MINUTES

Data Integrity Workgroup (DI)
EPA Chesapeake Bay Program Office
Joe Macknis Memorial Conference Room
Wednesday, March 30, 2016
10:00 - 3:00

Conference Line: 866-299-3188 Code: 4102675731
Adobe Connect: https://epawebconferencing.acms.com/diwg/

Announcements

- STAC Integrating and Leveraging Monitoring Networks Workshop; April 12-13
- Road Salt Usage and Environmental Impacts, Laurel, MD, April 13, 2016
- 10th National Water Quality Monitoring Conference; Tampa FL, May 2-6,
- Choose Clean Water Conference, Annapolis, MD, May 24-25, 2016
- National Nonpoint Source Monitoring Conference, Salt Lake City, Utah, Aug 23-25, 2016
- National Conference on Ecosystem Restoration Coral Springs, FL, April 18-22

Suzanne Doughten from ODU Lab: Lab Audit by DCLS for the Virginia Environmental Lab Program. ODU currently has the noncommercial certification.
The audit required the following:

- The lab needs to track TSS and PC/PN filter lot numbers, so on all filtration sheets and other documentation, the lot number of filters need to be listed.
- PP extraction times need to be documented. Must log on analytical sheets (where all reagents are listed) all start times when PP filters are extracted.
- External Calibration Weights cannot be sent out of the lab, so the vendor will now certify the weights in-lab. But for the smaller weights, 0.05 mg and 0.5 mg, a second set was ordered to always have a set in-lab.

The VELAP audit report will be sent to Mary Ellen Ley.
Estimate of cost to be certified: ~$5,000 every two years according to Suzanne Doughten

Water Clarity- Strong water clarity the past few years, but over a 30 year period, the data doesn't support a strong improvement. A Bay journal article will be posted about the issue.

SAV survey results will be delivered to CBP. Data shows higher numbers which is good news.

2016 Monitoring Schedule and Changes Michael/Johnson
VIRGINIA: No changes for VA monitoring schedule. VIMS has 5 con mon sites on the eastern shore, with an additional 2 or 3 sites through their NEERS program. A new segment has been rotated in: CB7 for the next three years. Looking into nontidal sites to include analyses for

anions and cations. VA wants to continue its involvement with the phytoplankton program with Maryland, but unsure how that might happen with logistics of Todd Edgerton, lab supervisor, moving.
Algal Blooms: York and Rappahannock- Heterocapsa algal bloom observed.

MARYLAND: MD's monitoring program includes 33 Con mon sites, 3 Dataflow segments. Finishing up segment CB2. No real new sites. Maryland was doing C+D Canal, but passed water clarity criteria, based on one year's worth of data, so monitoring will not continue. Mark Trice is conducting assessment to see how many segments of Maryland have passed their water clarity standards. It is reported every year to see how many segments pass SAV and water clarity standards. This information will be presented to SAV workgroup tomorrow. Hopefully more segments will begin passing MD's water clarity standards.
Maryland continues to service CBIBs Buoys for NOAA (10 buoys, plus additional buoys from other funding). Maryland will continue with its water quality profiler in Harris Creek, an oyster restoration site, as well as two Con mon sites in this area.
Maryland is also implementing a phytoplankton program working with CBP, VIMS, ODU, and VA. It will not include all sites as before, but done to a similar protocol as before.
Bloom conditions: Maryland has been working with ODU to observe a lot of algal bloom species at different times of the year. Collecting a lot more samples, coordinating with VA, such as in the lower Potomac. Bruce Michael wants to do a phytoplankton split sample with VA, but it might be delayed a bit due to VA's staff situation. Bruce would like for a meeting (with Rich Batiuk, Peter Tango, and Mary Ellen Ley) to be scheduled for this in the next couple months.
Maryland is getting ready to sign an agreement with Maryland State Highway Administration to fund Continuous conductivity loggers. Some of those sites will also have associated benthic samples included.

Cruise schedules for tidal area 2016- DOCUMENT passed out. It indicates when split samples are being collected.

Conowingo Dam High Flow Event; February 26-29 Michael
The Lower Susquenhanna Watershed Assessment Report came out early March. One of the recommendations included enhanced monitoring at Conowingo dam.
Conowingo Dam High Flow EVENT- anything over 100,000 cubic feet/sec is to be recorded. Feb 26-29 was the most recent event: 183,000 cubic feet/sec was recorded. Samples were acquired from the dam itself, as well as points upstream including Marietta and Holtwood. These samples were taken in time to use for the model. University of Maryland will also be able to use these samples for experiments on the bio-reactivity of the sediments and associated nutrients.
In the original contract, Exelon had agreed to sample up to 6 high flow events. Three have already been collected. However, no more data will be used for the model after June 2016, so the funding for any subsequent high flow events might need to be re-worked. If Exelon were to pull out afterward, the effort may need to go back to state agencies to continue this sampling work post 2016. Since not all 6 flow events will be used, Exelon is developing a Conowingo-specific model to help inform Bay Program modeling inputs. Also looking for an independent review panel to review that work.

Review and Approval of Revisions to Analytical Methods for Chesapeake Bay Water Quality Monitoring Programs Ley

HANDOUT- CBPO QA Tasks – March 2016
Deadline to finish: May 2016.
Comments required ASAP before the end of April.

Publish on the Web. Then in May, have a hard copy printed.
Introduction- reformatted. Cindy Johnson requested that under the Lab Tech roles, where it's specified that the lab tech can be under the supervision of a more experienced person to substitute for lab experience, this exception should be extended for field personnel/specialist.
Chapter 2- reformatted.
Chapter 3- regarding data submission. Mary Ellen and Mike Mallonnee will start that chapter development for the manual. On the Chesapeake Bay Webpage, Duet Guidance is provided.
Chapter 4: Tidal water quality sampling. This document was drafted last summer 2015. Field audits will be based on these Tidal WQ sampling procedures – Suzanne Doughten, Kristin Heyer and Matt Carter to review.
Chapter 5: Nontidal sampling procedures. Drafted last fall 2015. Changes were made to the storm sampling. Doug Moyer, USGS, discussed how larger peaks of storms were sometimes missed, so language was added to ask for emphasis for the larger storms that come through. Doubling of storms is a guide, but not the only criteria. The collection of at least 1 storm event per quarter is desired to capture seasonal effects, but with less priority than larger storms.
Doug Moyer has agreed to pull together a directory of stations that shows the diagnostics looked at within the model, organized by each sampling group, to allow for better targeting of stations for storm sampling.
This information is being dispersed through the Integrated Monitoring Network Workgroup (under STAR). We need to make sure this information goes through every state.
Table of stations added for Water Year 2016- might need to be moved to an addendum, along with another table of tidal stations.
Field QC Sample Collection Interim Procedures for NTN are now incorporated into Chapter 5.
Chapter 6: Lab QA and Lab Methods Sections. Lab QA is mostly completed. Discussion was had of **table 6.2 Frequency of Routine Calibration, Blank, and QC Samples.**

- MQL/PQL standard in calibration- discussed that it is not a requirement for running a separate sample. Discussed that it might be able to stay in the manual, but only as an annual procedure.
- CCV in the table was also discussed to be changed from "one per 20 samples" to "one per 10 samples".
- In LCS, "90-110% recovery of known concentration" is used with EPA methods, but when using Standard Methods, it's actually 85-115% then charted to set limits. It was discussed when LCS is done: most participants agreed at the beginning of the day, and then CCVs throughout the day. NO SRM at the end of the day or batch. The LCS is used to prove the calibration curve. Once the curve is proven, then the CCV proves no drift. A CCV is one of the calibration standards.
- Jay Armstrong will pdf sections of Standard Methods discussed above and will send to Mary Ellen.

- Under the "method blank" row- discussion was had about the "reject sample results if blank ≥ PQL" and how to reword. Suzanne suggested looking at a table provided by the NELAC Institute for reference.
- "Duplicate Sample": RPD for duplicates- discussion to remove RPD for duplicates and add "Analyte-specific See Table 2.3" to the RPD for duplicates section in the acceptance criteria box.
- Mary Ellen will edit this table and send to participants.

PCN Procedure- Jay Armstrong mentioned a 5% acceptance criteria in EPA 440 on QC sample. This manual has guidelines that say 90%-100% acceptance. Chapter 2 has conflicting numbers.. It was agreed to make the procedure manual consistent that 10% is reasonable.
This table will be included in every method. Currently, 80%-120% is written on pg2-16 for chapter 2, which should now be changed 90%-110%.

For Chapter 6 Lab methods, participants should respond with approval of these methods:

D.1- Alkaline Persulfate Digestion- Final copy on the web.
D.2- Ammonia- Previously reviewed. Final copy on the web. Jay Armstrong- mentioned that in the Ammonia method the manual does not mention not doing the distillation. "These samples are not being distilled" Should be the language added.
D.3- Chlorophyll and Pheophytin- from 1999- keep same.
D.4- CDOM- Leave as is.
D.5- Nitrate+ Nitrite- Mary Ellen will send to everyone for review.
D.6- Nitrite- Mary Ellen will send to everyone for review
D.7- Organic Carbon- Mary Ellen will send to everyone for review
D.8- Orthophosphate- final copy.
D.9- Particulate N and PC- not on the web. Mary Ellen will work on the edits from CBL.
D.10- Particulate P Digestion- not on the web. Mary Ellen will work on.
D.11-Total Suspended Solids- Mary Ellen changed balance calibration language on p. 4 G5. "NIST traceable external weights". L02- method code.
D.12- Fixed Suspended Solids- P2 f2- constant weight- within 10% of initial weight as definition of what is a constant weight, but will add "as defined in the method used". Under H Quality Control, add "or do a method blank".
D.13- Silica- draft complete.

These methods will be edited and resent out for review.

Jeni Keisman, chair of Integrated Trends and Analysis Team, has requested tidal WQ data, and had asked a question prior to the meeting to understand about how the data is reported regarding the detection limit. In tidal, currently the labs report values below detect, in a separate BMDL table. The data is censored in the final table to equal the detection limit, with a less than qualifier. Whereas data between the MDL and Reporting Limit is the actual value, with a "G"qualifier. The values between the detection and reporting limit are available to the public. In non-tidal, not all labs are reporting below detect.

We will have MDL/PQL on the next agenda most likely.

Comparison of Mid-Atlantic Tributary Assessment Coalition (Riverkeeper) methods to CBP Protocols Caroline Donovan

See PRESENTATION
See Comparison Document of CBP vs MTAC Core Parameters

IAN was originally doing individual report cards for individual watershed organizations, but then began to standardize the methods to collect monitoring data to allow for the creation of comparable report cards. A tidal protocol document was created for the watershed organizations to create their own report cards.
Tidal Protocol Document
Non-Tidal Protocol Document

Several watershed organizations, use the UMCES Horn Point Lab for nutrients and chlorophyll. UMCES Horn Point lab staff does not participate in DIWG but analyzes inter-laboratory results. Bruce Michael and others discussed having Horn Point Lab participate in the split sample program for the mainstem. Bruce Michael will talk to Horn Point Lab to discuss further involvement.

This discussion of the MTAC protocol relates to the Chesapeake Monitoring Cooperative- is this protocol similar enough to the CBP field procedures to be used in criteria assessment? Specifically looking at the Tier 3 groups (the highest data quality).
Caroline discussed some groups that have provided their QAPPs for possible Tier 3 approval: Blue Water Baltimore, Nanticoke Watershed Alliance, South River Federation, Chester River Association, to name a few.
It had been discussed in the past to do field audits on the Tier 3 candidates, including a review of the the QAPP to make sure it is executed.
Caroline asked for feedback on the criteria used for comparing Tier 3 procedures to the CBP's. One question to start asking these groups are regarding Design Objectives and to compare them to CBP Sampling Designs.

Lunch

Field Audit Process and Schedule for 2016 Ley
NONTIDAL:
Brenda Majedi from Maryland and USGS office will help in this Field Audit Process.
April- The PA USGS and SRBC field audits lab will be a priority, as well as the actual PADEP lab itself, if possible.
Checklists will be developed to standardize the process.
June- Delware DNREC
August- West Virginia USGS
Possible training/ info exchange session in West Virginia this Fall- meant for all non-tidal sampling field staff.
TIDAL:
Review of Mainstems cruises

Virginia cannot assist until after July (travel funds renew at that time)
Citizen Monitoring Groups- Potential Tier 3 data collectors: The group discussed focusing on two (possible groups include: Blue Water Baltimore, Nanticoke, South River) citizen groups on which to perform a field audit. It was discussed that the Bay Program will not approve the QAPPs, but instead the Citizen Monitoring project team will review them.
These groups have not been audited before, except when Nanticoke had high bacteria samples DNR investigated. Need to discuss a team for the reviews of these Tier 3 groups. Bruce Michael has said that DNR would be interested to get involved. VADEQ, through Matt Carter, can help. Cindy Johnson will also send VDEQ audit check lists for tidal. Looking at the timeline of Sept-October for these audits to occur.

The beta survey to citizen monitoring groups is going out this week. April 15 will be the full survey send-out. The idea is to identify groups that could easily be added to a Tier 3 level.

Tributaries
Discussion about how to put the CBP tidal tributary sampling on the Field Audit Schedule. Mary Ellen said that coordination will be key to accomplish all Field Audits.

Coordinated Split Sample Program

- November/February Mainstem Results — Mallonee

- December Tributary Results — Mallonee
    - Dongmei Wang will look into OWML's numbers since they've been consistently high for the past few months. There was discussion about how sharing the lab with other faculty might be contributing to this issue. Mike Mallonee will try to forward her results for the March Split Sample to help identify the issue.
    - Kristen Heyer and Dongmei Wang brought up the concern about odd white plastic pieces in the last split samples in March. The pieces look like hard plastic, not from a carboy. Mary Ellen added that a possible solution would be to add DI water to any of the bottles to notice floating particles.

USGS Reference Samples — Mallonee
DCLS- SKALAR, Segmented Flow Analyzer
DHMH- Latchet 8500 Series 2 (FIA)
DNREC- OI/ALPKEM Segmented flow Analyzer
CBL- K0NELKB Lab Aquakem 250 Discrete Analyzer
ODU- Latchet 8500 Series 2 (FIA)

It was decided that TKN to take off of the USGS Reference Samples charts from now on.

DNREC, OWML, DCLS will conduct follow up for some on results with high Z values that occurred in the USGS Reference Samples.

Blind Audit Report — Frank

All participants in USGS Reference Samples: Please let Jerry Frank know how everyone is analyzing their Chlorophyll.

PA vs MD Non Tidal Split Comparison Study Michael

All PA/MD split samples have been collected. Bill Romano is currently working on the comparison analysis. The results will be ready by the next DI meeting.

Chesapeake Bay Mid-Point Assessment Update Michael

The watershed model and Water Quality model will be updated with data from 2015. All of the modeling work needs to be done by this calendar year (2016). The Mid Point Assessment will be completed 2018, with goal of model done by early 2017. The modeling workgroup is updating the model in phases, using water year 2014, with each phase having a comment period. Still updating phase 5.2. The Land Use update might need a three month extension, delaying the TMDL process. This will need approval by the Management Board and the PCS.

Bruce Michael discussed how DNR and the CBP will start developing mitigation strategies for the Conowingo Dam, as well as possibly relicensing with Exelon in this process.

Our next meeting will be at CBL on July 7, 2016.

PARTICIPANTS

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