, level-to-undulating, fertile valleys that are a mix of agriculture and urban landscapes. Sinkholes, underground streams, and other karst features have developed on the underlying limestone/dolomite, and as a result, the drainage density (or number of surface streams) is low. The karst geology in much of this watershed lends itself to rapid distribution of pollutants from both urban and agricultural sources into groundwater and subsequently into surface streams fed by springs and seeps. Development has sharply increased due to the close proximity to the Washington-Baltimore Metropolitan Area.

The lower eastern panhandle, containing Hardy, Grant, Hampshire, Pendleton and Mineral counties, is the home of three sizeable watersheds: the South Branch of the Potomac, the North Branch of the Potomac and the Cacapon. The lower eastern panhandle is approximately 68% forested, with mixed (coniferous and deciduous) canopy trees. Twenty-four percent of the land is used for agriculture, and the valleys, gentler slopes and rounded ridge tops support many agricultural pursuits, primarily pasture and hay production, but also some orchard and row-crop production. One of West Virginia's most agricultural areas, the lower panhandle region includes cattle and poultry production. Roughly 2% of the watershed is urban in nature, with the remaining 6% in mixed open.

The counties located within the Chesapeake Bay drainage basin have a long and rich tradition of agricultural production. Many families in the area make their living from agriculture or jobs related to agriculture. West Virginia is the number one state in the country in percentage of family farms. Individuals or families run 95.3 percent of these farms.

In the eastern panhandle, poultry is the number one agricultural commodity and accounts for more than half of the cash receipts for sales generated for the state each year. A direct result of the poultry industry, this rural area is an important part of the statewide economy. Three of the top five agricultural counties in the state are located in this region. While the poultry industry is important to the local economy, agriculture has seen many losses over the past five years. The average farm size in West Virginia's portion of the Bay drainage has decreased on average by 33 acres. Operational expenses have also risen dramatically in the same time period. The increase in operational expenses on farms from 2002 to 2007 was an average of $13,488.85. Farm income saw an average decrease of $9574.25 in that same period.

Agriculture faces many challenges with new and pending regulations, the loss of agricultural land, increases in production costs and reductions in profitability. Current regulations that are being implemented at this time are affecting the state. Additional regulations at this time will be burdensome to both the agriculture community and the state as they try to implement regulations. To reduce nutrient loading to the Bay, West Virginia has adopted a voluntary incentive-based approach. This approach has proven to be very successful.

PARTNERSHIPS/ PROGRAMS

Working in partnership with other agencies and organizations has been an important way for agencies to stretch their limited Bay budgets. By cooperating, agencies are able to send their message to a wider audience and demonstrate that water quality is important to everyone. To coordinate efforts, the Chesapeake Bay Implementation Committee was created in 2005 to synchronize nutrient and sediment reduction efforts. West Virginia's Chesapeake Bay Implementation Committee developed a prioritization matrix. This matrix ranks priority watersheds based on water quality factors that specifically affect the watershed (reference Appendix II).

State-sponsored funding has been utilized for programs such as the 319 grant, which supports agricultural nutrient and sediment reduction efforts. For instance, this program provides funding for the maintenance and upgrading of failing septic systems and offers a strong emphasis on nutrient and sediment education for landowners. State agencies have also taken the lead in working with grassroots organizations, such as watershed groups and project teams, to reach more landowners. The volunteers dedicate numerous hours to rally the community, educate landowners about nutrients and sediment and promote programs that can improve water quality. These programs not only focus on rural agricultural areas, but urban outreach as well. The urban forestry program has become an important educational tool in the eastern panhandle. The West Virginia Conservation Agency and West Virginia Division of Forestry are working in urban and rural municipalities to encourage additional tree plantings, maintain current tree plantings and reducing nutrient losses in urban areas.

Cost share programs have also been important to landowners and producers. In the last 15 years, over 24 million dollars have been spent in cost share dollars to install practices throughout the eastern panhandle of West Virginia. This funding supports familiar programs including: Environmental Quality Incentives Program, Conservation Reserve Enhancement Program, United State Department of Agriculture's PL-534 program and Grassland Reserve Program. It should also be noted that producers must pay a portion to receive cost share monies. More than 8.6 million dollars have come from landowner contributions for installation of best management practices.

Outreach plays an important role in meeting nutrient reduction goals. By having a strong educational focus on point- and nonpoint-source pollution, community buy-in is maximized, and the implementation process can be accelerated. The most recent example of a successful outreach program was the update of the Poultry Producers Best Management Practices Manual, which was provided to all poultry producers in the eastern panhandle. Focus on urban issues, such as rain barrel workshops, has been very successful in engaging the public in protecting water quality.

Protecting existing farmland to slow development is also important in the state. Since 2000, Farmland Protection programs have protected 5,686 acres in West Virginia's eastern panhandle (reference Appendix II). This effort will assure that this acreage will never be subdivided, which will greatly reduce impervious areas and runoff throughout the state.

The Forest Legacy Program supports state efforts to protect environmentally sensitive forest lands. Designed to encourage the protection of privately owned forest lands, the Forest Legacy Program is an entirely voluntary program. To maximize the public benefits it achieves, the program focuses on the acquisition of partial interests in privately owned forest lands. The Forest Legacy Program helps states develop and carry out their forest conservation plans. It encourages and supports acquisition of conservation easements - legally binding agreements transferring a negotiated set of property rights from one party to another - without removing the property from private ownership. Most the Forest Legacy Program conservation easements restrict development, require sustainable forestry practices, and protect other values. In West Virginia, the Forest Legacy Program has protected 763.54 acres, and plans to protect another 10,500 acres by 2011 (reference Appendix II).

Another successful project is the Opequon Creek Implementation Team. The Opequon Watershed has the greatest water quality issues in streams monitored by the West Virginia Department of Agriculture in the eastern panhandle. The team consists of state, federal and local partnerships who are working to improve water quality for local residents. This group has focused efforts on a variety of projects and has been successful in installing riparian buffers, developing watershed-based plans and implementing natural stream restoration projects in the watershed. Through these activities, they have actively engaged many residents of the watershed and developed strong working relationship with not only their neighbors, but their government partners as well.

The West Virginia Department of Agriculture has played an important role in partnering with the agricultural community and other partners in the utilization of the water quality data that has been collected over the last ten years. This sampling program has been adapted to meet the needs of not only the agricultural community, but also others in the Chesapeake Bay drainage, as well as to assist West Virginia partners in implementation decisions. This data is also used to calibrate the Chesapeake Bay model and provide input in decision-making for the state agencies.

As with all the Bay states, the implementation of best management practices would not be possible without the joint effort of a multitude of governmental, non-governmental and non-profit entities. State and federal agencies, such as the United States Department of Agriculture's Natural Resources Conservation Service and Farm Service Agency, West Virginia Conservation Agency, West Virginia Department of Environmental Protection and the West Virginia Department of Agriculture, continue to work in partnership.

In 2000, a multiagency effort was launched to reduce bacteria and sediment loading throughout the North Fork watershed with hopes to delist the river from the 303(d) list of impaired waters. Numerous best management practices were installed to meet the 35% reductions in fecal

coliform needed for West Virginia water standards (WVDEP 2007). In 2002, the entire length of the North Fork River was delisted (WVDEP 2008).

WATER QUALITY

In 1998, the West Virginia Department of Agriculture began a water quality sampling program headquartered in Moorefield, West Virginia. Various watersheds found within the eight eastern panhandle counties (Figure 1) have been sampled to establish a baseline and to collect additional data that will more accurately establish the condition of the streams. The water quality laboratory has allowed for research into the origin of pollutants and to study unanswered water quality questions about agricultural activity in West Virginia's Potomac basin. As of June 31, 2009, 29,044 samples have been collected and analyzed throughout 29 watersheds.

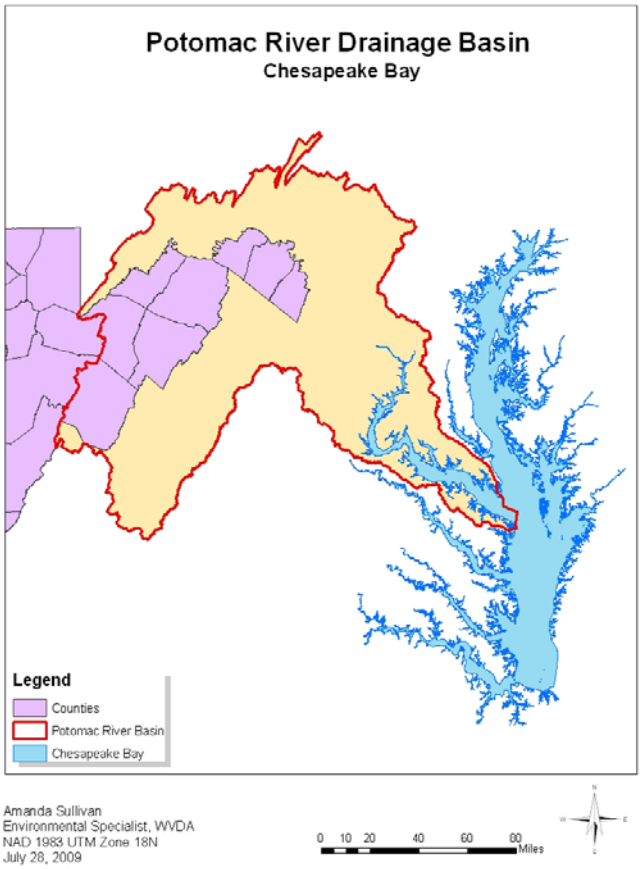
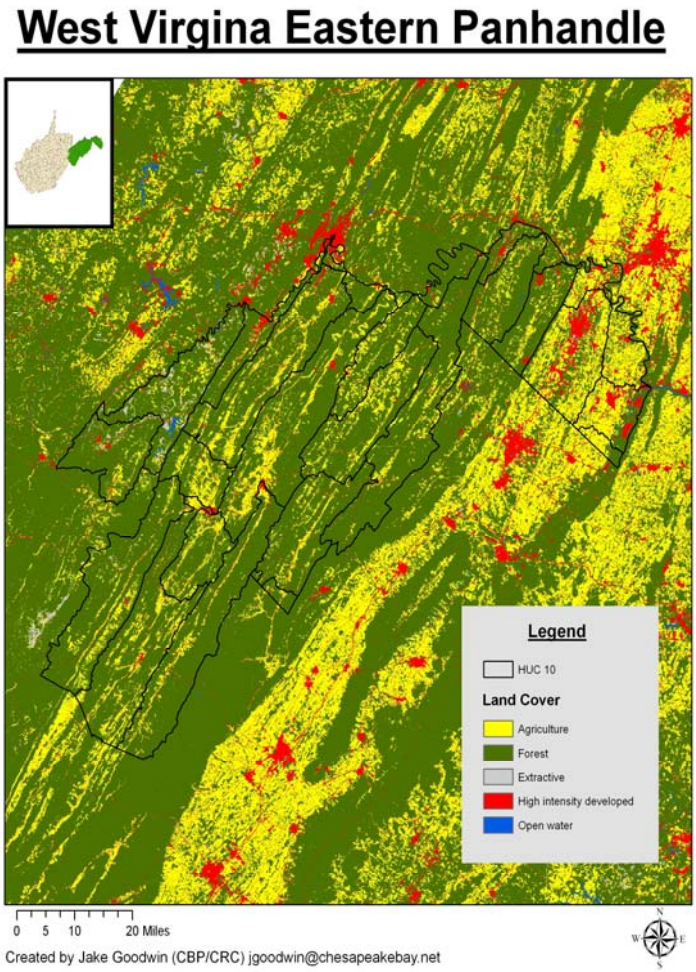


Figure 1: Potomac River Drainage Basin, Chesapeake Bay

Currently, the water quality program is running a full sampling schedule, with eleven streams the main focus at this time. Parameters analyzed include: temperature, dissolved oxygen (DO), pH, turbidity, conductivity, total phosphorous, ammonia-nitrogen, nitrate-nitrogen, fecal coliform, ortho-phosphate, turbidity, sulfate, total Kjeldahl nitrogen, total nitrogen, total solids, dissolved solids, total suspended solids, calcium and magnesium. Furthermore, aluminum levels are tested throughout Opequon Creek to comply with total maximum daily load, and atrazine is sampled and analyzed throughout various sites within the eastern panhandle.

Ground and surface waters are dynamic systems, constantly changing. The ability to accurately understand and evaluate the streams is exceedingly challenging. The countless man-hours devoted by the West Virginia Department of Agriculture's water quality staff has aided in our understanding of the quality of the waters found throughout the eastern panhandle. With this knowledge, governmental and non-governmental agencies are better equipped to evaluate the areas of concern, allowing for more meaningful spending of program dollars.

The *West Virginia Potomac Headwaters Water Quality Report* (Sullivan 2009), summarizing the last 10 years of sampling data, is currently in publication, and will be released in August 2009. Ten watersheds are evaluated in the report: Anderson Run, Lost River, Lunice Creek, Mill Creek South Branch, North Fork South Branch Potomac River, Opequon Creek, Patterson Creek,



Sleepy Creek, South Branch Potomac River and South Fork South Branch Potomac River. A majority of the watersheds are similar, sparsely populated areas settled in highly forested land. However, Opequon Creek watershed is the exception, with highly populated urbanized areas set in very industrialized and agricultural land with low forested areas (Figure 2, Table 1). A total of 26,252 samples were analyzed. Realizing the scale of this data set, it was necessary to demonstrate where parameters fell in relation to other watersheds. Watershed samples per parameter were averaged for mean or median then plotted onto a concentration map.

Figure 2: Land cover throughout West Virginia's eastern panhandle

Table 1: Percent of Land use by watershed area

HUC_10	Watershed	Open Water	Urban	Forested	Agriculture	Other*
0207000101	North Fork South Branch Potomac River	0.09%	1.70%	86.05%	11.64%	0.52%
0207000102	Lunice Creek	0.06%	2.93%	67.92%	28.73%	0.36%
0207000103	Headwaters South Branch Potomac River	0.12%	2.60%	79.62%	17.55%	0.10%
0207000106	Outlet South Branch Potomac River	0.33%	2.54%	78.10%	18.62%	0.42%
	Total South Branch	*0.24%*	*2.57%*	*78.79%*	*18.14%*	*0.27%*
0207000104	Mill Creek South Branch	0.06%	2.95%	77.00%	19.84%	0.14%
0207000105	South Fork South Branch Potomac River	0.13%	2.05%	88.27%	9.31%	0.24%
0207000207	Patterson Creek	0.12%	3.32%	76.90%	19.51%	0.14%
0207000303	Lost River	0.06%	1.86%	86.04%	11.90%	0.14%
0207000402	Sleepy Creek	0.29%	2.30%	85.31%	12.09%	0.01%
0207000409	Opequon Creek	0.12%	16.25%	37.59%	41.35%	4.68%

* Includes Extractive and barren land and nurseries/orchards.
Source: Phase V Chesapeake Bay Watershed model LU/LC dataset. Anderson Run, a sub-watershed of the South Branch, Potomac River, was not analyzed. Note: In report only various percentages are listed.

Total Phosphorous

Of the 23,407 total phosphorous samples analyzed, 3,943 (16.8%) were below the method detection limit of 0.0070mg/L (Figure 3). Of the 114 sampling sites, nine (7.8%) saw median total phosphorus concentrations below the method detection limit. The lowest of these concentrations was 0.0020mg/L located in the North Fork South Branch River at NF03. The highest median recorded was 0.2410mg/L located in the Opequon Creek at OP06. Exceedingly high values were found within the South Branch Potomac River (South Branch) and Opequon Creek. At SB15 (below Moorefield, West Virginia), median total phosphorous values were 0.2410mg/L. Values continued to be high throughout the remaining sites. All throughout Opequon Creek, medians were elevated, with the greatest value occurring at OP06 (bridge at County Route 12). (Note: Phosphorous stored in reservoirs of plants and minerals do not show up in water samples.)

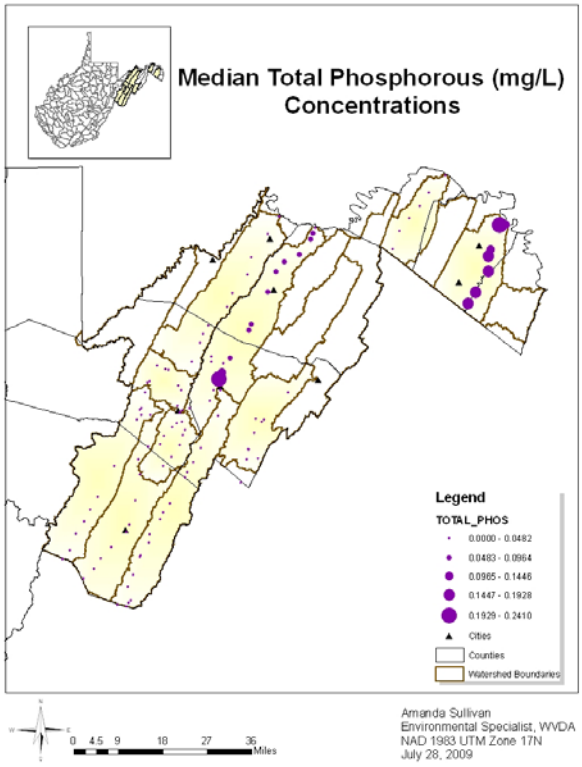


Figure 3: Median total phosphorous concentrations

Nitrate-n

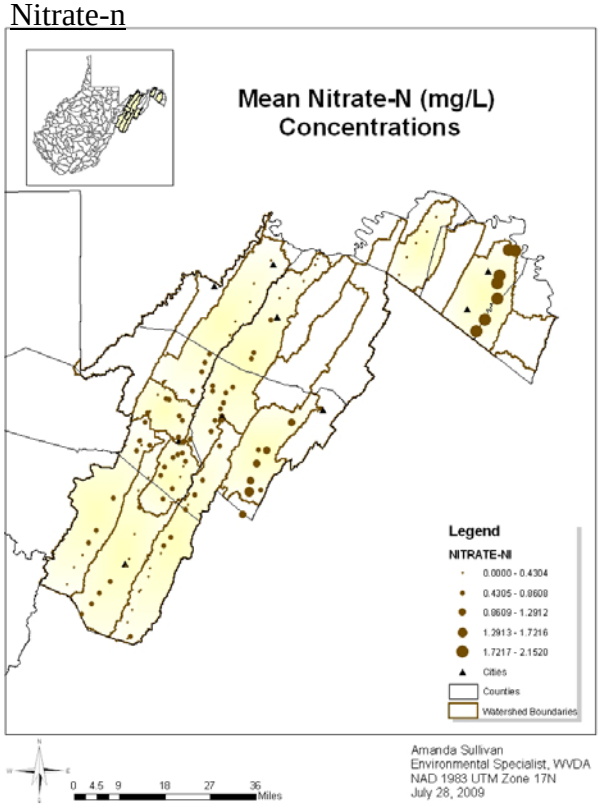


Figure 4: Medan nitrate-n concentrations

SC05 (Route 9/3, Sleepy Creek) had the lowest median calculation of 0.148mg/L (Figure 4). The highest median (M = 2.152mg/L) occurred at OP02 (Bridge on State Route 51, Opequon Creek). Site median values were chronically high throughout Opequon Creek's entire watershed, ranging from 1.874mg/L at OP05 (Stone Bridge) to 2.152mg/L at OP02. The minimum nitrate-n value recorded was 0.000mg/L at SB02 (Brushy Fork, South Branch) and the maximum values recorded were 6.500mg/L at LC10 (Route 42, Lunice Creek) and 7.300mg/L at LR01 (Cullers Run, Lost River). The highest acute values occurred most readily throughout the Lost River, especially at LR01 (M = 1.495mg/L). None of the 24,670 nitrate-n samples analyzed were above the drinking water standard of 10mg/L.

Fecal coliform

Fecal coliform is most commonly used to determine if a river is suitable for water contact recreation. West Virginia has a water quality standard for fecal coliform that is stated in two parts. If the water quality values do not meet any part of the standard, the stream will be in violation. First, the standard states that a violation occurs if the geometric mean of five or more samples collected within 30 days exceeds 200 colony forming units (cfu) in 100 milliliters of water. Second, a violation occurs if 10% or more of samples collected at a site exceed 400 cfu/100ml.

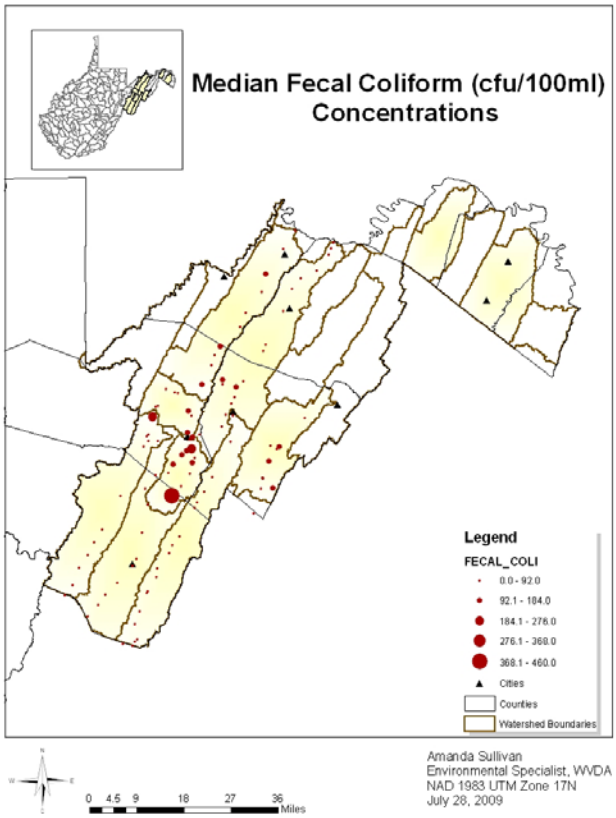


Figure 5: Median Fecal Coliform Concentrations

Of the 22,434 fecal coliform samples analyzed throughout the sampling sites, 17,632 (78.5%) were below 200cfu/100ml and 2,801 (12.4%) were above the critical threshold of 400cfu/100ml (Figure 5). Medians were as low as 4.0cfu/100ml at SF05 (Route 9/3, South Branch) and as high as 460.0cfu/100 at MC01 (South Mill Creek Church, Mill Creek). Numerous samples had counts of 1cfu/100ml. In total, 2,971 (77.1%) were below 200cfu/100ml and 479 (12.4%) were above the critical threshold. Throughout Mill Creek, 3,800 samples were taken. In total, 2,436 (64.1%) were below 200cfu/100ml and 833 (21.9%) were above 400cfu/100ml. Fecal coliform sampling began on Sleepy Creek and Opequon Creek at the beginning of 2009.

Overall water quality throughout West Virginia's Chesapeake Bay drainage is good. Currently, organizations are using data to concentrate efforts in decreasing nutrient loading to the Bay based on the information contained within this report. We have identified areas of concern, and are working toward water quality improvements.

CHALLENGES

Funding stability and the threat of regulation are two significant concerns that West Virginia faces while working with the Bay Program. The State has made a commitment to make reductions using a voluntary approach. The State is also in the process of implementing concentrated animal feeding operations regulations. These regulations will not become law until after the next legislative session. The Bay Program and Environmental Protection Agency are putting the State under constant pressure to begin developing additional regulations without giving the current regulations a chance to take effect or make a difference. This threat has the

potential to reduce our ability to work with the farm community and can potentially cause the participation in programs to decline.

The State is also under constant pressure to direct resources toward providing input to the Bay Model, instead of directing efforts and funding toward on-the-ground projects and outreach and education. The time spent refining models has caused a great loss of trust in the eastern panhandle area from residents who question why constant refinements to the Bay model are necessary.

In order to progress, states need to step back and look at reality. Producers have shown their willingness to install practices without the threat of regulation. States need help in assessing and getting credit for implementation of best management practices, especially those that do not fit in the short list of "approved" practices with assigned efficiencies.

For example, if a farmer establishes a buffer that does not meet the minimum threshold for width, it gets zero credit instead of partial credit. Willingness to accept partial credit is important for older practices and voluntary efforts of producers working without cost share dollars.

Another significant hurdle for states is associated with best management practice assigned "efficiencies" or "effectiveness estimates". Best management practices effectiveness is constantly under revision by the Bay Program. This reduces credibility and creates distrust in the farm community regarding BMP programs. This constant revision not only makes reporting difficult, but when looking at practices where a state can get the "most bang for its buck," a constantly moving target hinders implementation and buy-in.

Land use changes are of utmost importance to Bay states, West Virginia included. Rural landscapes are quickly transitioning to urban landscapes with associated impervious surface and increased runoff. S**ince 1997, nearly 73,000 acres of farmland has been lost in the eastern panhandle of West Virginia.**

This issue alone could be the determining factor as to whether the Bay will ever recover. The perception of rural residents is that the Bay Program and its supporters are not concerned about urban contributions to water quality. Documentation is showing that acreage of lawns and turf grasses have now exceeded pasture acreage in the Bay watershed. There are many statistics about the impacts of excess poultry litter, but very little published on the 42% increase in impervious surfaces in the Bay Watershed in the past several years. Agriculture has shown significant nutrient and sediment reductions, yet farmers are being tasked with more and more reductions and regulations.

Another challenge for agriculture is the current state of the economy, especially in the poultry and cattle markets. Rising costs have affected agriculture on many fronts; the largest poultry integrator in West Virginia filed for bankruptcy protection last year, which has caused much uncertainty. Statistics just released show that cattle numbers are at an all-time low and 8 percent lower than last year's inventory levels. These reductions are putting fewer dollars in producers' pockets. This further decreases profitability and the ability to afford best management practices. While the economy is in dire straits, producers have maintained a high signup rate for cost share

dollars made available by the Farm Bill for Chesapeake Bay states. Additional funding and higher cost share rates are needed to meet the accelerated rate of implementation contemplated in the milestone goals that are being developed.

As a headwater state, West Virginia does not receive the amount of funding that other states do. In order to continue the level of implementation needed, additional funding will be vital. While increased funding has recently become available for best management practices, this money is not available for much needed technical resources. Without the addition of field personnel, the lack of staffing will prevent the needed increase of implementation.

FEDERAL ASSISTANCE

In order to meet the goals set forth by the Chesapeake Bay Program, the State of West Virginia is in need of additional financial assistance. West Virginia generally receives an Environmental Protection Agency grant of 250,000 dollars a year at the state level for Bay restoration efforts. This is only a small portion of what is needed to meet the stringent goals set forth for restoration, as it funds two full time staff positions and limited outreach and education projects. Staff is now being forced to take time away from implementation to begin revising the State's tributary strategy and implementation plan. Without additional staff resources and funding, the State will be forced to limit its outreach and implementation capabilities.

When West Virginia developed its first tributary strategy, the estimated cost for agricultural implementation from 2005-2010 was 200,907,403 dollars. This number has increased with time and additional funding will be necessary to meet the new implementation goals set forth by the total maximum daily load. Most states are requesting additional funding - the goals cannot be met unless additional funds are allocated.

In order to meet water quality goals, additional money must be made available for staff to support and carry out programs which will reduce nutrient and sediment loading to local streams. With budget reductions at the federal level, staff that in the past went out to farms to promote the benefits of conservation practices is now overwhelmed with administrative tasks and record keeping, which diminishes their ability to reach those most in need of assistance in the field. Streamlining paperwork for federal staff would allow additional time in the field to work one on one with producer and accelerate the installation of practices.

The West Virginia Department of Agriculture requests that the federal government allow the voluntary approach to continue. This approach is working and the assumption that increased regulation will have more dramatic results is not demonstrated. The State has not exhausted its voluntary approach for assisting producers. It is not the time to make the transition to stringent regulations while the State is in the process of implementing regulations that are targeting our largest operations.

CONCLUSION

West Virginia has a proven track record of success using a voluntary approach. This remains a vital part of improving and protecting water quality in the State. While a stringent regulatory approach may be *status quo* in other jurisdictions, West Virginia's voluntary approach is working and is highly respected by our producer and regulatory partners. We respectfully request

that you evaluate West Virginia's success with our existing approach, and that you consider additional funding to provide more staffing and program dollars to support to the agriculture community. This will allow for the continuation of agricultural water quality improvements as the Bay Program moves forward.

LITERATURE CITED

Sullivan, Amanda (2009). West Virginia's Potomac headwaters water quality report, July 1998 to June 2008. West Virginia Department of Agriculture. Charleston, West Virginia.

United States Census Bureau [USCB] (2009). Population finder. Available online at: http://www.census.gov/. Retrieved: April 28, 2009.

West Virginia Department of Environmental Protection [WVDEP] (2007). The North Fork project: Farmers' cooperation leads to proposed delisting of degraded river. Available online at: http://www.epa.gov/owow/nps/Section319III/WV.htm. Retrieved: April 13, 2009.

WVDEP (2008). West Virginia integrated water quality monitoring and assessment report. West Virginia Department of Environmental Protection's Division of Water and Waste Management.

West Virginia Tributary Strategy Stakeholder Work Group [WVTSSWG]. (2005). West Virginia Potomac's tributary strategy. West Virginia Department of Environmental Protection, West Virginia Conservation Agency, West Virginia Department of Agriculture.

APPENDICES

ENROLLED

COMMITTEE SUBSTITUTE

FOR

Senate Bill No. 715

(Senators Snyder, Unger, Helmick, McCabe, Plymale and Kessler, *original sponsors*)

_____

[Passed April 11, 2009; in effect ninety days from passage.]

_____

AN ACT to amend the Code of West Virginia, 1931, as amended, by adding thereto a new section, designated §22-11-30, relating to the protection of the Chesapeake Bay Watershed; and nutrient reductions projects.

Be it enacted by the Legislature of West Virginia:
That the Code of West Virginia, 1931, as amended, be amended by adding thereto a new section, designated §22-11-30, to read as follows:
ARTICLE 11. WEST VIRGINIA WATER POLLUTION CONTROL ACT.
§22-11-30. Chesapeake Bay Restoration Initiative.

(a) The Legislature finds and declares that:
(1) The Chesapeake Bay and its tributaries are valuable natural resources providing both recreational and economic opportunities to citizens living in and around the Chesapeake Bay watershed. Eight West Virginia counties, and a collective population of more than two hundred thousand citizens, are within the Chesapeake Bay watershed. The protection and promotion of the environmental health and integrity of the Chesapeake Bay is accordingly in the best interests of the State of West Virginia.
(2) The Chesapeake Bay has been identified by the United States Environmental Protection Agency as an impaired water due to excess nitrogen and phosphorous entering the bay from its various tributaries. These pollutants, commonly referred to as nutrients, result in depleted dissolved oxygen supplies and other factors which impact the overall health of the Chesapeake Bay and its watershed.
(b) West Virginia is among six states from which nutrients flow into the Chesapeake Bay. In order to restore the Chesapeake Bay, these states have agreed to reduce the amount of nutrients contributed to the Chesapeake Bay by sources located within their respective jurisdictions. (c) Among the sources of nutrients discharged into the Chesapeake Bay watershed are wastewater discharged by West Virginia wastewater

treatment facilities, stormwater discharged from various sources, wastewater discharged from agriculture-related activities and other sources of wastewater related to both natural and man-made impacts which are not specifically set forth herein. (d) The need to provide and maintain affordable and high- quality public infrastructure services and to safeguard existing industrial and agricultural sectors of the economy in the Chesapeake Bay watershed are essential to the continued economic growth and quality of life of West Virginia communities within the watershed. Protection of these communities' economic vitality and the Chesapeake Bay are critical interests of the state. The capital costs of nutrient removal processes, if borne by individual rate customers of sewer services or by individual business owners, would result in significant increases in rates for an essential public service, deferral or cancellation of other critical infrastructure extensions and/or improvements and act as a disincentive for business growth, both commercial and agricultural, in these communities, if not the shrinking of industrial and agricultural activity in the watershed. Therefore, a holistic program, while assuring the protection of the Chesapeake Bay, must include: (1) A nutrient trading and off-set program to allow for efficiencies within the watershed to assure that public moneys are placed to best use; and (2) a capital improvement program to assist those required to install capital improvements to obtain the reductions in nutrients previously agreed to by the state.

(e) The secretary, in consultation with affected stakeholders, is hereby directed to establish no later than June 1, 2012, a program of nutrient trading and off-sets. Pending establishment of such a program, the secretary is authorized to consider and implement interim trading and offset programs as necessary and appropriate for individual permittees in order to protect the Chesapeake Bay and its tributaries.

(f) The secretary is hereby directed, no later than June 1, 2010, and in consultation with affected stakeholders, to report to the Joint Legislative Commission on State Water Resources the status of proposed performance standards necessary for wastewater treatment facilities in the Chesapeake Bay watershed for any reduction of nutrients in the watershed required to protect water quality in the Bay.

(g) The secretary and stakeholders shall, no later than June 1, 2012, consider and recommend to the Legislature a program establishing a new and independent source of funding for capital improvements made necessary by the imposition of nutrient removal requirements. (h) The secretary shall, pursuant to the requirements of the West Virginia Water Pollution Control and applicable rules, modify existing West Virginia/National Pollutant Discharge Elimination System permits containing limitations for the discharge of phosphorous and nitrogen into the Chesapeake Bay watershed so as to make said limitations effective and final only upon the completion of the requirements set forth in subsections (e), (f) and (g) of this section and no later than June 1, 2014. Further, upon the approval by the Legislature of the requirements as set forth in subsections (e), (f) and (g) of this section, and no later than June 1, 2014, the secretary shall further modify those permits set forth in this subsection and further grant affected entities a reasonable period of time to attain affordable compliance with any requirement related to the discharge of nitrogen and phosphorous into the Chesapeake Bay watershed.

(i) Should it be determined based upon new information or the issuance of a final total maximum daily load for the Chesapeake Bay that modifications to nutrient loading requirements contained in West Virginia/National Pollutant Discharge Elimination

System permits are necessary to be consistent with this new information or the final total maximum daily load, the secretary shall recalculate such loading requirements and modify such permits consistent with this information.

APPENDIX II Supplemental Material

West Virginia – Bay Area

CRP – Conservation Reserve Program (Continuous and General Signups) and CREP – Conservation Reserve Enhancement Program

County	Total No. of Contracts	CRP/CREP Acres				Average Rent/Acre	Practice Acres			
		CREP	Continuous	General	Total		Cropland	Wetlands	MPL	Tree
Berkeley	13	83.8	--	150.1	233.9	$59.58	195.7	27.4	38.2	38.2
Grant	47	1183.4	--	--	1183.4	77.52	37.2	--	1146.2	1146.2
Hampshire	139	1689.4	--	317.1	2006.5	75.02	623.8	--	1382.7	1558.4
Hardy	21	97.6	--	--	97.6	78.92	1.2	--	96.4	96.4
Jefferson	11	58.4	40.7	50.4	149.5	60.68	91.1	--	58.4	90.8
Mineral	2	5.3	--	--	5.3	83.00	--	--	5.3	5.3
Pendleton	10	70.2	16.6	--	86.8	69.15	--	--	86.8	86.8
Morgan	0	--	--	--	--	--	--	--	--	--
BAY TOTALS	243	3188.1	57.3	517.6	3763	$71.98	949	27.4	2814	3022.1
STATE TOTALS	383	4111.5	245.7	732.5	5089.7	$71.12				
Bay % of State Total	(63%)	(78%)	(23%)	(71%)	(74%)					

Rent 3763 (acres) x $71.98 (average rent) = $270,860.74 (annual rent) x 12 (average years) = **$3,250,328.88**

Signing Incentive Payment 3763 acres x $100 acre = **$376,300**

CREP Cost Share = **$2,070,445**

CREP Practice Incentive Payment = **$1,656,356**

Total Federal CRP/CREP Funds paid/committed to the Bay Area on 3,763 acres = $7,353,429.88

Grassland Reserve Program
GRP is administered by NRCS, which handles approved easements, and FSA, which deals with approved rental contracts. GRP is designed to maintain land in grassland to put grassland into reserve that is threatened with being converted to other uses such as cropland, developed land, etc. The information listed is very close and is based on direct contacts with the counties in the Bay.

GRP - 3 easements totaling 242.2 acres - ($376,141 paid) - Hampshire and Grant Counties

GRP - 10 rental contracts on 579.9 acres ($59,130 paid and committed) - Grant, Hampshire, and Hardy Counties.
Source Water Protection Program

The Source Water Protection Program is administered by the Farm Service Agency and is funded and employed through the WV Rural Water Association. The intent of the program is to concentrate/study/record source water pollution and how drinking water can be improved as it relates to and from agriculture impacts.

West Virginia Conservation Activities that Benefit the Chesapeake Bay

1996 Farm Bill - NRCS had a total of 138 contracts for $883,610 in Berkeley, Grant, Hampshire, Hardy, Jefferson, Mineral, Morgan, and Pendleton Counties. These contracts addressed many resource concerns including water quality.

2002 Farm Bill – NRCS had a total of 445 EQIP contracts for $8,283,723; 111 WHIP contracts for $791,850.77; and 64 AMA contracts for $570,255.

In years 2005-2008, some contracts specifically identified "*Water Quality*" as the resource concern:
2005 – 35 EQIP contracts for $648,546
2006 – 40 EQIP contracts for $1,196,549
2007 = 36 EQIP contracts for $1,230,854 and 10 WHIP contracts for $176,060
2008 = 38 EQIP contracts for $1,649,002 and 5 WHIP contracts for $97,237

Potomac Headwaters Watershed Project - The goal of this project is to protect the water quality in the Upper Potomac River Watershed in Hardy, Hampshire, Grant, Mineral, and Pendleton counties. The project covers 1,787,850 acres in 22 hydrologic unit areas. Of concern is nutrient and bacterial contamination of the Potomac River as a result of concentrated agricultural production. Project consists of installation of dead bird composters, animal waste storage structures, livestock confinement areas, nutrient management plans, and riparian buffer zones. 269 long-term contracts were developed with farmers in the participating area. Project sponsors are the Potomac Valley Conservation District and the West Virginia State Conservation Committee. This project protects water quality in 1,779 miles of tributaries to the Potomac River. Recreation, aesthetic values, and 61 domestic water supplies are protected. Total federal investment $7 million; cost share – 60% federal / 40% local.

Farmland Protected in West Virginia's Eastern Panhandle

Berkeley	2,198 acres
Jefferson	1,566 acres
Morgan	417 acres
Mineral	None
Hampshire	506 acres
Hardy	570 acres
Grant	429 acres
Pendleton	None

Total 5,686 acres protected

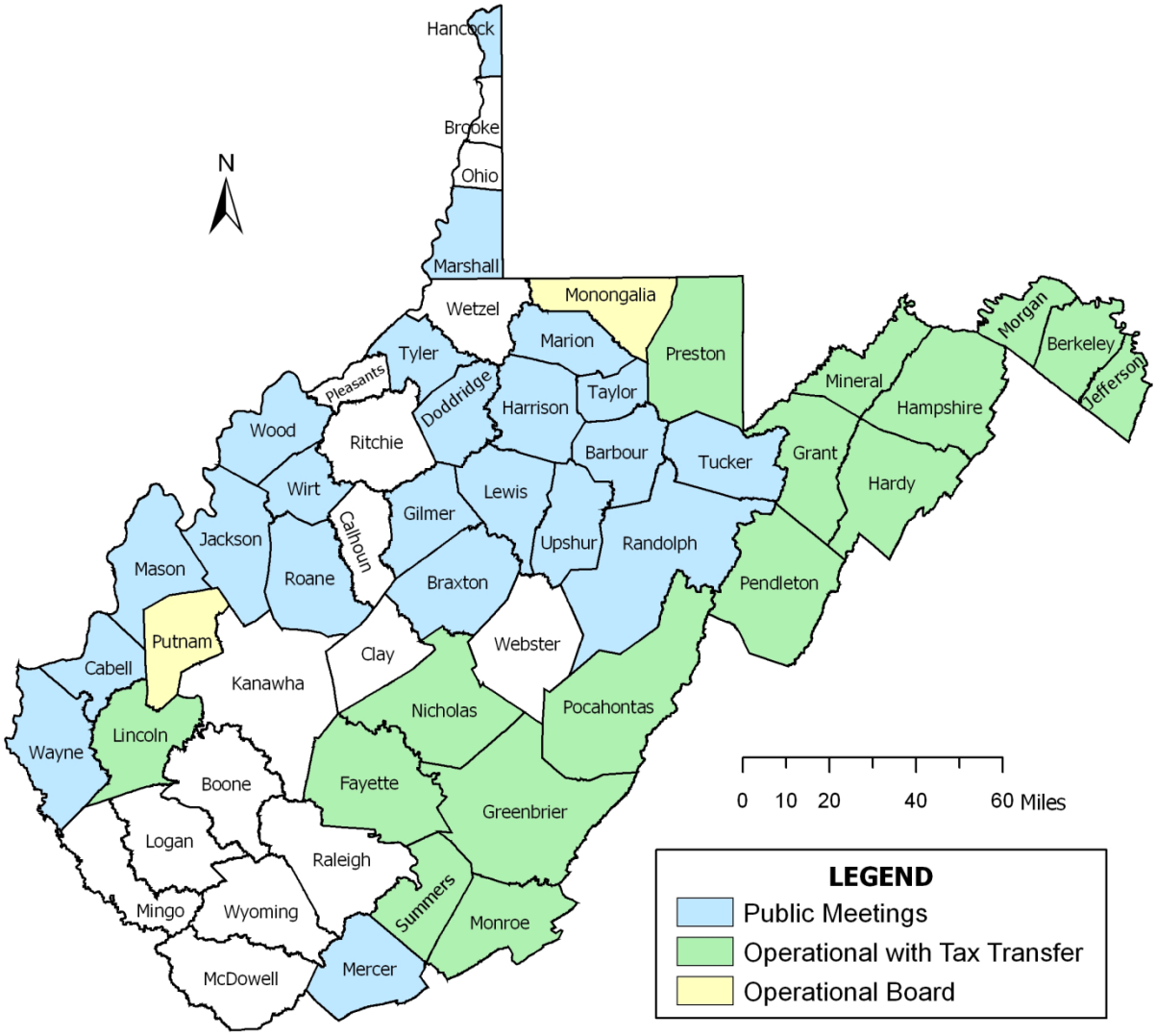
Forest Legacy Program Conservation Easements

Completed:	764 acres
Funded in acquisition in progress:	2900 acres
To be funded later in 2009:	2300 acres (Acquisition to be started when grant is in place)
Applying for funding for 2011:	5300 acres

All acreage is within the Chesapeake Bay Watershed. (Hampshire, Grant, Pendleton, Morgan Counties)

West Virginia Voluntary Farmland Protection Status

November 10, 2008



West Virginia Agricultural Land Protection Authority
West Virginia Department of Agriculture
West Virginia Conservation Agency
USDA Natural Resources Conservation Service

NRCS Natural Resources Conservation Service

MO-13
Morgantown, WV
November 2008

Decision Matrix for Watershed Prioritization
WV Potomac Tributary Strategy

Major Basin	Watershed (HUC-10)	Nitrogen Impairment Index	Phosphorus Impairment Index	Impaired High Quality Stream (miles)	TMDL (miles)	Agricultural BMP Saturation / Likelihood of Landowner Participation	Watershed Group Activity	Population Growth	Nitrogen Delivery Factor	Source Water Protection Area	Total Score (unweighted)	Total Score (weighted)
Weight>>>		0.92	0.92	0.63	0.65	0.78	0.67	1.00	0.54	0.84		
02070004-Potomac Direct Drains	0207000409 - Opequon Creek	1.000	1.000	0.900	1.000	0.800	1.000	0.409	0.949	1.000	8.06	6.11
02070004-Potomac Direct Drains	0207000402 - Sleepy Creek	0.348	0.318	0.721	0.573	0.600	1.000	0.662	0.949	0.000	5.17	3.75
02070001-S. Branch Potomac	0207000106 - Outlet South Branch Potomac River	0.657	0.579	0.550	0.487	0.700	0.800	0.191	0.718	0.277	4.96	3.69
02070004-Potomac Direct Drains	0207000412 - Rockymarsh Run-Potomac River	0.566	0.561	0.061	0.064	1.000	0.900	0.424	1.000	0.149	4.72	3.59
02070001-S. Branch Potomac	0207000105 - South Fork South Branch Potomac River	0.671	0.672	1.000	0.790	0.500	0.000	0.224	0.718	0.165	4.74	3.51
02070007-Shenandoah	0207000703 - Bullskin Run-Shenandoah River	0.395	0.374	0.366	0.000	0.800	0.900	0.383	0.758	0.216	4.19	3.14
02070001-S. Branch Potomac	0207000101 - North Fork South Branch Potomac River	0.516	0.476	0.813	0.489	0.200	1.000	0.067	0.718	0.126	4.41	3.13
02070004-Potomac Direct Drains	0207000410 - Harlan Run-Camp Spring Run-Potomac River	0.444	0.215	0.081	0.141	0.800	0.000	1.000	0.949	0.096	3.73	2.96
02070003-Cacapon	0207000303 - Lost River	0.370	0.287	0.377	0.278	0.400	1.000	0.241	0.885	0.000	3.84	2.72
02070004-Potomac Direct Drains	0207000404 - Back Creek	0.141	0.065	0.000	0.000	0.800	1.000	0.689	0.949	0.002	3.65	2.69
02070003-Cacapon	0207000304 - North River	0.221	0.177	0.000	0.000	0.800	0.900	0.616	0.885	0.000	3.60	2.69
02070003-Cacapon	0207000307 - Cacapon River	0.277	0.121	0.000	0.000	0.500	1.000	0.632	0.885	0.000	3.42	2.54
02070003-Cacapon	0207000302 - Little Cacapon River	0.185	0.145	0.099	0.000	0.600	0.900	0.535	0.885	0.095	3.44	2.53
02070007-Shenandoah	0207000702 - Long Marsh Run-Shenandoah River	0.036	0.020	0.000	0.000	0.800	0.900	0.556	0.758	0.103	3.17	2.33
02070001-S. Branch Potomac	0207000103 - Headwaters South Branch Potomac River	0.404	0.367	0.220	0.000	1.000	0.000	0.105	0.718	0.156	2.97	2.25
02070002-N. Branch Potomac	0207000207 - Patterson Creek	0.499	0.333	0.341	0.000	0.500	0.000	0.153	0.729	0.187	2.74	2.07
02070001-S. Branch Potomac	0207000104 - South Mill Creek-Mill Creek	0.246	0.315	0.032	0.025	0.800	0.600	0.074	0.718	0.032	2.84	2.06
02070002-N. Branch Potomac	0207000202 - Stony River-N. Br. Potomac River	0.465	0.497	0.000	0.000	0.600	0.600	-0.153	0.729	0.029	2.77	2.02
02070001-S. Branch Potomac	0207000102 - Lunice Creek	0.238	0.241	0.241	0.080	0.600	0.000	0.454	0.718	0.001	2.57	1.95
02070004-Potomac Direct Drains	0207000405 - Warm Spring Run-Cherry Run-Potomac River	0.148	0.158	0.000	0.000	0.400	0.200	0.366	0.913	0.106	2.29	1.67
02070002-N. Branch Potomac	0207000204 - New Creek-N. Br. Potomac River	0.191	0.144	0.000	0.000	1.000	0.000	-0.039	0.729	0.147	2.17	1.56
02070003-Cacapon	0207000308 - Willett Run-Potomac River	0.068	0.095	0.000	0.000	0.400	0.000	0.332	0.885	0.071	1.85	1.33
02070002-N. Branch Potomac	0207000208 - Green Spring Run-N. Br. Potomac River	0.104	0.099	0.000	0.000	0.800	0.000	0.017	0.729	0.033	1.78	1.25
02070006-N. Fork Shenandoah	0207000601 - Little Dry River-N. Fork Shenandoah River	0.162	0.107	0.000	0.000	0.400	0.000	0.250	0.758	0.000	1.68	1.22

Rank: Lowest … Highest