The Potomac River Basin Drinking Water Source Protection Partnership

Quarterly Meeting, May 1, 2019
Location: ICPRB Offices, Lower Level, 30 West Gude Drive, Rockville, Maryland

Attendees

Utilities

Berkeley County:
Steve DeRidder
Jim Ouellet

City of Rockville:
Judy Ding

DC Water:
Anjuman Islam

Fairfax Water:
Nichole Belleza
Doug Grimes
Greg Prelewicz
Niffy Saji
Joel Thompson

Frederick Co. DUSWM:
Terri Snyder-Kolovich

Loudoun Water:
Cathy Cogswell
Pam Kenel

Town of Leesburg:
Russell Chambers

Washington Aqueduct:
Anna Hayden
Tom Jacobus
He Anh Le
Anne Spiesman

WSSC:
Joel Caudill
Martin Chandler
Robin Forte
Julie Karceski
Jin Shin
Priscilla To
Daniel Yuan

State and Local Agencies

DOEE:
Jayne Deichmeister
Joshua Rodriguez

MDE:
John Grace
Chris Luckett
Charlie Poukish

PA DEP:
Rhonda Manning

VDH:
Raven Jarvis
Mary Mahoney

WV BPH:
Monica Whyte

Federal and Regional Agencies

EPA Region 3:
Michelle Audie
Beth Garcia
David McGuigan

ICPRB:
Renee Bourassa
Curtis Dalpra
Heidi Moltz
Mike Nardolilli
Mike Selckmann

MWCOG:
Lisa Ragain

Other

Hazen and Sawyer:
Aaron Duke

Horsley Witten:
Kathleen McAllister

Welcome, Introductions and Agenda Review

Joel Caudill, WSSC

Business Meeting

1. **Microcystin Testing in Potomac River and Maryland HAB SOP**
   Charlie Poukish, MDE (presentation)

Poukish investigates harmful algal blooms (HABs) for the Maryland Department of Environment. They work in conjunction with other state and local agencies. MDE is responsible for monitoring the "Waters of the State," which includes drinking water reservoirs. Red tides, blue-green algae, and cyanobacteria are examples of harmful algal blooms that can have severe impacts on human health, aquatic ecosystems, and the economy. Cyanobacteria are of greatest concern in the basin.

The HAB surveillance program involves field response, laboratory identification and analysis, and management. MDE performs routine monitoring and receives reports of algal blooms from local resource managers and concerned citizens. The lab identifies species and cell counts using ELISA. An advisory is issued when lab results show high amounts of toxins. The World Health Organization's (WHO) guidelines for microcystin are 10 ppb toxin for recreational contact and 1 ppb toxin for drinking water. The Environmental Protection Agency (EPA) guidelines are 8 ppb toxin and 0.3 ppb toxin, respectively. Maryland follows the WHO guidelines for recreational contact. When a HAB is detected, MDE communicates with local officials, posts advisories, and continues monitoring.

Advisories have been issued across Maryland since 1997 (Pfiesteria). There have been two HAB advisories in the tidal Potomac, in 2011 and 2014. From 2010-2014, 3 samples were greater than the WHO guideline (n=19). Events at Dargan, White's Ferry, and Brunswick have tested positive for HAB, but below the WHO guideline.

Fountain Rock Quarry in Frederick County had a bloom of 500 ppb microcystin in March 2010. Lake Anita Louise, a tributary of Lake Linganore (a drinking water source), in Frederick County, had high levels of toxic algae (160ppb) in January 2016. Hydrogen peroxide applications were used to control future blooms in Lake Anita Louise. There have been 40 fish kills from an algae species that harms fish, but not humans.

The algal blooms consume the nutrients, so testing for nutrients can be uninformative.

John Grace will look into the locations of routine HAB monitoring in the Potomac.

2. **Detecting the Contributing Factors of Lotic Algal Blooms**
   Mike Selckmann, ICPRB (presentation)

Selckmann is investigating non-point nutrient sources as they relate to filamentous algal blooms. Flow, temperature, and groundwater conditions can contribute to algae blooms. He monitors in the South Branch Potomac, Cacapon, and Lost rivers through routine water chemistry testing, habitat assessments, and visual algae transect assessments.

When there is an obvious phosphorous source such as a wastewater treatment plant, an algal bloom can be predictable. However, when there is not an obvious source, it is more difficult to predict blooms. There is a "Goldilocks" range where there is no obvious nutrient source that would predict an algal bloom, yet a bloom

exists. Selckmann has found there is no nutrient signal to explain these blooms, but there is a biological signal of high alkalinity and low hardness. The hypothesis for his current project is that there is some water chemistry parameter that is cloaking the ability to detect phosphorus that is causing the biological response.

A section of the Cacapon River fits under this Goldilocks category, with no obvious source, but there is a correlation with alkalinity and hardness. There seems to be some complex chemistry that is feeding the blooms.

The Appalachian Mountains are an area with high alkalinity and low hardness. The locations of the blooms overlap with groundwater seams. It is believed the interaction with the (high alkalinity/low hardness) water releases the phosphorous in groundwater that would not be detectable in standard water monitoring practices.

Further exploration with thermal imaging will be conducted this summer. These springs may be originating from the heavy agricultural areas on the other side of the Appalachian Mountains.

Some conclusions to the presentation: Nutrients normally attributed to algal blooms are not always detectable, production at bloom sites may be driving their own proliferation in a feedback loop, underlying geology may create environments more conducive to nutrient availability, and groundwater flow paths through high nutrient regions act as nutrient travel corridors.

3. **America's Water Infrastructure Act Risk & Resilience Assessments Now and into the Future**
Patti Kay Wisniewski, EPA Region 3 (presentation)

Factsheets:

- Amendments to the Emergency Planning and Community Right-to-Know Act- America's Water Infrastructure Act: A Guide for SERCs, TERCs, and LEPCs
- Risk and Resilience Assessments and Emergency Response Plans

The EPA will no longer house the previous Vulnerability Assessments that were done by the Community Water Systems (CWS) under the Bioterrorism Act. A CWS may request the VA be returned by contacting the EPA. If a CWS does not send a request, the assessments will be destroyed by the EPA.

The Vulnerability Assessment is now called a Risk & Resilience Assessment (RRA). The RRA includes more risks than the VA, including cybersecurity. It is also ongoing, unlike the VA. The RRA is due every five years. Elements of the RRA include water infrastructure, monitoring practices, financial infrastructure, use, storage or handling of chemicals, operation and maintenance, and more. The EPA is not collecting the RRA directly, they are only collecting the certification that the work has been done.

Due dates for the certification are determined by the number of populations served by a CWS:

- March 31, 2020, for populations served of ≥ 100,000,
- December 31, 2020, for populations served of 50,000-99,999, and
- June 30, 2021, for populations served of 3,301-49,999.

A CWS serving a population of < 3,301 people is not required to complete the RRA.

An Emergency Response Plan (ERP) is due to the EPA six months after the RRA certification has been submitted. The ERP will need to be incorporated into the RRA. Coordinating with the Local Emergency Planning Committees is an important aspect of both the RRA and the ERP.

AWWA, Water/Wastewater Agency Response Network (WARN), and other organizations provide a variety of tools for completing the RRA, but a CWS is not required by the EPA to use these tools. A CWS is only required to follow the law regarding the AWIA.

An online portal and template will be available for submitting the certification. Regular USPS mail and email options are also available. More detailed information on the online portal will be available later this summer. EPA requests that water systems wait until after August 1 to submit the RRA and ERP certifications.

Effective immediately, the AWIA specifically states that the state/primacy agency must promptly notify a CWS of a release impacting source waters. In addition, a CWS is given access to EPCRA Tier II data from any facility within a delineated source water area. The EPA can assist with obtaining this information.

Information on AWIA updates will be sent to the contact information already in the EPA system for a CWS. It is also available online. Contact Patti Kay Wisniewski directly to be added to an email list for proposed regulations, security, preparedness, and the AWIA.

4. **Source Water Protection in the Potomac River Basin – A Story Map**
Kathleen McAllister, Horsley Witten Group (presentation)

The Horsley Witten Group was tasked with conducting a source water assessment for DC Water. It has developed an ArcGIS Story Map tool for showcasing ongoing efforts to protect source water. It is still in development and housed on a secure website that is not available to the public.

WaterSuite has been used across the National Capital region as a way to identify and inventory contamination sources. Horsley Witten developed the Story Map to highlight source water protection activities across the basin.

For the project, Horsley Witten conducted interviews with a variety of organizations (MWCOG, ICPRB, utilities, EPA Region 3, Va. DEQ, and others), reviewed relevant literature, collected data, developed the content, then plugged it into the ArcGIS Story Map form.

Currently in draft form, the Story Map will be a public-facing website tool for easily accessing information and data. The website is for the public to learn more about source water protection activities in the watershed by highlighting work by ICPRB, DWSPP, Va. DEQ, water utilities, and others.

Content includes the uses of the river (recreation, drinking water, habitat), the role of the various organizations working on source water protection within the basin, threats to the basin (extreme weather events, potential contaminants), information on ICPRB's Emergency River Spill Model, the *Forest Cover Impacts on Drinking Water Utility Treatment Costs in a Large Watershed* study (WRF #4651), NPDES permit information, non-point source and point source pollutants, land use, various interactive mapping tools, and more.

There was a concern raised by the meeting attendants that utilities may be uncomfortable with the Emergency River Spill Model's (ERSM) time-of-travel information available on a public-facing website. It was noted that the ERSM tool is important to highlight to the public, but the details of the tool should be considered sensitive information.

The EPA and/or its contractors will be conducting internal reviews and follow-up interviews with the organizations regarding the content.

5. **Activity Updates**

   a. **Va. Forestry and Source Water Forum, June 12-13, Charlottesville, VA**
   Beth Garcia, EPA Region 3

   The forum will be held at the CityScape in Charlottesville on June 12-13. June 12 is tentatively scheduled to be a half-day site visit with the Rivanna River Basin Commission. June 13 will be a full day of presentations and workshops regarding forests and drinking water. The forum will provide a basic understanding of the forestry sector, forest management, the water utility sector and utility management and how the conservation, forestry, and drinking water sectors overlap in the challenges they face. It will also cover areas of opportunity for collaboration, funding sources, examples of ongoing source water protection efforts in Virginia, and will provide an opportunity for networking among the various organizations.

   DWSPP members are invited to attend and will receive an invitation soon.

   DWSPP will be sponsoring light refreshments in the morning. DWSPP outreach materials and information will be provided to the group during that time.

   b. **EPA Region 3 Source Water Protection Meeting, June 18-20, Lewes, DE**
   Beth Garcia, EPA Region 3
   This is the annual source water protection meeting organized by EPA Region 3. State source water organizations, river commissions, EPA Region 3 and other organizations will be gathering in Lewes, DE to discuss source water protection activities in Region 3. A field trip will be held the first day to explore saltwater intrusion monitoring and a PFAS contamination site. The second day, the group will hear activity updates from each organization and will learn more about the Farm Bill.

   c. **WV Table Top Exercise, May 9, Kearneysville, WV**
   Monica Whyte, WVBPH

   There are ~40 participants signed up for the event, including community water systems from around West Virginia, LEPCs, ICPRB, Homeland Security, EPA, and others. The scenario for the spill exercise will be an issue of interest to the West Virginia utilities, build on some prior work done in the state, and provide continuing education credits. Rusty Joins, DEP Homeland Security and Emergency Response Chief, will present on WV DEP's spill response hotline.

   d. **Eastern Panhandle Conservation Group Gathering, May 23, Martinsburg, WV**
   Monica Whyte, WVBPH

   The event will include forestry organizations, non-profits, conservation districts, and a wide array of organizations that work in the watershed. It is an educational event with good networking opportunities.

   e. **Va. DEQ's Salt Management Strategy**
   Dr. Heidi Moltz, ICPRB

The Accotink Chloride TMDL was completed in 2017. The implementation plan for that will be a Northern Virginia Salt Management Strategy (SaMS) that included a robust Stakeholder Advisory Committee (SAC) process. A training for the SAC was held at the beginning of the process. The third SAC meeting will be held on May 29. Va. DEQ maintains a website with information on the SaMS process.

There are 6 workgroups; Education and Outreach, Government Coordination, Non-Traditional BMPs, Traditional BMPs, Salt Tracking and Reporting, and Water Quality Monitoring and Research. Each workgroup has met at least twice with the exception of the Government Coordination workgroup.

The workgroups have developed some preliminary recommendations and intended products/resources. The overall message of the products is identifying how we can improve our processes without having prescriptive application amounts. The preliminary ideas will be presented at the next SAC meeting.

The third round of workgroup meetings is being scheduled. Some workgroups may meet a fourth time. As the document is finalized, there will be several rounds of review. The plan is expected to be completed in December 2020.

It was suggested that the utilities involved in the SaMS process should have a discussion on the best way to ensure drinking water maintains a priority during the SaMS process.

DOEE is under a consent decree to implement pilot programs for salt reduction. The pollution prevention programs are working with DPW to implement them. There may be opportunities to learn from each other on this issue. Maryland provided draft language at a recent salt summit that is likely to be included in the MS4 permit that may also be helpful.

f. PFAS Talking Points
Lisa Ragain, MWCOG

The DWSPP Reaching Out Workgroup met to discuss a list of PFAS talking points and offer input and edits. They will be getting input from the Contaminants of Emerging Concern Workgroup on the technical issues. John Deignan of DC Water is putting the document together and should have a draft out soon.

Anne Spiesman of USACE suggested that the PFAS talking points start with a basic, simple message about the chemical and then expand to more detailed information.

It was noted that PFAS foams are sometimes used to euthanize birds in agriculture.

g. Farm Bill: Agricultural Conservation Programs Address Source Water Concerns Webinar
Nicki Bellezza, Fairfax Water (presentation)

There was a recent webinar on the Farm Bill (FB). It discussed the FB, NRCS programs, opportunities for engagement, and examples of pilot programs. In each fiscal year, 10% of the FB funding must be devoted to source water protection.

The NRCS offers voluntary, incentive-based programs to promote sustainability and solve natural resource concerns. Source water protection should be considered on all projects. If it is identified as a priority on the project, the landowner qualifies for a larger cost share amount.

NRCS programs include the Environmental Quality Incentives Program (EQIP), Conservation Stewardship Program, Ag Conservation Easement Program, and Regional Conservation Partnership Program (RCPP). The most promising engagement opportunity for DWSPP seems to be RCPP since it features projects that are partner-led.

The webinar gave several suggestions for engagement:

- Reach out to all levels of NRCS to share specific priorities and issues,
- Show up at the local workgroups (they meet 1-2x per year), and
- Have a seat and be represented at the State Technical Committees.

Two case studies were included in the webinar, the NWQI pilot program in Pennsylvania that is looking at source water protection areas and the Milford Watershed Study RCPP, a group of water utilities and local governments that are working to reduce nutrient loads.

Conclusions:

- Work with NRCS on all levels to identify and prioritize emerging natural resource concerns that need to be addressed.
- Proposed areas should be delineated and have an existing Source Water Protection Plan in place that lists agriculture as a potential source of contamination.
- Target core NRCS conservation practices.
- Ensure there is interest and demand for the project by assisting in education and outreach
- NRCS is mandated to quantify outcomes.
- Ask how can we help? Water monitoring? Technical resources?

6. Workgroup Updates

Agricultural Issues

Pam Kenel, Loudoun Water

The workgroup is developing connections with NRCS to leverage the options that stem from the Farm Bill. The workgroup is exploring where source water collaboratives can help fill the gaps in the various programs that are funded by the Farm Bill.

Federal, state, and local agencies are meeting in May to discuss the prospective roles of each agency. Further program guidance is expected as an outcome of this meeting. The workgroup would like to have the groundwork in place when the official Farm Bill guidance comes out this fall.

There has already been some collaboration among DWSPP members and NRCS, including GIS data sharing and information sharing. Some workgroup members will present at the Virginia State Technical Committee meeting in June.

Contaminants of Emerging Concern

Martin Chandler, WSSC

A CEC member will attend the Chesapeake Bay Scientific and Technical Advisory Committee Workgroup meeting that focuses on emerging contaminants in agriculture and urban settings at the end of May.

The national drug take-back event was held on April 27. The increased public awareness of proper disposal of prescription drugs is an important outcome of these events. It is too early to collect the data from this event.

Workgroup members attended two webinars. One was on cyanotoxins, which included a "lessons learned" from a community in Oregon that had a Do Not Drink advisory due to a HAB. The second webinar was on PFAS.

The most recent update from the EPA from UCMR4 data was released in January. There are about 50 utilities in the basin involved in the UCMR4. The workgroup explored the dataset of information with the Potomac River basin. Data from 16 of the utilities has been released by the EPA. The remaining utility data is still being processed by the EPA. In that data, there were no detections of cyanotoxins, pesticides, semi-volatile organic compounds, alcohols, or germanium. Manganese was detected in 61% of the systems (n=23). Haleoacetic acid group detection was 100%.

Early Warning & Emergency Response

Joel Thompson, Fairfax Water

The workgroup collaborated with the Water Quality Workgroup to develop protocols for uploading documents to the Potomac Spills Groups.io website.

There may be funding available soon that the workgroup could use to improve spill response in the region. It would be used to incorporate NOAA's GNOME model into ICPRB's Emergency River Spill Model.

Thompson and other workgroup members recently met with representatives of the U.S. Coast Guard. Even though the non-tidal Potomac is not within their jurisdiction, the Coast Guard indicated that they are willing to assist the EPA during a spill response.

Reaching Out

Lisa Ragain, MWCOG

- The workgroup is currently working on the annual report. A draft version will be sent out to the workgroup chairs for approval in the next few weeks.
- The workgroup is working on PFAS talking points.

Urban and Industrial Issues

Greg Prelewicz, Fairfax Water

The workgroup continues to track and monitor NPDES permits across the basin. No other permits have been of interest lately. The information is uploaded to the Samepage.io website.

The workgroup continues to track information for WaterSuite. There was a user's conference on February 19th. There is a new dashboard, new "Search by site name" option and some other updates. Prelewicz will try to get a copy of the webinar on Samepage. There is also a new 24/7 emergency hotline for WaterSuite support. It is unclear if that is an additional fee. The WaterSuite developers are trying to take advantage of the new Tier II data sharing requirement. A user's group is exploring how to use the tool to identify possible sources of PFAS.

A meeting was held recently in Cincinnati on information necessary in source water protection and emergency response. It was a one-day workshop sponsored by the EPA. There may be some WaterSuite products that come out of that meeting.

Notifications of CSO's have increased recently. The workgroup is interested in learning more about the reporting process and the capital projects done on CSO's in the basin states. This will most likely be the subject of a future DWSPP quarterly meeting.

Joel Caudill noted that the Maryland legislature just passed a revision to the notification requirements. It expanded on what was required to be reported to downstream utilities. It seems like there is a movement to increase communication in this area.

Water Quality

Niffy Saji, Fairfax Water

The workgroup is updating the Spill Response Plan. This includes streamlining the notification process and including the limitations to ICPRB's Emergency River Spill Model.

The workgroup collaborated with the Early Warning and Emergency Response group to develop protocols to help streamline the uploading process to the Potomac Spills Groups.io website. The protocols are being finalized by the workgroups and then will be presented to the larger group. A short exercise on the new protocols will be held prior to the August meeting.

Some of the members of the workgroup are involved in Va. DEQ's Salt Management Strategy, specifically the Water Quality Monitoring and Research Workgroup. They are developing guidelines for a pilot monitoring program to assess the impact of BMPs on salts. Workgroup members are advocating for a water utility perspective in the monitoring criteria.

7. Open Discussions

Anne Spiesman brought up a suggestion that dues-paying members of DWSPP could contribute a special assessment to support a Forestry Prioritization Mapping Project. There will be further discussions via email regarding this issue.

**Due to time restrictions, the presentation on Framework Revision listed on the agenda was postponed.

Upcoming Events

Meeting Dates for 2019:

- Wednesday, August 7
- Wednesday, November 13