

**POTOMAC WATERSHED ROUNDTABLE**  
**Quarterly Meeting – April 10, 2015**  
**Rowser Building, Stafford**

**MINUTES**

**Members and Alternates**

Hon. Penny Gross, Chair, Voting Member, Fairfax County  
Hon. Woody Hynson, 2<sup>nd</sup> Vice Chair, Voting Member, Westmoreland County  
Jim Christian, Voting Member, Loudoun SWCD  
Kristen Conrad-Buhls, Advisory Member, Virginia Cooperative Extension  
Curtis Dalpra, Voting Alternate, Interstate Commission of the Potomac River Basin  
Hon. Michael DeMarco, Voting Member, City of Fairfax  
Hon. Jim Gehlsen, Voting Member, Prince William SWCD  
Harry Glasgow, Voting Member, Environment  
Alan Gray, Voting Member, Agriculture and Forestry (Forestry)  
Hon. Paul McCulla, Voting Alternate, Fauquier County  
Jim McGlone, Advisory Member, VA Department of Forestry  
Stuart McKenzie, Voting Alternate, Planning District Commissions  
Conrad Meehan, Voting Member, Waste Management and Recycling  
Daniel Moore, Advisory Member, VA DEQ – Chesapeake Bay Local Assistance Division  
Karen Pallansch, Voting Member, Water and Wastewater Utilities  
John Peterson, Voting Member, Northern Virginia SWCD  
Greg Prelewicz, Voting Member, Water and Wastewater Utilities  
Robert Shoemaker, Voting Member, Agriculture and Forestry (Agriculture)  
Michael Trop, Voting Alternate, John Marshall SWCD

**Interested Parties**

Randy Bartlett, Fairfax County  
Monica Billger, Audubon Naturalist Society  
Tony Dawood, City of Manassas  
Bill Dickenson, Interested Resident  
Norm Goulet, Northern Virginia Regional Commission  
Laura Grape, Northern Virginia SWCD, Scribe  
Glenn Harvey, Virginia Nutrient Credit Exchange  
Maria Harwood, Northern Virginia SWCD  
Christine Howard, Metropolitan Washington Council of Governments  
Diane Hoffman, Northern Virginia SWCD  
Steve Hubble, Stafford County  
Nick Kuttner, Potomac RiverKeeper Network  
Corey Miles, Northern Virginia Regional Commission  
Craig Nicol, Virginia Department of Environmental Quality  
Jerry Peters, Northern Virginia SWCD  
Andrea Reese, Northern Virginia Conservation Trust

Mary Sherrill, Fauquier County Water and Sanitation Authority  
Rebecca Shoemaker, VA Department of Environmental Quality  
Burwell Wingfield, Loudoun SWCD

**Call to Order and Welcome.** Mrs. Gross called the meeting to order at 10:00 a.m., expressed her appreciation to the Tri-County City Soil and Water Conservation District for hosting the meeting, and asked everyone to introduce themselves.

**Approval of Minutes.** A **motion** passed unanimously to approve the minutes of the January 9, 2015 meeting in Warrenton, VA, with slight modification.

**Updates from the Chair.** Mrs. Gross mentioned that Fairfax County received their phase I permit renewal on April 1, 2015. Mr. Bartlett shared that the last time it was issued was in 2007 and there are many new items included since then. The new permit includes a focus on added coordination among agencies and enhance tracking and accounting for programs. The County estimates that it required approximately \$100 million per year to cover the needs of the permit. Fairfax County established a Stormwater Service District in FY2010 to meet regulatory requirements and reinvest in aging infrastructure.

**Urban Stormwater Workgroup.** Mr. Goulet, Senior Environmental Planner with the Northern Virginia Regional Commission and Chair of the Chesapeake Bay Program's Urban Stormwater Workgroup, provided an update on the efforts made by the Urban Stormwater Workgroup, which supports the Chesapeake Bay Program and was established to facilitate the implementation of stormwater controls to achieve the necessary pollutant reduction planning targets as defined under the 2010 Chesapeake Bay TMDL. Additionally, it supports the efforts of the Workgroup members' state and local stormwater initiatives. Mr. Goulet provided an overview of the 2014 Virginia Progress Report which reflects reductions made to Total Phosphorous (TP), Total Nitrogen (TN), and Total Suspended Solids (TSS). He explained that there has been some progress in reducing TP, primarily since the model includes a credit for the Phosphorous-free fertilizer program, established in 2013. Slower progress has been made in reducing TN, due primarily to an increase in urban growth. Efforts continue to recognize all of the efforts jurisdictions have been implementing over the years. Sediment loads continue to be high and there are concerns that conditions will continue to worsen. Five expert panels are currently researching available data and discussing several other topics to determine what the level of credit will be, including floating treatment wetlands, impervious cover disconnection, MS4 education and outreach efforts, outfall stabilization practices, performance enhancement to existing LID practices. Mr. Goulet explained that it can take up to two years to incorporate panel recommendations into the Bay Watershed Model. Each panel is responsible for defining tracing and verification protocols. For example, BMP verification begins at installation and is maintained through follow-up checks. As the facility nears its end-of-life, verification is necessary again to ensure that it still exists and functions to renew credit. The credit duration depends on the BMP type. Mr. Goulet explained that a facility that is found to need significant repair, the jurisdiction has some time to make the repair. However, if the repair does not occur, the facility will come out of the model and the jurisdiction will lose credit. Mr. Goulet reviewed the schedule for the remainder of the calendar year 2015, describing the development of

the state's BMP verification plan. Additionally, he shared the revisions to the Phase 6 Chesapeake Watershed Bay Model system and structure. Other factors that may affect the TMDL include, effects of the fill behind the Conowingo Dam, influence of climate change on Chesapeake Bay water quality standards, criteria for James River chlorophyll-a, and influence of oyster filter feeders on water quality due to increase in aquaculture and sanctuary development. In 2017, the Phase III Watershed Improvement Plan (WIP) development will begin, which will set the goals for what remains to be accomplished by 2025. The Phase 6 Bay Model will be used to make the decision.

Mrs. Gross thanked Mr. Goulet for his excellent overview and shared that some of the Bay TMDL requirements seem so onerous that she's concerned about how local governments are going to be able to meet the needs of the state and federal regulators. She stressed the importance of local representation on any of the panels and encouraged the membership to consider their participation. In response to a question about how well the current model is calibrating, Mr. Goulet shared that it standardizes well, but challenges still exist in the Coastal Plain and in areas where runoff directly flows to waterways. Additionally, growth in each sector is not static and may present complications in future iterations of the Bay Model. For example, the efforts made by urban jurisdictions may be under-represented because the amount of urban area has increased. Efforts continue to determine credit for urban forestry programs. Currently, there isn't an effort to track and verify facilities in a consistent way across jurisdictions and accounting for existing BMPs will be challenging for many smaller jurisdictions.

**Potomac and Shenandoah Point Source Performance.** Mr. Harvey, Consultant to the Virginia Nutrient Credit Exchange provided an update on the nutrient removal performance data for significant point sources, reviewed the commitments made by the Virginia Nutrient Credit Exchange members, summarized the planning levels for 2019-2021 and described trading mechanisms employed by the Exchange. Mr. Harvey explained that the Exchange was authorized through an amendment to the State Water Control Law in March 2005, which also mandated a watershed general permit establishing wasteload allocations and authorized trading. The Exchange is guided by four principles, including 1) trading is voluntary, 2) benefits for all, 3) compliance first ("safety first"), and 4) never forget the Clean Water Act "base case." Mr. Harvey explained that the "base case" came out of the Virginia Tributary Strategy which required all 127 significant facilities to upgrade in order to meet new wasteload allocations between 2006 and 2011. Compressing the work during this time will result in an estimated cost savings through 2030 or \$410 million on a \$2.2 billion program for construction. A Nutrient Credit Services Agreement is entered among the participants and Exchange and is based on the compliance plan, which is approved by DEQ and the Credit Exchange Policy, which sets trading procedures and is issued by the Credit Exchange's Board. A buyer can purchase a pound of Phosphorous for roughly \$6.90 - \$13.08 through the exchange. By comparison, Phosphorous in non-point source programs are at a rate of approximately \$17,000/lb. With the exception of the Eastern Shore, credits may not be traded between tributaries. The Eastern Shore may trade between the Rappahannock and Potomac basins. The Exchange's current general permit will expire on 12/31/16. The new permit will cover an additional four years between 1/1/17 and 12/31/21. Mr. Harvey explained that there is little change in the permit expected, except for new delivery factors from the Bay Model. Additionally, some freshwater mussel species are impacted by low ammonia concentrations, which may stress all facilities to meet weekly/monthly permit limits. Future issues that may affect the Exchange include wasteload

allocation differences above and below the fall lines. Arlington County is drawing upon credits from its waste water treatment plant to support its MS4 program goals, while other stormwater facilities come online. Mr. Harvey shared several opportunities that might increase credits, including reclaimed water reuse in Loudoun and Fairfax, conservation and reduced water demand (there has been a downward trend per capita), and inflow and infiltration control. In addition, Mr. Harvey explained that new technologies may lower concentration and/or costs in the future. The Exchange expects credit buffers to shrink in the future.

Mrs. Gross expressed her appreciation to Mr. Harvey for the review and update of the Exchange program and recognized that the program has been successfully in place for quite some time. Mr. Harvey share that the Virginia program is the largest on-going program in the United States. In response to a question about the upgrades to plants and the future of the Exchange program, Mr. Harvey explained that the big driver for the exchange credit program was to avoid fiscal challenges with upgrading all of the plants at once. He expects to see a decline in the amount of money and credits available for exchange.

**Permitting Groundwater Withdrawals in Virginia's Coastal Plain.** Mr. Nicol, Groundwater Withdrawal Permitting Program Manager with Virginia Department of Environmental Quality – Office of Water Supply provided an overview of the groundwater withdrawal regulations and the effects on the Potomac Aquifer. Mr. Nicol began by providing an introduction on the geomorphology of the Virginia Coastal Plain Aquifer System and the confined Potomac Aquifer. Virginia DEQ manages the whole aquifer system to reduce stress across the network. Mr. Nicol explained that concerns about groundwater availability is not a new issues – it has been under discussion and study for over 100 years and water availability has changed significantly in Virginia during this time. The groundwater management act was enacted in Virginia in 1973. In 1986, an amendment was made to established groundwater management areas. The Ground Water Management Act of 1992 is the current statutory framework that allows the reasonable control of all groundwater resources within the Commonwealth, which is important to sustain and manage the resources. Mr. Nicol further explained that ground water management areas (GWMA) protect existing users from new or expanding withdrawals, assures continued resource availability in the future, and manages the resource comprehensively. Between the 1930's and 1960's, the aquifer experienced an increase in use, subsidence, an increase in chlorides migrating westward and a change in the direction of flow due to overuse. These trends supported defining the criteria of expansion of the GWMA. Water level trends continue in a downward trend throughout the Northern Neck and Middle Peninsula of Virginia, including areas that were not within the original GWMA and current monitoring is insufficient to characterize the extent of well interference, available storage, and potential for groundwater pollution. On January 1, 2014, the GWMA was expanded to include portions of the Northern Neck and Middle Peninsula to allow for a more comprehensive management strategy for Virginia's Coastal Plain. The expansion affects existing users that has withdrawn 300,000 gallons or more of groundwater in any one month prior to January 1, 2014 and new and expanded users that plan to modify an existing withdrawal or intend to create a new withdraw of 300,000 gallons or more of groundwater in any one month. For new or expanded users, there is a list of information and tasks required to complete an application. Additionally, permitting is a joint effort between DEQ and the applicant. Mr. Nicol shared that since the expansion, DEQ conducted public outreach and community pre-application meetings through

the Planning District Commissions, which resulted in 123 applications over a six-month period. It is anticipated that the permits will be issued over the next two years. Mr. Nicol described the Virginia Coastal Plain Groundwater Initiative, an effort to refine the Groundwater Model and collect data that will be used in making decisions to sustain the system in the long-term. DEQ will focus its future efforts on identifying potential permitting solutions for reducing current permitted uses, particularly for the 14 users that make up 87% of the total withdrawal. The goal is to issue permits for existing users by the end of 2015. Mr. Nicol recognized that stabilization and reductions are part of long term solutions and that additional strategies are necessary to account for future growth. However when considered as a complete system, capacity is available in upper portions of the aquifer and in the northeastern portion of the Coastal Plain.

In response to a question about the potential implications of fracking on the aquifer, Mr. Nicol explained that the Department of Mines, Minerals, and Energy is exempt entity under the Ground Water Management Act. However, he shared that DMME and DEQ are working toward a memorandum of understanding to ensure that appropriate studies are taking place. The Office of Groundwater Withdrawal and Permitting is concerned about water quantity for a drinking water supply, while other offices may focus on quality. However, they do look for instances when quantity concerns may also affect quality. In regards to maintaining water supply quantity, Mrs. Gross asked about studies on injection wells in the area. Mr. Nicol highlighted studies in the Hampton Roads area suggest that injection wells do not sufficiently meet the demands. In response to Mr. Dalpra's question regarding coordination efforts with neighboring states, Mr. Nicol shared that Virginia cannot ask Maryland and North Carolina to change their programs. However, DEQ is integrating their data into their analyses to the extent possible. In addition, DEQ is continuing to look at the chlorine interface to see where it may be moving. Once more data is collected, it will be integrated into the model. Mr. Bartlett asked how stormwater could be reused to meet nutrient reductions. Mr. Nicol suggested that if the state can figure out a way to incorporate nutrient credit into well injections, it will be quite profitable. Mrs. Gross shared that the Metropolitan Washington Council of Governments has monitored groundwater wells for much of the D.C. Metro region. She asked Mr. Nicol to describe possible implications on the groundwater system in Northern Virginia. Mr. Nicol shared that since Northern Virginia is on the fall line, if there is a large withdrawal from the system, it will affect water availability throughout the rest of the Coastal Plain aquifer system. However, the challenges are also dependent upon the weather conditions (recharge or drought). One possible option may be to consider surface water management areas, the same way the state established groundwater management areas to manage and work toward a stable system.

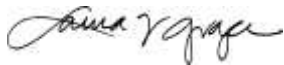
**Member Time and Announcements.** Mrs. Gross invited participants to share any news or announcements, recognizing that many may need to leave before the end of the program.

- Ms. Conrad-Buhls served as a judge for the Caring for Your Watershed program, sponsored by EarthForce. The award winners are able to implement their project. The winner, George Washington Middle School presented their outreach campaign that educated their community about Microbeads. Other projects featured pet waste pollution prevention and Grasses for the Masses. She suggested inviting the finalists to present their projects at a future Roundtable meeting.

- Ms. Clark provided an update on the efforts of a Virginia Association of Soil and Water Conservation Districts (VASWCD) subcommittee to better understand the implication of fracking on the Virginia Eastern Groundwater Area. The subcommittee will provide recommendations and guidance to the VASWCD in the fall, with a policy decision in December. The concern is for the aquifer to sustain current and future demands while maintaining good water quality, should fracking take place.
- Ms. Billger described the Audubon Naturalist Society's new regional program called "Creek Critters," which will roll out in summer 2015. The program includes an Android or iOS app that will help water quality monitors to identify the aquatic insects they find in their local streams and increase awareness about water quality. The program culminates around the H2O Blitz, which will take place in June.
- Ms. Grape shared that applications for a Fairfax Water Mini-Grant are due on May 15, 2015.

**Adjournment.** Mrs. Gross shared that the next meeting of the Potomac Watershed Roundtable will take place on July 10, 2015 in the Northern Neck. She thanked the Tri-County City Soil and Water Conservation District for their hospitality and the speakers for their time. The meeting adjourned at 2:09 p.m.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Laura Grape".

Laura Grape