The Potomac River Basin Drinking Water Source Protection Partnership

Annual Meeting Summary for November 13, 2019
USGS MD-DE-DC Science Center, 5522 Research Park Drive, Catonsville, MD

Attendees

Water Suppliers

City of Rockville:
Glenn Maggard

DC Water:
John Deignan
Anjuman Islam
Matt Ries
Maureen Schmelling

Fairfax Water:
Steve Edgemon
Scott Powers
Gregory Prelewicz
Niffy Saji
Joel Thompson

Frederick Co. DUSWM:
Terri Snyder-Kolovich

Loudoun Water:
Cathy Cogswell
Pam Kenel
Mark Peterson
Bradley Schmitz

Town of Leesburg:
Russell Chambers

Washington Aqueduct:
Anna Hayden
Anne Spiesman
Michael Vantzelfden

WSSC Water:
Joel Caudill
Martin Chandler
Nicole Horvath
Jin Shin
Priscilla To
Daniel Yuan

State and Local Agencies

DOEE:
Joshua Rodriguez

MDE:
John Anthony
John Grace
Saeid Kasraei
Jonathan Leiman
Robert Peoples
Michael Roberts
Rebecca Warns

Montgomery Co. DEP:
Nasser Kamazami
Steven Shofar

PA DEP:
Patrick Bowling

VDH:
Raven Jarvis*

WV BPH:
Monica Whyte

WV DHHR:
Brian Carr*

Federal and Regional Agencies

EPA Region 3:
James Bennett
Bette Conway

ICPRB:
Renee Bourassa
Curtis Dalpra
Michael Nardolilli

MWCOG:
Lisa Ragain

USGS:
Mary Kay Foley
Mat Pajerowski

Other:

National Labor Relations:
Joseph Lofton

*Attended via teleconference

Welcome, Introductions and Agenda Review

Joel Caudill, WSSC Water

Welcome to USGS

Mary Kay Foley, USGS

Business Meeting

1. **Year in Review and Proposed Workplan**
   John Deignan, DC Water (presentation)

The accomplishments of 2019 and the workplans for 2020 were highlighted for each of the six workgroups.

Contaminants of Emerging Concern

The workgroup accomplished the following in 2019:

- Tracked UCMR4 data from periodic updates released by the U.S. EPA.
- Tracked PFAS legislation and regulation, as well as limited occurrence data. Information on potential sources within the basin is being developed in Water Suite.
- Participated with MWCOG and the Reaching Out Workgroup on developing talking points for responding to public inquiries regarding PFAS chemicals.
- Monitored news and research on microplastics.
- Followed and shared news and reports of harmful algal blooms, including a bloom in the Potomac River.

The Workgroup plans to continue on the same trajectory in the coming year as well as working more closely with the Chesapeake Bay Program's Scientific and Technical Advisory Committee.

Urban and Industrial Issues

The workgroup accomplished activities in the following categories:

- Support and Coordination with the MWCOG Water Sector Program:
  - Provided new information/updates in the WaterSuite database, including information on Maryland Tier II sites.
  - Initiated the PFAS Source Inventory Project.

- Deicing/Winter Chemicals:
  - Participated in the Virginia DEQ Salt Management Strategy Workgroups.
  - Attended a regional event at MWCOG in April.

- Review NPDES discharge renewals/permit applications/issues:

- Requested and discussed seven draft permits: *Rockwool Insulation Plant, Brook Lane Mental Health, Mt. Storm/Virginia Power, U.S. Silica, Ox Paperboard, Potomac North, and Verso Luke.*
- Coordinated comments and responses to the permits.
- Initiated an MDE presentation at the May DWSPP meeting to discuss MD CSOs and reporting.

The workplan for 2020 includes:

- Investigate and report on trends of urban and industrial areas in the Potomac River basin.
- Monitor, review, and comment on applicable NPDES or equivalent state discharge permit renewals to advise regulators about drinking water source water concerns and impacts.
- Continue to gather and track information about urban and industrial sites in the basin and communicate with Partnership members.
- Prioritize communities or other urban and industrial stakeholders with whom to begin a dialogue on source water protection issues.
- Investigate best management practices regarding the use of deicing/winter maintenance chemicals.
- As applicable, track all information related to facilities of significance using the WaterSuite Source Water Protection GIS tool.

Agricultural Issues

The workgroup objectives for 2019 included understanding where the workgroup could make a difference, identify and collaborate with other standing groups, leverage activities of other organizations and programs, and bring money through funding pathways.

A large focus of the workgroup was the 2018 Farm Bill and the subsequent 10% funding requirement for source water protection activities. The workgroup worked to develop relationships, understand the process, and initiate dialogue. Members of the group attended meetings with State Conservationists and state agricultural departments, as well as the Natural Resource Conservation Service's State Technical Committee Meetings and Local District Meetings. This included several presentations by workgroup members at the meetings.

Reaching Out

The 2019 accomplishments included identifying potential DWSPP members and subsequently recruiting the organizations for membership, developing content in conjunction with other workgroups (for example, the development of PFAS talking points), attending and speaking at the Virginia Forests and Drinking Water Forum, and developing promotional materials for the Partnership.

The workplan for 2020 includes the development of an annual report, continuing outreach to possible DWSPP members, developing a "bookmark" promotional item, developing FAQs for emerging contaminants, and working with other workgroups on an as-needed basis.

Water Quality

The workgroup accomplished the following activities in 2019:

- Updated the DWSPP Utility Spill Response Plan (Plan):
  - The Plan was updated in June 2019 and available on the DWSPP website.
  - Collaborated with the Early Warning/Emergency Response Workgroup to update the protocols on uploading information on the Groups.io website.
  - Collaborated with the Early Warning/Emergency Response Workgroup to organize an online Potomac Spills Groups.io Protocols exercise and the development of an after-action report.
- The workgroup is currently updating the spreadsheet containing information on utility-specific water quality monitoring.

The workgroup's plans for 2020 include:

- Maintain DWSPP Utility Spill Response Plan:
  - Participate and support Spill Exercises.
  - Periodically update the Spill Response Plan to reflect the changing needs of the utilities.
- Explore timely water quality issues and develop an understanding of possible sources of contamination.
- Continue to participate in webinars and workshops on water quality issues.
- As appropriate, sponsor an information session on water quality issues.
- Maintain an updated spreadsheet containing information on utility-specific water quality monitoring.
- Support DWSPP projects related to water quality issues.
- Update the HAB Monitoring Information

Early Warning & Emergency Response

The workgroup accomplished the following activities in 2019:

- Collaborated with the Water Quality Workgroup:
  - Completed updates to the Utility Spill Response Plan.
  - Updated the protocols to upload information on the Groups.io website.
  - Organized an online Potomac Spills Groups.io Protocols exercise.
  - Compiled parameters being measured on the Potomac, including online instruments.
- Collaborated with the Water Security Workgroup (MWCOG) to identify USGS parameters being measured.
- Held a regional spill exercise on May 9, 2019, at the Jefferson County Health Services Building in West Virginia. Funding and facilitation provided by EPA Region 3.

Plans for 2020 include identifying the need and timing for a tabletop spill exercise, working with GenOn to determine the feasibility to deploy a boom near Whites Ferry and plan and identify funding sources for another exercise with the boom, and identifying alarm parameters for online instrumentation.

Partnership

- Develop a relationship with the Natural Resources Conservation District.
- Contact facilities that pose a high risk to source water contamination.
- Implement improvements to regional response, including planning spill response exercises throughout the basin.
- Develop a work plan to address issues related to contaminants of emerging concern.
- Hold stakeholder meetings to further develop collaborative source water protection efforts.

2. Financial Report

Michael Nardolilli, ICPRB (presentation)

For 2019, DWSPP received all the fees from its member organizations, except West Virginia, for a total of $69,644. A retroactive grant is in the works for FY2019 and it is expected West Virginia will pay the FY19 and FY20 dues. The FY19 revenue and expenses were in balance, with most of the expenses covering staff support for the Partnership. ICPRB commits to covering the costs if revenue exceeds expenses, so their contribution fluctuates from year-to-year.

It was noted that a group very similar to DWSPP, called the Hudson River Drinking Water Intermunicipal Council, known as the "Hudson 7," has recently formed. It is comprised of seven communities that draw drinking water from the Hudson River. It shows that other areas are recognizing the value of an organization such as DWSPP.

3. Administration Updates

Renee Bourassa, ICPRB (presentation)

For 2020, the Partnership Chair is Steve Edgemon of Fairfax Water. The Chair of the Utility Committee is Fairfax Water and the Chair of the Government Committee is MDE.

For 2021, the Partnership Chair will be a representative from MDE. The Government and Utility Committee Chairs will stay the same.

A volunteer is requested to host the Partnership's Annual Meeting on November 4, 2020.

4. Examples of NextGen Water Observing System in Delaware River

Mary Kay Foley, USGS (please contact her at mkfoley@usgs.gov for a copy of the presentation)

The Next Generation Water Observing System (NGWOS) is a high-density monitoring network that will be deployed in select river basins. It supports modern water prediction and decision support systems while integrating a set of fixed and mobile monitoring assets in the water, ground, and air. The program looks at the entire water cycle to help inform computer models. NGWOS will use traditional water monitoring technology as well as remote sensing and will try out new technologies that are not yet commercially available.

An initial pilot project of the NGWOS was implemented in the Delaware River Basin. The process started with stakeholder meetings to help inform the work USGS would do in the region. In FY2018, USGS added 17 new streamgages to fill critical gaps, enhanced water quality parameters at 28 stream gages, and increased monitoring to support fisheries and water prediction. In FY2019, USGS continued to enhance mainstem monitoring and sub-basin monitoring. The work will continue into FY2020, with continued engagement with stakeholders, increased use of sensors and remote sensing, expansion of surface water/groundwater interactions to estimate baseflows, build an innovative site in Philadelphia, and continue to explore how monitoring infrastructure can support additional water monitoring needs.

Remote sensing with NGWOS can observe hydrologic variables of water quality, water quantity, and the water cycle. USGS plans to use remote sensing to study altimetry, discharge, temperature, and other parameters in the future. The project also addresses harmful algal blooms and deploys an Autonomous Underwater Vehicle that takes specific conductivity readings.

Artificial Intelligence (AI) is a small component of the NGWOS. AI can help analyze data and will save time and money on data quality control. Currently, there is an AI pilot project in Maryland to predict sensor malfunction at Rock Creek which is not associated with NGWOS.

NGWOS includes modernization of the USGS National Water Information System (NWIS). Upgrades will include data visualizations to make USGS data more user-friendly by creating online maps, easy-to-read graphics, and photos that help the general public understand flood stages.

USGS hopes to designate 10 basins nationwide as NGWOS basins. The USGS Water Mission Area has asked local Water Science Centers to propose basins for inclusion into the program, the Maryland, Virginia/WV, and Pennsylvania Centers have collectively proposed the Potomac River Basin as a candidate for NGWOS. The USGS will pick as many river basins as possible, but that number is dependent on appropriated funds from Congress. Stakeholder input will be considered in the selection process. Letters of support from stakeholders, like DWSPP and ICPRB, encouraging the Potomac River basin could be helpful in the process. The Potomac River basin is a good candidate for NGWOS because there is already a lot of monitoring activity and heavy stakeholder involvement.

It was suggested that lessons learned from the Delaware River Basin NGWOS could be applied to the Potomac River Basin, as they are similar systems.

5. **STAC Workshop on Contaminants of Emerging Concern in Ag and Urban Settings**
Anjuman Islam, DC Water (presentation)

The Chesapeake Bay Program's Scientific and Technical Advisory Committee (STAC) recently held a workshop on Contaminants of Emerging Concern in Agricultural and Urban Settings. The workshop reviewed major findings of toxic contaminants in agricultural and urban settings and how these are impacting fish consumption advisories and fish health.

Fish consumption advisories vary among the jurisdictions. PCBs are one of the biggest concerns for the advisories among the jurisdictions. In urban settings, fish are exposed to a mixture of toxic contaminants as well as other stressors. PCBs, pharmaceuticals, personal care products, and PFAS are the primary concerns. In agricultural settings, fish kills and exposure to endocrine-disrupting chemicals (thought to create intersex fish) are the biggest concerns. Contamination from chemicals associated with manure, biosolids, and pesticide applications are the most common.

Several studies regarding chemical contaminants in water were discussed as well as the need for future research.

6. Potential DWSPP Project: Mapping Land Prioritization
Anne Spiesman, Washington Aqueduct (presentation)

A proposal for a possible DWSPP project was discussed. The project, Mapping Land Prioritization, would identify land parcels important to protecting Potomac water quality. The map can be used by land trust and conservancy organizations, local governments, the Natural Resources Conservation Service, and many other organizations that work in the conservation field, allowing them to prioritize source water protection in their work.

The overall effort (including funding and in-kind contributions) will cost $40,000. The U.S. Endowment for Forestry and Communities will contribute a portion of this amount. It was requested that, if interested in the project, the large utilities contribute a minimum of $2,000 and the small utilities contribute a minimum of $200 for this project.

An email will be sent out with more information and a commitment letter for the utilities, should they choose to contribute.

Michael Nardolilli noted that a property located within a planned source water protection prioritization area receives tax benefits. Land trusts and other organizations can use the map to encourage landowners to put a conservation easement on their property and possibly receive tax benefits.

Pam Kenel noted that the project links well with the work by the DWSPP Agricultural Workgroup and will be useful in conversations with the agricultural community. It was noted that the funding partner provided broad support for the prioritizations the stakeholder group decided on, not just land for conservation easements, but also agricultural land or other land use.

Pat Bowling noted that Pennsylvania has completed a similar project in the Marsh Creek Basin. He will send the information on the project.

John Grace noted that MDE staff might be interested in assisting with the GIS work. Also, he attended a meeting at NRCS where there was a land conservancy organization that had an

interest in mapping areas with cross benefits for ecological habitat and preservation for drinking water protection.

7. State Revolving Funds and Source Water Protection
Michael Roberts, MDE (presentation)

An overview of the state and federal funding sources for source water protection was provided. There are several high priority areas for this type of funding in the Potomac River basin.

The structural difference between traditional State Revolving Funds (SRF) and source water protection SRF is where the work is taking place and who is paying for the work. The 319 grant program and the Clean Water SRF have different prioritizations, but a loan through CWRSF can fund any activity that is covered under the 319 grant program. It is an annual application process. Pre-applications are accepted in December/January.

There are three roles for a watershed partner to work with CWSRF: broker, sub-lender (intermediary), or recipient. Each role has a different payment and payback mechanism.

The SRF funds can be used as a match for WIFIA projects and NRCS RCPP projects.

There are economic arguments for using these grants and loans, including a reduction in treatment costs, reducing wear and tear on the treatment facility, and decreasing operating costs.

It was noted that there is funding from EPA for assessment and cleanup of mine scarred lands.

8. SWP Shenandoah Outreach Project
Raven Jarvis, VDH

The Virginia Department of Health contracted with TetraTech to conduct outreach to water suppliers in the Shenandoah region. TetraTech will be sending a letter soon asking for the level of interest of the water suppliers in source water protection activities.

9. Agricultural Improvement Act 2018: Source Water Protection and Prioritization
Rebecca Warns, MDE (presentation)

The Agricultural Improvement Act of 2018 (Farm Bill) is a recurring bill that renews every 5 years. This bill remains in effect until 2023. New to the 2018 bill is the emphasis on source water protection. Under this bill, 10% of the conservation funding is to be spent on source water protection.

For this project, MDE provided a technical recommendation for which areas should receive this additional funding. MDE focused on community water systems for this project because of how many people they serve, how often they are used, and how susceptible they are to land-use

changes. They developed a list of criteria and then derived a ranking system of those criteria through discussions with Maryland NRCS and EPA.

There were two categories of criteria classifications and subsequent parameters, agricultural importance (percent crop cover, percent pasture cover, and animal density) and water quality parameters (sensitivity to pathogens, sensitivity to disinfection byproducts, and sensitivity to nutrients). The sources were assigned a weighted value and then divided into 5 different priority levels.

The final findings were presented at a stakeholder meeting. The MD NRCS made the final decision of priority areas after additional consideration of staffing concerns, existing funding streams, and general interest from the agricultural community. Liberty Reservoir, Cranberry Reservoir, and North East Creek were the final priority areas selected. In the following years, MD NRC will reassess and pick additional areas to focus the source water protection funding.

Some lessons learned through the process included establishing relationships with stakeholders early in the process and check-in often.

Future considerations include integrating populations served into the ranking criteria, looking at watershed land cover data, and consider using only animal density or percent pasture cover to more accurately model animal inputs.

10. Passing of the Gavel

Joel Caudill of WSSC Water "passed the gavel" to Steve Edgemon of Fairfax Water, who will chair the Partnership for 2020.

11. Open Discussions

Steve Edgemon noted the new Master Plan on the Jennings Randolph Reservoir. It is important to be involved in these processes in the future as a Master Plan can have land-use consequences for an important source of drinking water. The U.S. Army Corps of Engineer has said there are no major changes from the original Master Plan. Renee Bourassa will reach out to see how the Partnership can be involved in the future.

EPA's Lead and Copper Rule was released today. There are 60 days to comment. Lisa Ragain noted that the Water Security Workgroup is thinking about submitting comments.

12. Tour

The meeting was followed by a tour of the USGS MD-DE-DC Water Science Center, which included the USGS mobile lab and a demonstration of geophysical well monitoring.

<u>Upcoming Events mentioned in the meeting</u>

Salt & Stormwater – The Salinization of our Watersheds (Webinar, $, Nov 20)
This webcast will look at some of the latest research on sodium and chlorides and explore ways to reduce its impact on our local aquatic ecosystems.

Quantifying the Potential Benefits of Land Conservation on Water Supply to Optimize Return on Investments (Webinar, Nov. 26)
The Catawba Water Management Group will share ways to cost-effectively mitigate potential changes in water quantity and changes caused by population growth and climate change through targeted land conservation efforts.

Meeting Dates for 2020:

- Wednesday, February 5
- Wednesday, May 6
- Wednesday, August 5
- Wednesday, November 4