

AGENDA
Data Integrity Workgroup (DI)
U.S. Fish and Wildlife Service
Chesapeake Bay Field Office
177 Admiral Cochrane Drive
Annapolis, MD 21401

Tuesday, March 19, 2019
10:00 - 3:00

Conference Line: 929-205-6099; Member ID: 852-928-779

Webinar: <https://zoom.us/j/852928779>

*If you are joining by webinar, please open the webinar first, then dial in.

Event Webpage:

https://www.chesapeakebay.net/what/event/data_integrity_workgroup_march_2019_meeting

Announcements, Meetings, Conferences:

- 11th National Water Monitoring Conference, March 25-29, 2019. Sheraton Denver Downtown Hotel, Denver, Colorado
 - Peter is going, and he mentioned it is a nice representation of the watershed. Next meeting in June, he will give an update of the conference.
 - Mike is presenting a poster.
- Citizen Science Association Conference, March 13-17, 2019. Raleigh NC
 - Peter also went to this conference and even though it was a national conference it had an international representation – New Zealand, Great Britain – describing how they are running their programs and work completed. There was a wonderful environmental justice panel, and the citizen monitoring program was well represented and gave a few presentations on the subject.
- Coastal and Estuarine Research Federation Conference, November 3-7, 2019. Mobile, Alabama. Abstracts due May 1, 2019
- Esri User Conference, July 8 -12, 2019. San Diego, CA

Bay Program Updates on WIPS, Funding, Leadership,

Michael/Tango

The Bay Program has a new director, Dana Aunkst.

Last week, a majority of the Bay Program members met in Richmond, VA for the Strategic Review System Biennale Meeting. The topics discussed what progress the program has made over the two years, ways to improve the Strategic Review System, prioritizing science needs for the GITs, and more.

People are very supportive of the Bay Program's work and are pushing to keep it going and possibly get more funding. MD executive leadership and possibly VA are pushing to keep the program fully funded.

To showcase the monitoring efforts of the state, Bruce would like to take the new Director on a monitoring cruise along with the new DNR Secretary Jeannie Haddaway-Riccio later this summer. Bruce will work with Peter to schedule this even if it is just for a couple of hours. Peter noted that Dana works only 2-3 days a week in Annapolis.

Lew Linker is the acting Associate Director for Science, Analysis, and Implementation. Jim Edward is back to Assistant Director, and he has mentioned that monitoring will be supported even if budgets are cut because without it, the Bay Program cannot make the decisions.

Every year an annual budget cycle is completed, and last year Bruce was close to cutting \$1,000,000 out of the monitoring budget. None of these cuts were taken that they had to offer up, and the state also provided new funds for monitoring efforts and resources. Bruce will find out in the next few days the amount of those new funds. The plan is to put \$100,000 towards the mainstem monitoring efforts and supporting staff.

The drafts for the MD WIPs have just gotten in front of the bay cabinet. Once they get the final blessing, it will be distributed to the local governments and be open for public comments. Both MD and VA are focusing on climate change initiatives.

The Conowingo Dam is now at capacity and is no longer trapping nitrogen, phosphorus, or sediment. As a result, there will be a separate WIP specifically for the Conowingo Dam. All the jurisdictions will be contributing to it. There is an RFP out now to address the additional loads from the dam and how to fund it. Bruce believes the RFP went out in February and the closing date is around March 28th.

2019 Monitoring Updates

MD/VA

Cruises will be maintained June – August for the mainstem. In 2018, there were record flows, so additional funding was used to do cruises pertaining to that issue. Due to these record freshwater flows, the salinity decreased tremendously. It is about 10 ppt less than what used to be seen in the surface waters. Peter is interested in looking over the USGS graphs on flow especially since this increase in freshwater flow is still hitting records in 2019. Bruce would like to work with Peter to look at nutrient concentrations along with real time data of what flows are coming in so that everyone can try and understand what the impacts from all of this are and how will it impact 2019. DNR always works with universities such as UMCES to do hypoxia forecasts for the summer, and with the continued high flows during the winter, the hypoxia forecast is probably going to be worse than average. DNR uses the monitoring results to validate what they are doing. Hopefully all the monitoring cruises can go through to get the data because last summer it was hard with all the storms. The issue of increased freshwater flows has received a lot of attention with the public and some stakeholders struggle to understand why action is required when a large flow could wipe the work away. This may require the workgroup and interested parties to find out more about this story. Bruce suggested that an ask is formed for more funding to look more into these freshwater flows, possibly going out and looking at a different parameter. It would be beneficial if some partners such as UMCES or VIMS asked Jim for this funding, between \$4,000-\$5,000. This additional research would help them gain more understanding on either the impacts of the benthic community, fishing community and the connection with living resources such as SAV. Bruce believes Jim would be receptive to this request.

Peter discussed the challenges with the SAV survey due to weather and budgeting issues with the aircraft company. Currently researchers are looking into using satellite imagery and interpretation for these types of surveys. It is being investigated to see if it can help fill in info from last year. Peter and Brooke Landry put in a proposal for a STAC workshop to investigate this option more fully such as who can acquire this information, how to use it, should they use a hybrid method etc. Bruce asked if this workshop will be used to look at the data. Peter responded it will involve a little of that along with what should be the protocol if they decide to use it. Kristen asked if it could be used for something other than SAV. Peter said that for now they are just looking to use it for SAV, but he has a meeting with NASA later today to discuss other parameters and different interpretations that can be used with this method. Kristen knows NOAA is trying to work out the same thing with the satellite imagery for phytoplankton. As a result, it would be a natural step to move onto other analyses once they know it is working for the SAV program. Bruce asked if the SAV aerial overflights are in place for this year. Peter stated that he knows the company was saved from a bigger company. Cindy mentioned that the governor has not signed the approval yet, but the funding for the SAV portion went through the house so the Virginia portion is at least covered. Peter knows MDE has put in some funds for the Maryland side. That is all the pieces he knows of, but it seems like everything is in place.

Peter mentioned an RFP for a vertical profile test was submitted, and the Chesapeake Bay Trust is working through any proposals retrieved. He will let the workgroup know if he hears anything else.

Audit Reports and Updates

Ghosh

Material: [Presentation](#)

Another audit was completed and a comparison between the old and new methods was analyzed. Kevin mentioned that there is misinterpretation with the pre-2004 data. There was an auto-sampler used on storm events only and the modified DH-48 was used the entire time all the way up to the new methods.

With the side-by-side companions, Durga mentioned there was some concern with how valid the information would be now. The study stated it would be done at two locations, but Kevin and others looked at one of them for two storm events (8/4/18 and 8/22/18). Based on what they have, Durga believes they are doing fine, but because of the concerns on whether this study is going to be enough to comment on some of the historically collected data, the answer is no. Durga states this needs to be kept in mind, but since the study was done, and the results look fine, she thinks they can move on. Durga then presented on the side-by-side highlights. Storm one samples were collected as Split duplicates, and storm two samples were collected as Concurrent duplicates. For study result 1, there was no great variability. They are mostly all within 10% variation. The next study she did was looking to see if the split or concurrent duplicate results were comparable. In both cases, variability is well within limits. For the Historic Data Review, large variability in data was observed for TP and TSS when collected using an autosampler before 2004. Kevin commented on these graphs stating that the autosampler was used pre-2004, and this is seen through the multiple dots on the graph lines not only catching the peak but collected from the bottom too. Kevin also mentioned that the storms he was present for were gigantic. He was shooting for 7,000 cfs and got over 14,000 cfs. Also,

for the TSS (DH-95) and SSC (DH-48), there was one outlier that threw everything off. They did not throw them out, but they are the drivers for why there is approximately 25% variation.

Doug asked if anyone has looked at the variability of dups over the long-term for within and between sampler types. Durga said she started on this before the shutdown, and it is ongoing. She mentioned she will provide an update once she has something. Doug asked if they should consider this full record in their trend analysis because they need to consider how much is environmental and how much is change in sample protocols. He also notes to Durga that what would be helpful on these plots is bringing in the hydrology to consider how different the hydrology is throughout the years. This could help show if what is being caught is a hydrological difference or concentration difference.

In summary, they may move on because of the input from the study and the limited resources. Durga will go back and include some of the hydrology information on these graphs.

Kevin was curious if they were going to talk about Non-tidal field audits. Durga said she does not have a permanent schedule. Peter and Durga have been talking about money, and she is having trouble getting money from USGS to do it. Durga needs someone to come with her to help out, but no one can do it. For a year's audit, it would be a weeks time from someone to help. Bruce stated that the workgroup will make this a priority. He suggested that a couple of dates should be given for people to consider. Durga has a potential schedule so she will send it out.

Incorporating Non-traditional Labs in CBP Split Samples All Blind Audits and USGS Reference Samples.

Material: [Presentation](#)

The Chesapeake Bay Program has requirements and recommendations for monitoring programs. In the past, there was one agency that does everything. They are solely responsible for the monitoring program including sending the samples to the lab and loading the data. The CBP is moving away from this due to the Chesapeake Monitoring Cooperative. It is no longer one organization. It is several small groups providing samples to various other labs. There are current requirements that the CBP may not be able to keep doing with these new groups such as mandated QA/QC procedures and external performance assessments. Durga asked for the workgroup's input on if they should continue with all three external audits for performance testing or can they go with any two. The workgroup discussed how there is a capacity for the split samples and ways to change their split lab methods, but they decided that before changing this the labs should focus on easier measures. Therefore, it was decided the monitoring groups should follow a tiered approach starting with doing USGS Reference Sample, then blind audit, followed by split sample. If problems are showing up with USGS and blind audits, then there is no reason for the lab to continue with the split samples. This will help them from decreasing the split samples. All the labs so far do all three except for Blue Water Baltimore. Bruce will reach out to them to see if they are willing to work in a coordinated split sample program. Durga will reach out to Elgin about possibly changing the split samplers.

Bruce stated the labs contributing to the Chesapeake Bay Program should be included in this workgroup so that the workgroup can help them and share information.

Liz questioned if this was only available for labs at tier 3 because tier 2 groups would like to get CBP approval. Bruce mentioned it was difficult at this time because of a resource issue. They will bring this topic back up in the fall because the goal is get everyone engaged.

Shallow Water Monitoring

All

MD and VA met with Peter to go over the shallow water monitoring program. The meeting concluded that they don't want to go back and redo all the tributaries, so they are talking about how to better use the data. They will be working with VIMS to lay out a plan to move forward with this program such as using new technology. Peter commented how it has taken around 15 years to get around the bay which is different from other monitoring programs which have annual or three year reports, but shallow water monitoring is useful to use when approaching water quality. Peter agrees with Bruce that there is a lot of interest and value in this program and believes it will go forward with funding with possibly targeting different areas with certain resources. He states they should always be looking for other funding options and organizations that could help.

This year there is legislation related to nutrient management to increase monitoring. NOAA helped fund nine long-term monitoring sites on the eastern shore and they were maintained until 2013 due to budgeting constraints. This legislation is stating to reinstate these nine continuing monitoring sites. They are aware of the fiscal constraint for doing this action, and Bruce will keep the workgroup updated on this legislation.

Peter mentioned a Fish Habitat workshop was released which provided response from the community about local scale conditions and providing those monitoring efforts to smaller watersheds.

Lunch

Electronic Data Reporting / Eliminating Field Sheets

All

Cindy mentioned how they are advising their project plans and are curious if they should eliminate field sheets. The last time she talked about this they were afraid they would lose data, but the manufacturer of the tool tracking the data states they will not lose data. Currently the workers are using the device to log in the data, and at the end of day, subscribing it to field sheets. Workgroup members stated that they have not lost a lot of data and they download it each day. Doug stated his concern is that the workers are not looking at the data before leaving the site when only using the device. If they see an error, they can't go back to the site and correct it. Bruce agreed they should not just trust the instrument. It is decided Cindy will tell the workers they can use whatever is most comfortable for them, but it must be either the instrument or the field sheets. Also, if the instrument is used, they need to check the data while still at the site.

Lab Methods: Changing desiccants; and time limit for PNC filters to remain in the desiccator dish

All

Cindy had a question about her desiccants, but it was concluded that Cindy keep doing the same procedure she is doing now.

Coordinated Split Sample Program

- November 2019 Mainstem Results **Mallonee**
 - Material: [Presentation](#)
 - CHLA had a high point (18.631), but there is no need to be concerned until there is more than one.
 - The comment was made that TSS could be rising because of salt concentration, but TSS has been better than this. These results are low because 5 mg/l are the average. However, between 1 – 2 mg/l for multiple analyst is good.
- December 2018 Tributary Results **Mallonee**
 - Material: [Presentation](#)
 - Don mentioned that you will see a change in CHLA. There isn't suppose to be the point 2.297.
- UMCES Appalachian Lab was added- March 11, 2019

Blind Audit Program

All

Jerry discussed that they received data from the last round except for one and this is due to the government shutdown. They will receive it soon. The next round of samples go out the second week of April. If the workgroup knows of any labs interested in participating to please get them in touch with Jerry. He will get them involved in the next round. Anne Arundel Community College isn't participating yet, but they will be on board for the next round in April. Blue Water Baltimore is participating too.

Topics and Date for Next DI Meeting

All

The next meeting will probably be in June at the Chesapeake Bay Laboratory. If it is not, it might be held in Richmond. However, Richmond might be the location for the fall meeting. Jerry's only request is that it is after the week of the 17th/18th of June. He would like that entire week available. Kristen has a cruise the first and the last week of June. Jerry said closer to May would be better.

Bruce will follow up with USGS, Doug and Durga on the potential for lab or field audits to check to see if everyone is following the CBP methods. Durga will send out a potential schedule so people may help.

Next meeting should have a presentation on a follow-up with Elgin and Rebecca's work.

The next meeting will also follow up with Durga on the coordinated split samples to see if they should keep with four splits or look at changing it. Durga will talk with Elgin about this before the meeting.

Participants

Durga Ghosh, Kristen Heyer, Mike Mallonee, Peter Tango, Bruce Michael, Betty Niekirk, Liz Chudoba, Douglas Moyer, Jaclyn Mantell, Jerry Frank, Kim Blodnikar, Suzanne Doughten, Heather Wright, Kevin McGonagall, Carl Freidrichs, Cindy Johnson, Jay Armstrong, James Beckley, Sarah Giordano, Kathy Knowles, Breck Sullivan