

Chesapeake Bay Program: Regional Decisions; Local Impacts

By

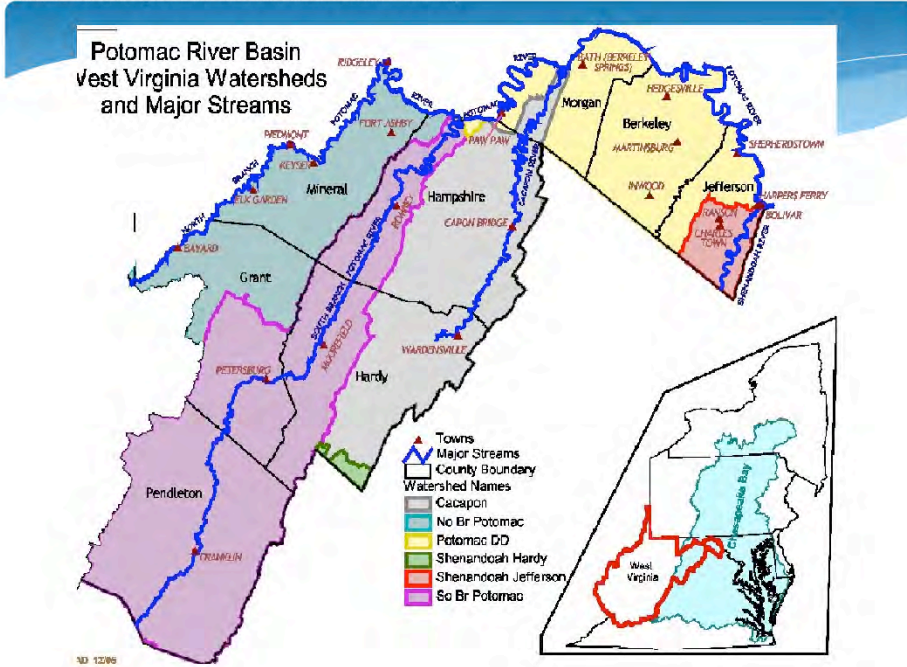
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The author is a sociologist and 22-year resident of Jefferson County, WV. He has served as a non-farmer member of the Jefferson County Farmland Protection Board since 2002, chair of a sub-committee of the USDA's State Agricultural Technical Advisory Committee since 2008, and an officer of the WV Association of Farmland Protection Boards since 2006. The information presented in this paper has been gathered through participant observation at meetings of the organizations above, through attendance at public meetings and hearings called by EPA and WV DEP, and conversations with staff and/or members of WV Ag. Dept., Farm Bureau, JC PSD, JC County Commission, and conversations with farmers in Jefferson, Berkeley and Hampshire counties. Extensive literature searches of EPA, USDA, WV DEP, and public media documents were used to corroborate information. However the author bears full responsibility for any inaccuracies.

Fourteen percent of West Virginia's waters drain to the Potomac River and on to the Bay



Jefferson County is the eastern-most point of WV and contains the confluence of the Shenandoah and Potomac Rivers. The North Branch and main-stem of the Potomac River watershed is shared with Maryland, which state has the water column and bed of the river in its jurisdiction. The Shenandoah River rises in Virginia south of Jefferson County and has a history of industrial and agricultural pollution from plants near Front Royal and from confined animal feeding operations (CAFOs) on the North and South Forks of the Shenandoah. Opequon Creek is the third major Jefferson County tributary to the Potomac. Waste-water treatment plants serving Winchester and its industries discharge into the Opequon. This creek is heavily contaminated as it flows from Virginia north into West Virginia, but water quality testing in 2011 shows that the Opequon Creek water leaving WV into the Potomac is cleaner than the water entering WV.

Jefferson County Commission Policy, 2000

Agriculture is an integral and viable part of the County's economy, landscape, natural resources, and sense of community.

Jefferson County has a right-to-farm policy. This was developed in response to the rapid growth of population and sub-divisions in the county.

The County Commission also established a County Farmland Protection Board in 2000, which has entered into 36, and is completing another 2, Deeds of Conservation Easement with farmers protecting 3,900 acres. Each deed in perpetuity requires farmers to have a USDA conservation plan and follow agricultural best management practices (BMP).

Jefferson County, WV: Place and People

- * Population: 1960 = 18,931; 2010 = 53,498 persons
- * County is in Washington/Baltimore Metro area
- * New residents largely employed in DC or NoVA
- * New residents live in rural subdivisions on commuter routes
- * Farm families often descended from settlers
- * Farm families share kinship and cultural ties
- * Five towns have public water/sewer
- * Majority of rural housing depends on well/septic

This slide is largely self-explanatory. It should be noted that many of the new rural subdivisions are located in a 10-mile swath between the commuter rail line (Martinsburg to Harper's Ferry) and the Potomac.

The population in 1960 was a stable one, with strong local and kinship ties. Land owners lived within the county, and many families had held their land for more than 100 years. In 1976, nine bi-centennial farms were recognized in the county; i.e. this land was farmed by the direct descendents of those owning and farming the land in 1776.

By 2010, regional and national housing development companies, e.g. Dan Ryan Homes, Huntfield, and Toll Brothers, had moved into the Eastern Panhandle and had purchased large tracts of land for subdivisions. With the collapse of the housing market in 2007-2008, new building has largely ceased, some developments are in foreclosure, and many acres of former farmland is lying idle.

Jefferson County and Agriculture

- * Farming has been a principal activity since 1730
- * 54 percent (72,091 acres) is agricultural land in 2010
- * Jefferson County ranks first in West Virginia in the production of corn, milk, soybeans, and wheat
- * 546 county farms sold \$19,459,000 of product in 2007
- * Jefferson County has 2,451 horses and 15,615 cattle
- * Farms employ 2,182 persons directly & 1,336 persons indirectly in the County, plus seasonal workers
- * 90 percent of County farms are family-owned

There has been an increase in number of farms since 2000, due to the re-vitalization of horse racing in Charles Town and loss of agricultural land to subdivisions in Loudon and Fauquier Counties, VA. Jefferson County agricultural acreage has remained stable; the increase in farms is through sub-division of existing farms. Average size of farms is 132 acres, but the median size is 81 acres, with many horse farms of 40 acres or less.

The resurgence of the Charles Town race track and the arrival of new horse farms has changed the dynamic of Jefferson County farm economics to an extent. Hay and pasture are now in demand and several farmers have said that this reduced the amount of chemical fertilizers used.

The seasonal workers are employed in the county's orchards.

The impact of horse-racing on the county's economy and farms has been documented in a series of studies by WVU School of Agriculture, most recently in a report issued in February 2012.

Regional Decision Makers

- * **Federal**
 - * EPA
 - * USDA/Natural Resources Conservation Service
 - * US Dept. of Defense (Army Corps of Engineers)
 - * Other US agencies with local facilities
- * **State**
 - * WV Legislature
 - * WV Dept. of Environmental Protection
 - * WV Dept. of Agriculture
 - * WV Conservation Agency
 - * WV Public Service Commission

The Federal agencies form the Chesapeake Bay Initiative's Federal Leadership Committee chaired by EPA. There are 11-14 agencies involved depending on how the count is made. The EPA and USDA are the important actors so far as WV farmers are concerned.

The state agency efforts are determined by the delegation of powers from the legislature. The WV DEP has powers to enforce state pollution regulations. The WV DoA has powers to regulate CAFOs, but compliance with other best management practices (BMP) is voluntary.

Since only 14 % of WV watersheds drain to the Chesapeake, the WV Public Service Commission has shown little interest in funding improvements in the Eastern Panhandle. To upgrade the existing Jefferson County waste-water plants would cost some \$33 million by estimates from the five municipalities and Jefferson County PSD.

Local Advocacy Groups, pro and con TMDLs, including

- * Eastern Panhandle Soil Conservation District
- * State and County Farm Bureaus
- * Potomac Conservancy
- * The Nature Conservancy
- * Watershed Committees
- * Jefferson County Commission
- * County Public Service District
- * Municipalities (5)

None of these bodies have regulatory powers related to TMDLs, other than over operations at municipal waste-water treatment plants and engineering for stormwater retention/runoff.

The Soil Conservation District is a local unit of the WV Conservation Agency. It is responsible for the soil and water conservation work within the boundaries of Berkeley, Jefferson and Morgan. The district's role is to increase voluntary conservation practices among farmers and other land users. It partners with the WV Conservation Agency and USDA/NRCS to provide an information source for conservation grants to protect river systems, prevent soil erosion, and distribute lime and other nutrients.

State and County Farm Bureaus are grassroots organizations of farmers. They provide web-site and other information materials to farmers on issues, and take positions through member-directed discussions of issues and policies.

Watershed Committees, composed of volunteers and stakeholders interested in conservation, work with the Soil Conservation Districts, local government agencies, and environmental NGOs to discover, assess, and remediate watershed pollution issues.

Regional Action 2002-2010

- * 2002 – WV signed the Chesapeake Bay Program Water Quality Initiative MoU
 - * WV to reduce nutrient loads by 33% for nitrogen, 35% for phosphorus and 6 % for sediment by 2010
 - * WV DoA introduces BMP, regulates CAFOs and buffers
 - * USDA/NRCS funds fencing, tree planting, and easements
 - * WV DoA develops NMP; WVU provides extension services
- * 2010 – WV met the majority of goals of the 2002 MoU related to agriculture; failed to meet sewage treatment and storm-water management goals

The agricultural compliance program was voluntary and built on no-till and cover-crop practices introduced in the 1980s-1990s.

Regional Action 2009-2012

- * May 2009 – Executive Order 13508 – requires plan and targets for further reductions
- * May 2010 – EPA sets TMDLs; requires states to submit Watershed Implementation Plans (WIPs)
- * Aug.-Dec. 2010 – WV develops, revises and submits 4 WIPs – all rejected by EPA.
- * Feb. 2011 – EPA accepts 5th version of WV WIP
- * Jan. 2012 – Phase II WIP submitted by WV

The state agencies led by WV DEP are required to develop the WIPs. Differences between the WV agencies on whether the agricultural goals should be voluntary were compounded by EPA insistence on defined targets and sanctions for non-compliance. Four versions of the WIP were rejected before one was accepted by EPA.

The Issue, 2012: TMDLs (Total Maximum Daily Loads)

- * EPA requires states to reduce TMDLs through a Watershed Implementation Plan
- * The TMDLs are safe levels of nitrogen, phosphorus, etc, released to rivers and water bodies
- * EPA determined, through a computer model, that farms in the Bay region contributed the most to pollution and should scale back use of fertilizers
- * **Jefferson farmers believe that current practices meet TMDLs**

There has been considerable push back from farmers, the Farm Bureau, and the Soil Conservation District

The Issue, 2012: Voluntary Program

- * WV Legislature has authorized regulation of CAFOs, but has not authorized other regulatory farm actions
- * WV DoA implemented voluntary programs to meet farm TMDLs under 2002 MoU
- * EPA objects to voluntary farm program under WIP
- * WV DEP caught in middle as developer of WIP
- * **WV DoA, the Soil Conservation District, and Farm Bureau oppose mandatory farm program**

Based on its regional computer model, EPA has argued that 95% of Jefferson County farms would need to be in voluntary compliance to meet the TMDLs proposed for agriculture. Farmers, the Soil Conservation District, Farm Bureau and WV DoA argue that the EPA TMDL has not been ground-truthed and does not reflect current farm nutrient budgets; a voluntary program including a nutrient management plan would achieve the reductions. Further, Jefferson County has no high-pollution risk CAFOs.

Bones of Contention

- * EPA TMDL computer model for agriculture has not been ground-truthed for WV or Jefferson County
- * The North Branch and main-stem Potomac River is the border with Maryland; what is the pollution share?
- * Shenandoah and Opequon rise in Virginia and are polluted when they enter Jefferson County, but cleaner when they join the Potomac
- * “Imperious attitude of EPA...” (Jefferson County Commissioner)

The bones of contention are the responses expressed by farmers concerning the TMDLs and WIP. The questions have not been answered to farmers’ satisfaction and are seen as evidence of poor communication and lack of concern by EPA.

The use of computer models rather than boots on the ground by EPA is seen as high-handed and not what farmers expect from the Federal agencies they regularly deal with. Farmers talk and visit with/are visited by WVU extension agents and USDA Farm Service Agency and NRCS personnel, and expect to receive advisory notices and other information.

The American Farm Bureau Federation filed suit against EPA on January 27, 2012, regarding TMDLs and their determination. “West Virginia Farm Bureau supports AFBF in this case,” said West Virginia Farm Bureau administrator Stephen Butler. “We believe, as does AFBF, that the EPA’s TMDL is based on faulty computer models that even they admit are erroneous. It is inappropriate to base a regulatory program on unsound data.”

The issue of pollution arising in adjacent states has not been answered at public meetings and, in particular with Virginia, the Jefferson farmers believe that insufficient action is being taken to reduce pollution in the southern Shenandoah Valley and around Winchester. “[Virginians] dump all this crap from industrial and sewer discharges into the rivers and then expect us [farmers in Jefferson County] to stop farming and clean up their mess” *Farmer, former officer of Farm Bureau.*

EPA and the Chesapeake Bay Initiative program personnel have not established the trust necessary to work at the local level with farmers. It should be noted that the average citizen (or farmer) does not read the FEDERAL REGISTER in which program and TMDL details are published. The farmers are very much aware of the conflicts between WV DoA, WV DEP, WVCA, and EPA in developing the Phase I WIP

Bones of Contention II

- * **USDA and WV DoA do not have adequate resources or personnel**
- * **EPA Nutrient Trading Programs do not stop pollution, merely shift it around**
- * **No additional funding for sewage and storm water treatment plants and upgrades**
- * **No TMDLs applied to home gardens or lawn care industry**

Budget and personnel cuts at the USDA/NRCS and Farm Services Agency and lack of resources at WV DoA are seen as affecting help to farmers in attaining the WIP goals.

Nutrient trading programs are seen by farmers as a sop to poor planning by waste treatment plants and industry (including power plants) and as money-making schemes at the expense of farmers as plant operators skirt regulations and continue to pollute.

Farmers believe that the rest of the population are not taking their share of the burden. Evidence for this, farmers say, is foot dragging in up-grading wastewater treatment plants and the failure of the PSC in Charleston to release funds for waste treatment facilities to cover subdivisions. Farmers want a requirement that all wastewater be properly treated (injection wells are not seen as appropriate by farmers because of the karst geology of the region). Farmers advocate for wastewater treatment systems in rural villages and sub-divisions so that septic systems can be removed, thus reducing the risk of polluting groundwater used by residents and by farms.

The failure to apply TMDLs to garden and lawn fertilizer use is seen as a political issue which, in equity, should be addressed. Farmers are aware of the Robbins study "The Lawn People" in Columbus, OH that showed that water pollution by nitrogen and phosphorus was caused primarily by the misuse of garden fertilizers by home owners and lawn-care companies and not by farm fertilizers.

The View of the WV State Legislature

- * “House Resolution 41 was introduced on March 9 [2012] and legislative action completed/approved on March 10. The House expressed its concern regarding recent actions of the federal EPA and urged the EPA to exercise restraint and moderation in its regulation of the agriculture industry in West Virginia and to strike a fair balance between protecting the environment and the need to maintain and expand opportunities for employment in the agriculture industry. A copy of the resolution was forwarded to Governor Tomblin and the federal Environmental Protection Agency. Delegate Daniel Hall was the lead sponsor of the resolution, with 94 other House members co-sponsoring the resolution. (Note: Delegate Bill Hartman, Chairman of the Rural Caucus, and various members of the Rural Caucus co-signed a letter to Governor Tomblin expressing concerns about EPA’s attack on agriculture, and calling on the Governor to reach out to governors of neighboring states whose producers are facing similar challenges.)”

This quote is taken from the web-site of the WV Farm Bureau.

Analysis: Cultural Discontinuities

- * **Shared norms**
 - * **Cleaning the Bay is a good thing to do**
 - * **Everyone has to be careful not to pollute**
- * **Cultural differences**
 - * **Scientists are the experts**
 - * **Farmers are in the business of conservation**
- * **Unmet expectations**
 - * **Respect and understanding**
 - * **Mandates should come with resources**

For this discussion we will assume there are four groups who are stakeholders in the Bay clean-up: Farmers, environmentalists, WV agencies, and Federal agencies. Obviously there are many more stakeholders, but in focusing on agriculture in Jefferson County it is possible to describe the cultural climate surrounding the Phase I and Phase II WIPs and TMDLs in a relatively simple way.

All four groups of stakeholders agree that the cleaning the Bay is a good thing to do, and all agree that it fits their norm of conservation of natural resources and sustainability.

All four groups also agree that everyone, anywhere, has a duty not to pollute the environment. It would seem, therefore, that any disagreements would be minor. That is not the case.

Cultural differences between the groups are a key factor in the disagreements. First, a caveat: the groups are not homogenous. A USDA analyst in WV may also be a farmer or active in an environmental organization or participate in a WV agency's activities. A WV farmer may work for a WV agency, participate on a USDA advisory panel, and be active in an environmental organization. The only subgroup within the stakeholders who do not share in WV activities are the staff of EPA, who are based outside the state and work from Annapolis, MD.

The first cultural difference is related to science and the importance of science. Because the scientific method relies on careful experimentation, replication, and reliability of results, scientists often parlay their expertise into cultural coinage: e.g. "We are the experts and able to tell you what you should do." Since these scientists and their knowledge can be quantified, the information can be easily turned into regulations. EPA and the Federal Leadership Committee seemingly based their solution for resolving the pollution issue of the Bay on two principles: first, that scientific research and models could identify the sources of pollution and the amounts of pollutants from each source; second, that non-point source pollution by agriculture would be the easiest to resolve. WV DEP accepted, albeit with some

Last Words

- * “They’re ready to retire. They’re ready to sell off their farms into subdivisions.” *Supervisor, EPSCD*
- * “They [EPA] admit it’s just a guess-timate as far as how much pollution we are putting out there. Farmers all along said ‘we are not doing that much.’” *Jefferson County Farmer*
- * “My fear is that the relatively small number of farmers will be a far easier target for EPA than the rest of the 17 million mostly urban residents of the watershed” *WV Commissioner of Agriculture 2/20/2010*

Thank you. Please come visit Jefferson County!