



Maryland Water Monitoring Council
Maryland Dept. of Natural Resources
Tawes Building, C-2
580 Taylor Avenue
Annapolis MD 21401
www.marylandwatermonitoring.org

Mat Pajerowski, US Geological Survey
Vice-chair

Matt Stover, Maryland Dept. of the Environment
Chair

Katherine Hanna, Maryland DNR
Executive Secretary

Directors

Andy Becker, KCI Technologies
Megan Brosh, Baltimore Co. DEPS
Lindsay DeMarzo, Howard Co. OCS
John Denniston, Maryland Dept. of Transportation
Matt Harper, M-NCPPC
Bob Hilderbrand, UMCES
Ken Mack, Montgomery Co. DEP

Byron Madigan, Carroll Co. BRM
Rupert Rossetti, Octoraro Watershed Association
Nancy Roth, Tetra Tech, Inc.
Brian Smith, Maryland DNR
Ken Staver, Univ. of MD WREC
Chris Victoria, Anne Arundel DPW
Michael Williams, Univ. of MD College Park

BOARD MEETING REPORT

MARYLAND WATER MONITORING COUNCIL BOARD MEETING

JULY 30, 2024 – HYBRID

In Attendance

In person: Matt Stover, Mat Pajerowski, Katherine Hanna, Brian Smith, Byron Madigan, Eddie Lukemire (proxy for John Denniston), Najma Khokhar, Megan Brosh, Mike McMahon, Heather Quinn; *Virtual:* Nancy Roth, Bob Hilderbrand

Matt called the meeting to order at 10:06 AM. He called for a quick round of introductions.

Last Meeting Report & Board Member Voting

Matt called for the review of the last Meeting Report. The report was approved by consensus.

Matt skipped board nominations and voting, since Ken Mack was absent. He asked the board members to take the time to review the resumes for Greg Voigt (EPA-R3) and Tom Guay (Executive Director of the Severn River Association). We will vote when Ken arrives. We need at least half of our current active members present to vote. Make sure to vote.

Committee Updates

Monitoring and Assessment

Byron reported on the April 26 committee meeting. They arrived on a possible theme for the Pooled Monitoring Forum: Ten Years of Progress, Where Are We Now? Topics discussed included: bay milestones, TMDL development, PFAS, and Integrated Report Category 5 listing for temperature. Ultimately, they decided on a PFAS workshop for late fall/early winter of this year. Recent EPA regulation updates would be discussed. Also, PFAS in wastewater biosolids and treatment/remediation efforts. At our next meeting in August, we will concentrate on the workshop agenda and potential speakers.

Matt asked for any feedback from the board. *Mat* described USGS's efforts to pursue how PFAS can be broken down, including bacteriological. He offered to put *Byron* in contact with a regional team addressing PFAS. *Byron* was interested in having speakers talk about the monitoring and

laboratory options. *Nancy* mentioned her lab does a lot of work with fish contamination, working with EPA for many years. He also discussed a biochar/sand filter project they are working on with the Univ. of Del. *Mat* pointed out the possible destruction of the carbon matrix in the filter when exposed to high heat for cleaning. *Najma* pointed out that a lot of such work was being done in Howard County. *Nancy* also pointed out that a national study found 5% to 7% of fish tissues sampled showed high levels. *Matt* and *Byron* discussed studies done by MDH and a training center outside Westminster. *Mike* suggested combining the biochar and bacteriological studies to clean the filters without using heat. This would reduce damage and might use less energy.

Matt asked *Mat* if USGS mainly focused on PFAS testing at DoD facilities. *Mat* said that they look at other sites, including WWTPs. *Heather* said that DNR is testing all the state parks and its other properties. She & *Byron* went on to discuss issues with groundwater testing, such as karst geology. *Matt* discussed MDE's PFAS action plan. *Byron* brought up issues with biosolids.

Byron explained they plan to hold the PFAS workshop in December to mid-January. *Mat* again offered USGS facilities for the workshop. *Byron's* committee meets in the next couple of weeks.

Information Management

Najma repeated the description and numbers for the past January and February webinars. A third one is scheduled for September 12 (Leah Ettema). The subject will be continuous monitoring. She asked for suggested topics and presenters for future webinars. She discussed various organizations providing her with the list of qualifiers and have a community discussion; standardization between laboratories. *Mat* recommended contacting Brenda Maggetti at USGS, Data Collection Section, as a possible speaker. USGS could provide other speakers if you zero in on topics, such as deploying monitoring stations.

Matt remarked that USGS has robust monitoring Q/A systems in place. *Matt*, *Mat*, *Brian*, and *Heather* discussed USGS and DNR monitoring protocols. *Najma* asked for available SOPs. *Mat* recommended Googling or asking Brenda for the SOPs. *Matt* suggested *drift* as a topic for a webinar. The group discussed Aquarius, a data visualization tool, and expensive subscription-based service. Additional tools were discussed. *Brian* explained to *Najma* the different codes that his program uses. The group continued to discuss issues with drift and a seminar on it.

Matt brought up the topic on electronic data collection. The group discussed the use of iPads and Toughbooks and applications. *Mike* quoted webinar topics suggested by Chris Victoria during the January board meeting: tablet-based data collection and regional informatics (eDNA).

Heather touted the advantages of paper backup, explaining her office's repository, and the difficulties of using electronic in the field. *Mike* recommended having separate data storage in addition to the cloud. *Heather* added threats of cloud hacking or disputes with data providers. *Brian* and *Matt* stated that cloud-based data is backed up and transmitted to the client. *Megan* writes notes on paper, as there is no place in the application. Further paper vs. digital discussion.

BREAK 11:13 AM to 11:24 AM

Groundwater

Mat did not have updates. He is mentioned topics for their next meeting: drought, groundwater monitoring network, and the adequacy of the monitoring network for determining drought. *Heather* and *Mat* discussed lack of lessons-learned actions following the '02/'03 drought, including the Wolman Commission Report [2008]. Follow-up funding ended in 2012. *Heather* & *Mat* related monitoring of surface vs. groundwater, such as effectiveness of BMPs, and integrating

the two. Groundwater can show a greater impact from human activities. *Mat* added that climate change can alter the pattern of the flush of water into aquifers. There is no direct relationship between the degree of climate change and the change in water quality.

Matt mentioned a fractured rock by Pat Hammond that simulated droughts and impact on things such as trout. *Mat* described MDE's drought protocol. Parts of Maryland are in a drought watch. *Mike* shared MDE's drought status page, and suggested drought would be a good session topic. *Heather*, *Mat*, and *Byron* discussed the state well monitoring network.

Student

Eddie reported the committee is meeting Friday to discuss presentations and posters. He asked if we do virtual presentations. *Katherine* said we will do that as a very last resort. *Brian* related that the virtual presentation last year was for the Dolphin Watch app. *Matt* stated that we shouldn't offer that option unless it's a speaker we really want and there is no alternative. *Brian* described the room facilities used for the virtual talk. *Mike* thought Jason Dubow used his own laptop, which *Brian* verified. *Matt* asked to pass contacts from their school backgrounds for the committee. A good time of the year, since students are going back to school, to start them preparing their posters.

Citizen Science and Community Stewardship

Rupert was absent. *Katherine* read off his report. He has contacted 7 individuals who expressed interest in the committee. He plans to include them on the committee. Three have responded, who he will follow up with when he gets back to Maryland next month. He plans to have a meeting and explain the committee to them, getting their input. Topics proposed include: outreach, worksheets, resources, and a collection resources.

Byron asked what the qualifications are for new board members. *Katherine* explained that the person's job should match the Board mission.

Annual Conference Planning

Katherine reported the committee met yesterday. With the reserved venue, the committee has the green light to proceed with all planning activities. We started by choosing a theme. *MWMC at 30: Celebrating Successes and Tackling New Challenges* (from Nancy). We will send out an announcement with "save the date" and a "call for speakers and posters." We discussed a social, and *Andy Becker* has again secured support from KCI. Award nominations are open and will be added to the email announcement. Call for speakers will be open through September 20.

The committee will meet again and determine where these presentations fit, or possible new sessions based upon submissions. If we have extra submissions, we will invite them to submit as a poster. We have ample poster space. We discussed plenary speakers and decided to aim big, given it was our 30th. Our first choice is Governor Wes Moore. Ben Cardin would be an alternative. Also, a speaker that's been around for 30 years and could explain how things have evolved: Denise Wardrup or Rich Batiuk. There will be more to discuss in September.

Matt asked for suggestions of anybody who's been in the field for a while might be a good candidate for the Carl Weber Award and the Above and Beyond Award. *Katherine* asked if someone wanted to work on the cover art. She has drawn from the DNR free account.

LUNCH BREAK 11:53 AM to 12:30 PM

News Roundtable

Matt: submitting the Integrated Report. A number of temperature listings throughout Maryland. Regarding WQ standards development, in the next few months, advanced public notification changes to designated water uses, water quality WQ criteria, and Tier II waters. The public has an opportunity to make suggestions of what to pursue. Also, public notification of our cold water existing uses determinations; designated “not quite cold water” streams where DNR or other partners found cold water species; areas we have to protect under the Clean Water Act. We have compiled data into reports for public comment. Shannon McKendrick in our office is convening a forest conservation WG with four Maryland counties for criteria to credit forest conservation for MS4 jurisdictions. MD is still working with our DNR partners on biological data from MS4 jurisdictions. Following QA/QC, data will be provided in a public database. Fish data will be from some counties and macroinvertebrate from others, in coming months.

Katherine: just finished the Round 4 MBSS report. Studying changes over a 14 to 20 year period, back to our 1st and 2nd rounds. Sampling the same sites, we have analyzed data and released reports. Some improvements and not. In our summer sampling season with a number of big sites left. A number of dry streams this year. Wrapping up site sampling in the next month or so.

Najma: working on my new business. Developing a water quality data acquisition system, which could help States and counties manage their data. The system will do continuous and discrete monitoring, with biological and all the metadata; analysis and calculations in one place. It's cloud based, so field technicians and managers can use the same data set simultaneously. Currently, it targets surface water, but is intended to for groundwater; including all water data into one data set.

Heather: MGS Hydro Water Program is compiling data from county health departments. We began a PFAS program. Conducting chloride sampling and monitoring, like that done on Kent Island. They used to be on the edge, now they are in the Bay. In September, we will do significant groundwater monitoring, to contour the coastal plain aquifers, determining the pumping centers, and whether better or worse. We release this compilation every couple of years. Updating our aquifer information database started by MDE and USGS. Developing GIS data to map out aquifer subsurface elevations, which can tie into WQ. MDE water permit appropriations division will use this a lot. We have various data preservation programs, including an inventory of cuttings that come out of monitoring wells. Also looking at geophysical and coastal data in the Bay, using bathymetry and sonar.

Megan: doing lots of field work, keeping our interns out of the office. We just published our draft of a TMDL for PCBs in our watersheds, out for public comment.

Mat: journal article on PFAS degradation is coming out in May. Alex Soroka at our center is studying agricultural groundwater quality in the coastal plain. This study is under final approval and the report should have come out in the fall. Published our draft TMDL for PCBs, that's up for public comment. John Hammond is coming out with a report on monitoring groundwater quality regarding temperature of cold water streams; the effect on stream temperature of pumping groundwater in small watershed basins. Groundwater is a cold reservoir that could keep stream temperatures down, providing refuge for cold water species. *Matt* suggested we get Hammond to speak at our annual conference in the Temperature Session. Mat will ask him.

Brian: resumed our annual hypoxic cruises in May. Maryland has been conducting these cruises since 1985, once or twice a month, to measure hypoxic water (<2mg/L) volume in the Chesapeake Bay main stem. The spring forecast predicted 4% higher than the 39 year average. May and early June results were higher, but late June were low. Last year was lower. July results to be reviewed.

New oxygen meter (con-mon) stations have been deployed in the Choptank River to be linked with the Coast Guard and NOAA. We partnered with the National Aquarium, deploying monitoring stations in the harbor. Collecting baseline data to see any WQ impact of constructed wetlands.

Eddie: MS4 permits for SHA are coming out. Working with Walmart on smart stormwater management. Multiple impacts include flood control, longer holding time, and reduce O&M costs. Finishing projects with the ACoE in the Baltimore area. Looked at coastal flooding risk in the harbor area affected by sea level rise, using more nature based solutions. We are sharing our data with ACoE and had a public hearing with MDE. Worked with Delegate Ruth in the last legislative session for apply wildlife crossing grants. For Maryland, it would pertain to aquatic life passing through water culverts. This gets expensive and seeking federal funding. Able to get a categorical exclusion for reconstruction of the Key Bridge due using the same foundational locations. Applied to MDE for Carbon Pollution Reduction Grants (lower tier) for tree plantings in the port area. The community has been very supportive. Our exterior monitoring for all trust material has come up. Reported at a meeting that we are using the dredge material to build islands. Hart Miller island has been closed to accepting dredge material.

Mike: regarding the 319 program, the annual report is due at the end of the year and success stories are due later in June. We are planning a conference in October for 319 grant managers from across EPA Region 3. Developing an MOU to link HBCU students to real time research experience. Working on a blue carbon session for the MWMC conference. Was working on developing better operator recruitment for WWTPs to reduce the chance of plant failure. Unfortunately, a loss of three people in our division has forced us to reallocate people's time.

Byron: currently a mixture of field work and data analysis. Wrapped up our MS4 monitoring. Monitoring every couple of weeks at Piney Run and developing a watershed protection plan. Submitted all our monitoring plans to MDE in April and comments exchanged back and forth. Both our BMP effectiveness and watershed-wide assessment were approved. Started monitoring and connectivity.

Nancy: stream restoration monitoring project in Columbia, MD looking at how riparian vegetation has come back. Also did fish and habitat surveys this summer. Pulling data together and comparing to nearby unrestored reaches. Been involved in the microplastics monitoring framework with the Chesapeake Bay program. Includes good field methodologies. Builds on monitoring efforts going on everywhere. Have gotten enthusiastic responses from local governments. Will enable us to start tracking prevalence of microplastics at the local and baywide level, including in our fish.

Action Items

- Mat will include temperature impacts from groundwater pumping as a topic for the conference
- A few ideas for data management webinar series
- A few speaker ideas for PFAS workshop
- Submit conference presentation abstracts
- Send academic contacts to Lindsay
- Weber and Above and Beyond Awards nominees
- Nancy will find a speaker on the Chessie BIBI for the next meeting (Claire)

- Next meeting is October 22
- An in-person meeting will be scheduled for April

Adjournment (1:26 PM)

Tour of Brighton Dam by Jasper Sirk of WSSC.