

**POTOMAC WATERSHED ROUNDTABLE**  
**Quarterly Meeting – July 13, 2018**  
**Westmoreland State Park, Montross, VA**

**MINUTES**

**Members and Alternates**

Hon. Woody Hynson, Vice Chair, Voting Member, Fairfax County  
Hon. Jeff Adams, Voting Alternate, Tri-County City SWCD  
Curtis Dalpra, Voting Alternate, ICPRB  
Laura Grape, Voting Alternate, Northern Virginia SWCD  
Hon. Chip Jones, Voting Alternate, Northern Neck SWCD  
Daniel Moore, Advisory Member, Virginia DEQ  
James Patteson, Voting Alternate, Fairfax County  
Hon. Robert Pickett, Voting Member, Northern Neck SWCD  
Rebecca Shoemaker, Advisory Member, Virginia DEQ  
Hon. Elizabeth Ward, Voting Alternate, Prince William SWCD

**Interested Parties**

Keith Balderson, Northern Neck SWCD  
John Bateman, Northern Neck PDC  
Craig Carinci, Fairfax County  
Kathy Clarke, Northern Neck SWCD  
Marty Gary, Potomac River Fisheries Commission  
Norm Goulet, Northern Virginia Regional Commission  
Frank Graziano, Wetland Studies and Solutions, Inc  
Karen Hudson, Virginia Institute of Marine Sciences  
Ann Jennings, Virginia Office of the Governor  
Adrienne Kotula, Chesapeake Bay Commission  
Kelsey Moss, Northern Neck SWCD  
Bruce Pfirrmann, Virginia DCR  
Juan Reyes, Fairfax County  
Heather Shackley, Northern Virginia SWCD  
Elaine Tholen, Northern Virginia SWCD  
Aaron Wendt, Virginia DCR

**Call to Order.** Mr. Hynson called the meeting to order at 10:06 AM and thanked the Northern Neck Soil and Water Conservation District for hosting the meeting.

**Introductions.**

**Update from the Chair.** Mr. Hynson noted that he has seen an increase in the number of quail and rabbits on his farm. He commended those around the table and shared that, “it takes people that care about the environment to make things change.”

**Member Time & Acknowledgements.** Mr. Hynson noted that he sits on both the Rappahannock River Basin Commission and the Potomac Watershed Roundtable and noted there is a great

opportunity to share lessons between the waterbodies. He encouraged seeking opportunities for greater coordination beyond watershed boundaries.

**Chesapeake Bay TMDL Update.** Mr. Hynson introduced Ms. Ann Jennings, Deputy Secretary of Natural Resources – Chesapeake Bay and thanked her for the work she does. Ms. Jennings provided an update on the Chesapeake Bay Restoration Efforts at the mid-point assessment and where the Commonwealth is headed with the next phase. She noted the goal of achieving a 60 percent reduction in the amount of nutrients and sediment entering the Bay. She was pleased to share that the Commonwealth has met its mid-point goals and expressed her appreciation to many in the room who were instrumental in making that happen through the Phase I and II Watershed Improvement Plans. The most recent Health Report for the Chesapeake Bay prepared by the University of Maryland indicates that it is statistically significant that restoration efforts are moving in the right direction. Overall the Bay Health in 2017 is graded as a C, which is an average of the health of the major tributaries across the watershed. Ms. Jennings shared several indicators for success, including:

- Abundance of Submerged Aquatic Vegetation (SAV) continues to trend in a positive direction from 1984 through 2017. Currently there are over 100,000 acres of SAV, which is the first time it has been that abundant in 30 years. This exceeds the 2017 target of 90,000 acres.
- Rebound in oyster aquaculture and blue crabs, which benefit Virginia’s economy.

Ms. Jennings noted Governor Northam’s expressed commitment toward the Bay improvement, in which he acknowledged his personal connection to the Bay by saying, “the Chesapeake Bay is where I find my peace.” However, she noted that the status quo will not get the Commonwealth to its goals by 2025 and finding ways to make additional reductions is necessary.

For example, she noted that 84 percent of nitrogen reductions came from improvements made at wastewater treatment plants and the remaining 16 percent came primarily from the agricultural sector. However, both are reaching limits of technology or opportunity for reductions.

On June 20, 2018, the US Environmental Protection Agency provided a letter that outlines their expectations for the Phase III Watershed Implementation Plans (WIP), which in addition to implementing BMPs to reach nitrogen and phosphorous targeted reductions, also includes:

- Developing programmatic and numeric implementation commitments, which will provide EPA reasonable assurance that the job will get done.
- Engaging local, regional and federal partners
- Incorporating co-benefits, such as improving local streams, local economy, flood control, etc
- Establishing local area planning goals

Ms. Jennings noted that new approaches and challenges may also become apparent over the coming years, as efforts to account for growth through 2025 in the loading rates or accounting for conserved lands. She shared that EPA’s expectations of Pennsylvania are abundantly clear because the state is falling behind on meeting their commitments.

While the Conowingo Dam is at dynamic equilibrium, Ms. Jennings shared that it is adding 6 million pounds of phosphorous to the Bay every year. Because of the significance of this load and the regional significance of the dam will have its own WIP, which will be written by all jurisdictions specifically to address its contribution. Ms. Jennings sits on the committee that is developing this WIP and offered to present on that effort at a future Roundtable meeting.

Ms. Jennings reviewed the agencies involved in the development of the Phase III WIP and their respective roles. The multi-disciplined Chesapeake Bay Stakeholders Advisory Group are advising the Secretary's office as this plan is in development. Local area planning goals are being developed by the local Soil and Water Conservation Districts (SWCDs) and Planning District Commissions (PDCs). She noted that the local area plans should reflect what the local communities need, what their capable of, and what they are able to do locally. She reviewed the role of the PDCs, which are working under contract to complete the following tasks to identify what is needed at the local level to make this happen:

- Facilitate with localities and other partners, through 3 urban stakeholder meetings and 1 ag-urban joint stakeholder meeting;
- Revise the region's best management practice (BMP) input decks, particularly the urban input deck; and
- Identify regional implementation strategies for Phase III WIP implementation, including outline needed resources, funding authority, education, and technical assistance needs, and a list of local co-benefits achieved through the implementation of BMPs and strategies.

She noted that the Richmond-Regional PDC decided not to participate in this program and the Virginia Department of Environmental Quality (DEQ) will conduct the effort in their stead. The Soil and Water Conservation Districts are focused on the agricultural sector implementation, with updated decks for BMPs incorporated in the Virginia Agricultural Cost-Share Program due by the end of July.

Ms. Jennings reviewed the timeline, which includes:

- All of 2017 through 2018 – outreach to local decision makers
- July 9, 2018 – Chesapeake Bay Program Partnership Principals Staff Committee finalizes planning targets
- Late spring to late fall 2018 – engaging local communities through PDCs and SWCDs; see Virginia Townhall for meeting schedules
- April 12, 2019 – Draft Phase III WIP due to EPA; launch of formal public comment period
- August 9, 2019 – Final Phase III WIP due to EPA

Ms. Jennings noted her interest in engaging Roundtables in the reaching out to more stakeholders in this process.

Mr. Gary, with the Potomac River Fisheries Commission noted that the messages that efforts are working is encouraging. He noted that the Maryland Department of Natural Resources shared

information about the health of benthic community (worms, gastropods, which are the basis for the food chain) and noted that over many years, the amount of biomass in this community has reduced mostly due to eutrophication. However, it is now beginning to rebound. He noted that these positive trends and messages need to continue for engagement and commitment to also continue. He noted that the Chloride Total Maximum Daily Loads (TMDLs) is also a concern for anadromous fish, such as eels and herring that use the smaller streams to breeding habitat. He noted that messages should also feature the enhancements to Wastewater Treatment, particularly those in Washington, DC, that are showing demonstrated improvement to the Anacostia River.

Mr. Patteson noted that there are positive stories from the urban sector, as well. For example, he shared that the re-planning of areas and redevelopment provides an opportunity to incorporate a lot of goals for water quality. He shared that this is happening in the Tysons Corner, Reston, Route 1 areas of Fairfax County, allowing for consistency in local implementation and loading. He noted that this planning will help with making the significant budget requests that are necessary to meet targets. He also noted that having consistencies in credit of the projects are also very helpful.

Mr. Hyson expressed his appreciation to Ms. Jennings for her informative presentation and again for her efforts to support the Commonwealth.

**Educational Opportunities.** Mr. Hynson asked the Potomac Council explore the concept of developing a series of books to demonstrate the importance of the Potomac River to the younger generation, similar to those prepared by the Farm Bureau. Each year, the Farm Bureau releases one children's book on a particular agricultural-related topic. Every county gets books for each of their school libraries. He noted the books prepared by the Roundtable could promote clean water, stormwater runoff, and everything that needs to be protected, by putting some information out that will touch every family in the state. Best way is to start with schools and libraries. The feedback from schools and principals is that the Farm Bureau books are often the most popular in the library.

Elaine Tholen shared that the next Green Breakfast, hosted by the Northern Virginia Soil and Water Conservation District on July 14, 2018, will feature a presentation by Fairfax County Stormwater Management and a partnership with Fairfax County Public School. Educational benefits can be one of the co-benefits that needs to be acknowledged. It was noted that by educating the kids, you can often engage the parents. The concept of the book series was strongly supported by other Roundtable members.

**Virginia Shellfish Culture Industry.** Ms. Karen Hudson, Shellfish Aquaculture Specialist with the Virginia Institute of Marine Sciences (VIMS) introduced the VIMS - Marine Advisory Services which is located in Gloucester Point along the York River. She noted that the Marina Advisory Service support six different areas, including coastal communities, fisheries, education, seafood, recreation, and aquaculture.

She noted that for the Shellfish Aquaculture Industry, the Service acts as a conduit between the science and the industry for sustainable development. The shellfish culture is located throughout

Virginia's tidal rivers, creeks, Bay, and seaside. She noted that oysters are throughout the tributaries of both the eastern and western shore, while hard clams require a much higher salinity and those locations are along the Eastern Shore. Ms. Hudson noted that she served on the Oyster BMP Expert Panel approved Oyster Aquaculture as a BMP and is working to provide credit.

Virginia has one of the oldest and most progressive leasing programs for oyster beds. There is not a limitation on where shellfish can grow. In 1892, the Virginia General Assembly passed the Act to Protect the Oyster Industry of the Commonwealth. Virginia Marine Resources Commission (VMRC) maintains maps of the public and private leased grounds. Public grounds are naturally-producing reefs (243,000 acres in VA; about 60,000 is used and opened on a rotational management basis. Private grounds were historically not productive (124,000 acres available for lease). It requires significant investment in order to make these areas productive.

She noted that new aquaculture practices have several advantages including that there are fast-growing and more disease resistant genetic strains from local hatcheries.

Hard Clams are 90% hatchery based, while Oysters are 59% mix of hatchery and wild based. An annual grower survey, which has been tracking trends in hatchery-based sector for more than ten years is showing an uptick in the availability of Virginia Oysters because of the hatchery-based industry.

She noted that a crop reporting tool, originally developed by Tom Murray, tracks the number sold, planted, prices, and jobs, which results in an annual economic report. Virginia is a leader in shellfish aquaculture with a value of approximately \$56.6 million in 2016, which is mostly from it is clam aquaculture. However, oysters are the fastest growing sector. Growth starts with the hatcheries, which have great leasing systems that are flexible with a variety of production hatcheries. Ms. Hudson noted that there are five major production hatcheries throughout the coastal zone. Water quality is critical.

She shared that the life cycle of the oyster is manipulated in the hatcheries. Brood stock are used and water is pumped through the upwellers and floating systems until they become "plantable" size. Then depending upon the location's conditions, the oysters are transferred to cages, wraps and bags, which are popular along the Eastern Shore, or place in floating cultures to "grow out." Ms. Hudson noted that the number of oysters planted in aquaculture facilities have increased since 2012 and the number of oysters sold has increased since 2005. On average, there are close to 40 million Virginia oysters sold annually.

She shared that the Virginia Marine Resources Commission in partnership with the Virginia Institute of Marine Sciences and Natural Resources Conservation Service are offering funding to help oyster growers to improve water quality and increase oyster habitat in the Chesapeake Bay and its tidal tributaries. Through a Regional Conservation Partnership Program (RCPP) and Environmental Quality Innovation Program funding, shell can be purchased and the oyster company pays for the spat-on-shell. This new program is being offered for the first time in 2018.

Ms. Hudson noted that the focus of research is on hatcheries and water quality is critical for the sustainable growth of the industry. Hatcheries are not getting consistent production every year, which could be related to several factors including carbonate considerations, harmful algae blooms are an emerging issues, high zinc and heavy metals related to roadway improvement effects.

In response to a question about opportunities for growth in the industry, Ms. Hudson noted that there is room for growth, but a big driver is export markets, which are a bit unpredictable and the inability to sell brood stock is limiting to the industry.

Ms. Hudson noted that there is no private leasing in the mainstem of the Potomac River. However, she acknowledged that an obstacle for this is concern for competition with the finfish industry. She shared that there are over 50 oyster bars over the 15 nautical miles. Since the early 1990s only one has bio-productivity. She shared that there may be a need for third party facilitator bring together the finfish and shellfish industries.

Mr. Hynson thanked Ms. Hudson for her endeavors with the shellfish industry and for sharing her work and important considerations with the Roundtable. The meeting broke for lunch at 12:10 PM and reconvened at 1:08 PM.

**Shoreline Erosion Advisory Service Program Updates.** Mr. Aaron Wendt, Shoreline Engineer with the Virginia Department of Conservation and Recreation's Shoreline Erosion Advisory Service (SEAS) introduced the role of SEAS and the support it provides to landowners. In addition, he shared how their work relates to meeting the Chesapeake Bay TMDL goals. Mr. Wendt introduced Mr. Pfirrmann, who is a Coastal Policy Fellow working with the SEAS program.

Mr. Wendt shared that the Advisory Service helps homeowners make educated decisions on how to manage their shorelines. He provided an overview of the erosion rates that are naturally occurring along the shorelines. He noted that both erosion and accretion is taking place along the shorelines. Based upon the conditions of the shoreline, he noted that there is a large continuum of practices that homeowners can apply on their properties. Living Shorelines are the Commonwealth's preferred alternative to shoreline stabilization.

SEAS was established by the General Assembly in 1980 to provide free unbiased technical assistance to property owners, localities, and state and federal entities in tidal and non-tidal areas. The free SEAS Services include:

- Site Investigations
- Written reports (JPA includes a spot that asks if a SEAS rep has been onsite)
- Design/Plan Reviews
- Construction Inspection
- General outreach and information
- VCAP Living Shoreline programs

In relation to the Chesapeake Bay TMDL, Mr. Wendt noted that an expert panel to define removal rates for shoreline management projects released a document 2015 and revised in 2017. The report outlines four general protocols identified for the specific BMPs that relate to pollutant load reduction. The BMPs have a five-year life, which is renewable upon field verification. All shoreline management projects provide a benefit for sedimentation but nutrient credits are only for those that include marsh creation.

Mr. Wendt shared that SEAS has been participating in a BMP verification project using the expert report to calculate the reductions of projects that have been installed since 2008. The parameters needed include the length of shoreline, acres of marsh planted, historic erosion rate, and height of bank and load expectations from upland land uses. He noted that most of these parameters are available through VMRC permits, or other geo-spatial programs.

After reviewing roughly 2,500 permits, Mr. Wendt shared that they could retrieve the full data for 481 projects stabilizing 17 miles of shoreline, which resulted in the following reductions:

- 2,630 of Total Phosphorous
- 3,750 of Total Nitrogen
- 12,820 of Total Suspended Solids

He noted that the estimated costs for projects varies and that he is looking to integrate this information into CAST to make the cost-benefit more consistent with other traditional BMP practices.

In addition, he noted some additional next steps that include establishing a process for reporting and verifying new shoreline BMPs to make sure there is consistency in reporting this information. Some of the needs include:

- More reliable data on the extent of marsh plantings
- Potential role of VMRC and local wetland boards in inspecting and verifying these projects after five-year life span.

Mr. Gary noted that there is a concern about how these practices affect fish habitat and what type of fish use these sites. Mr. Wendt shared that the VIMS Shoreline Studies program is considering this and there is an opportunity for new research. However, SEAS does not generally talk with property owners about this. He did see this as a good opportunity for describing more of the co-benefits of these erosion shoreline stabilization projects.

**Follow-Up Questions on Aquaculture.** Mr. Hynson recognized that he had to cut questions for Ms. Hudson short to break for lunch and offered her the opportunity to respond to any additional inquiries. In response to a question about the export of oysters, Ms. Hudson noted that 80 percent is currently exported out of the state. In response to a question about how much shell has been purchased through the Virginia Oyster Partnership, she mentioned that through EQIP, over \$200,000 in shell has been purchased for projects. The Oyster industry's portion of the cost-share is for the larvae. She noted that it is a five-year partnership that is established. In response to a

question about concerns about Dermo or MSX diseases causing issues for farm-raised shellfish, she noted that most hatcheries are using enhanced genetic strains that are more immune or resistant to the diseases. She noted that innovations are happening and that some companies in the clam industry are looking to harvest the macro-algae off of their nets and looking for opportunities to use it for rope culture.

**Adjournment.** Mr. Hynson thanked everyone for their attendance and engagement in the meeting dialogue. He expressed appreciation to the Northern Neck SWCD for their hospitality. Ms. Grape noted that the next meeting will take place on October 12, 2018 and will be hosted by the Tri-County City SWCD. Mr. Hynson invited attendees to take time while at the Park to walk to the Potomac River shoreline and enjoy the resource that we work so hard to protect. The meeting adjourned at 2:15 PM.