

**Minutes
Data Integrity Work Group (DIWG)**

**Wednesday, July 19, 2023
1:00PM-3:00PM**

Meeting Materials: [Link](#)

This meeting was recorded for internal note-taking purposes only.

Actions

- ✓ Mike Mallonee will follow up with Michael Mueller from Fairfax County and try to get a new contact for Fairfax County if he doesn't get a response.
- ✓ Mike Mallonee will send to James Colgin a list of the data checks and calculations performed as data is processed from DUET to CEDR.
- ✓ Doug Moyer will speak with Jay Armstrong regarding VA historical data.
- ✓ Labs may contact Doug Moyer at dlmoyer@usgs.gov with any questions specific to their data record or labs for the USGS effort to reconstruct the historical and current database.
- ✓ The DI workgroup will reconvene in the near-term future as a smaller group for a focused discussion on TN/TP decision rules, and the lab groups will plan to meet in October to discuss transitioning to new flow analyzer machines.
- ✓ The Water Quality Standards Attainment and Monitoring Outcome will add more support for field audits to their logic and action plan (Peter Tango, Breck Sullivan, August Goldfischer responsible parties).

Minutes

1:00-1:10 Introductions & Announcements

All

1:10-1:30 Monitoring and Laboratory Analysis Updates

All

Lara Phillips provided the update for Maryland Department of Health (MDH). Lara reported a successful EPA audit at end of June for their drinking water methods. Lara said MDH welcomed a new QA officer for the Environmental Sciences Division. The inorganics lab is fully staffed now with 2 new employees: Samira Azemati, the Inorganics Nutrients Lead, started on 4/5/23; and Mohammed Habeeb, the new Supervisor, QAO Quality Systems for the Environmental Sciences Division started on 6/14/23. Their division chief is working on securing funding. MDH has a FIA analyzer in house that Samira is working on validating for nitrate-nitrite and nitrate testing. MDH also has an interest in SEAL. Lara asked if any other lab has a newer SEAL that they could look at? Lara also offered that if anyone was interested in looking at the FIA analyzer they were welcome to look at theirs.

Cindy Johnson provided the update for Virginia Department of Environmental Quality (VA DEQ). There were no issues besides a boat breakdown and that was just a minor issue. They didn't miss any sampling because of that.

Suzanne Doughten gave the update for Old Dominion University (ODU). ODU just received a SEAL flow analyzer and will start training on it next week and start working on a methods and comparison study. So far they have done their June double cruises and the first cruise of July,

with the second (profile only) cruise next week. Everything is on track with analyzing samples and going out in the field.

Doug Moyer provided the update for USGS VA, sharing that everything is good, and they are getting their storm samples on track.

Carl Friedrichs provided the update for VIMS, sharing that everything is going well, and they started the new Fiscal Year.

Kristen Heyer provided the update for Maryland Department of Natural Resources. Kristen said that the mainstem is coming along and they just finished their first July cruise. They had some boat availability issues, but they are working through that. Like VA, they are planning on doing a profile reading only cruise next week. They have to wait for a group at the university to finish their cruise first and then they should be able to go out Wednesday-Friday. If not, they may have to do a slightly truncated cruise schedule and get as much as they can in a couple days. Kristin shared that they had an availability issue for August and that the MD dates and VA dates were originally going to be different but now they're going to go at the same time as ODU. Provided the weather works out. All of our tributary sampling has been going as scheduled. Kristen said for their shallow water monitoring, they're still doing the Tangier Sound segment and that is on schedule. There was some trouble in June due to the weather not being good for small boat open water work. Kristen said for nontidal work they were significantly behind but have caught up. They have a few sites that didn't get a lot of rain, but they are catching up and filling in gaps. Routine sampling is fine with no issues. For one of the sites the bridge crossing the creek was under construction from Labor Day last year to partway through May. They were able to get some low flow routine samples during that time but not high flow. However, that's been re-opened and they're back on track with that site. They're getting 2 samples per quarter.

Tracee Cain shared the update for DE DNREC. They acquired a new chemist to help out with PFAS method development. They also are excited to get new SEAL instruments. They're expecting a new discrete and a new flow analyzer in early fall.

Pam Higgins gave the update for Pennsylvania. Pam said that PA is in a budget impasse affecting funding. The lab can purchase mission critical supplies to keep things going. Given this challenge, they're moving forward as best they can. Summer sampling load for HABs has increased, and they're working with some local colleges on some projects.

Jerry Frank shared the update for Chesapeake Biological Laboratory. Things are going well there, and they have one new analyst, Amber DeMarr. A new SEAL segmented flow analyzer instrument is due to arrive in September.

There was no representative or update from DC.

Doug Chambers shared for USGS West Virginia that all is going well.

1:30-1:45 Community Science Monitoring Updates

Alex Fries

Alex Fries (UMCES) gave the update for Community Science Monitoring. CMC's newest Tier 3 (T3) groups are Anne Arundel Rivers Federation (who had their field audit on May 10th), and Anne Arundel Community College (who had their field audit on May 31st). Nanticoke Watershed Alliance and Blue Water Baltimore are groups that have been Tier 3 for a while. Shore Rivers and Havre de Grace Maritime Institute will be new Tier 2 groups and were trained in June. There will be 2022 data uploads for Blue Water Baltimore, Nanticoke Watershed Alliance, and MDE Shellfish which is another Tier 3 group.

1:45-2:00 Blind Audits Update

Jerry Frank

Jerry Frank (CBL) said that he has all results for FY23 and is working on the report. The EPA granted him an extension. The report will be circulated first week of September. The next round of sampling is up in the air. The funding source for the blind audit program was interrupted and redirected. They are working on finding a new funding source. Once that is set, Jerry will let everyone know when the next round of samples is coming. Hopefully, this won't interrupt the timeline too much. CBL's new analyst will be working on TN and TP, and dissolved nutrients.

2:00-2:10 Coordinated Split Sample Program

Mike Mallonee

Mike Mallonee (ICPRB) presented the Coordinated Split Samples. He said for the tributary FSS split sample is that he has not received anything from Fairfax County from last June. He asked if anyone knew a new contact for Fairfax County, and he will email Mike Mueller.

Tracee Cain (DE DENREC) said for a lot of the nutrients, some labs can get low detection levels. She said they don't have that capability, for example, for ammonia although they did secure new instruments that will arrive in the fall that will help. Tracee asked, how do people achieve the low detection limits? Is it due to calibration limits? Or not going as high? For ammonia, does the gas diffusion allow you to get that low?

Suzanne Doughten (ODU) said they're doing the lower basin and some of their samples are almost oceanic. They're using a Lachat but they have low curves because all of their samples tend to be very low. Tracee said most of the samples they get for DE DENREC have a good amount of nutrients, so their curves tend to be a bit higher. Suzanne said for ODU's calibration curves they run a low standard at 0.005mg/l. They do MDLs for the EPA method, running a standard each month. But they're also looking for those really low numbers.

Lara Phillips (MDH) said MDH is using a Lachat flow injection analyzer and they see samples that low. Their low standard is at 0.008 mg/l. Tracee asked which tests MDH runs on the Lachat? Lara said they use it to run all of their nutrients tests. They are looking into new instruments now since the Lachat is being retired.

Cindy Johnson (VA DEQ) said that Jay Armstrong would be looking at some of the VA points but most out of range are just at the reporting limits.

Durga Ghosh (USGS) provided updates on the field audits schedule. She was able to do audits for both the Anne Arundel groups. She has yet to submit those audit reports to the data integrity

workgroup but will do that soon. Both audits went very well, and the groups are doing a great job. Their QAPPs are in place. In addition to the field audit, Durga also did a lab audit for the community college. She did not find anything that was irregular, and everything looks great. Durga was unable to do any tidal or nontidal audits and she will probably start doing those again in late August or early fall. August will check in with the group in regards to those audits and make sure everything is still on track. Durga will share the tentative outline for the audits. In terms of the other external non-USGS nontidal collectors, VA has done a great job of doing audits and sent reports to Durga over early summer. Durga has not had a chance to think about tidal monitoring yet and will probably kick that off next year, but she really needs more support for it. When Durga was over at USGS she found that some folks are interested in accompanying her and doing audits, so that might help distribute the load.

Durga explained that audits tend to get pushed down the priority list to last because QAPPs get precedent. This has been a trend throughout. She also shared that in the past Mark Nardi (USG) was able to secure some funds from EPA for field audits. However, at that time the covid-19 pandemic started, and the funds weren't spent because field audits were put on pause. Because they weren't spent, the funds were removed and sent elsewhere. Peter and Breck said they would talk to Lee and Kaylyn on Monday to see if these funds can be secured again.

2:10-2:50 [Decision Rules for Determining TP and TN](#)

Doug Moyer

Discussion:

Mike Mallonee (ICPRB) said when the Data Upload and Evaluation Tool (DUET) processes data into Chesapeake Environmental Data Repository (CEDR) it has a set of calculations it performs. He can send that to James Colgin. That would be a large sum of the parameters calculated based on the elements. Doug said that would be helpful. When they pull points from the portal, many have not gone through Quality Assurance. They would want to reproduce those Quality Assurance assessments and will work with jurisdictions through the Nontidal Network to address this.

Cindy Johnson said she spoke to Jay Armstrong, and he asked to contact him directly about this. For VA data, it's going to be what's available that will determine what to use because VA progressed from whole water to parts.

Doug Moyer said there are times when they have both whole water and parts available, and that's when it gets tricky. They can talk to Jay about that and if anything changes on order of priority based on using whole water or parts. They would like to do that for each of labs in NTN.

Doug Chambers said that there are method codes associated with them. Here is a [link to the USGS parameter codes](#). He suggested to perhaps use a decision tree for decision rules. He said looking at this for nitrogen several years ago, USGS put out notes that their method may not fully account for some of the particulate nitrogen. That's something that could move down in priority of decision rules.

Durga said that there is information in here that some of the groups don't deal every day and it may take longer to digest. It impacts all the labs. She suggested having some time for people to digest this information and then return to discuss it.

Doug agreed to do this and the group planned to reconvene approximately 4 weeks from now to have a specialty data integrity workgroup meeting on this topic.

Cindy Johnson said that VA has to submit metadata files to the Bay Program with historic and current MDLs and methods that may be helpful.

Doug Moyer said to contact him to have a call specific to your lab if interested.

2:50-3:05 Topics for Next DI Meeting

All

3:00 Adjourn

Participants

Alexandra Fries (UMCES), Amber DeMarr (CBL), August Goldfischer (CRC), Breck Sullivan (USGS), Carl Friedrichs (VIMS), Carol Cain (MD DNR), Chris Mason (USGS), Cindy Johnson (VA DEQ), Doug Chambers (USGS), Doug Moyer (USGS), Durga Ghosh (USGS), Heather Wright (ODU), Ian McMullen (DE DNREC), Jaclyn Mantell (CBL), Jake Kilczewski (MDH), James Colgin (USGS), Jerry Frank (CBL), Keri Maull (DE DNREC), Kevin Minga (ODU), Kristen Heyer (MD DNR), Lara Phillips (MDH), Laura Lockard (DE DNREC), Lexis Carter (ODU), Mariah Smith (University of Delaware), Mike Mallonee (ICPRB), Najma Khokhar (MDE), Nicholas Santoro (USGS), Pamela Higgins (PA DEP), Peter Tango (USGS), Renee Karrh (MD DNR), Suzanne Doughten (ODU), Tammy Zimmerman (USGS PA), Taylor Hughes (PA DEP), Tracee Cain (DE DCREC), Tyler Shenk (SRBC), Verónica Figueroa Negrón (UMCES)