# MINUTES

## Data Integrity Workgroup (DIWG)

Potomac River Fisheries Commission Office, Colonial Beach, VA.
Tuesday, April 14, 2015
10:00 am - 3:00 pm

*Meeting Webpage:*
*http://www.chesapeakebay.net/S=0/calendar/event/22407/*

## ACTION ITEMS:

- Share news about the Citizen Science Association newly established working groups and steering committees that came out of the Citizen Science Conference. (Lea Rubin)
- Add a section to the guidance document for dealing with ice during sampling. (Mary Ellen Ley)
- Contact Molly Pulket to inform her of the decision on dealing with ice when sampling. (Mike Mallonee and Kevin McGonigal)
- Mark Brickner found a spreadsheet with details on field collection methods (i.e. churn, grab) and will share this with Doug Moyer, Mary Ellen Ley, and Molly Pulket. (Mark Brickner)
- Explore the newly found historical split sample study data. (Mike Mallonee)
- Follow-up with data users to see if additional data codes would be useful. (Mike Mallonee)
- A meeting will take place with representatives from MDNR, VADEQ, CBP and others to begin discussions on reinstating the MD phytoplankton program. (Bruce Michael)

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## MINUTES:

### Announcements

- For information on the management strategies for the Chesapeake Bay Program Watershed Agreement visit: http://www.chesapeakebay.net/managementstrategies
- CERF Biannual Conference: Nov. 8-12, 2015, Portland, OR
- Alliance for the Chesapeake Bay was awarded EPA Citizens Monitoring Grant
- DHMH laboratories are relocating

### 2015 Monitoring Schedule and Changes

Maryland and Virginia both confirmed that 2015 monitoring is on schedule and the Maryland continuous monitoring stations are set-up and operational.

## EPA Citizens Monitoring Grant

The Alliance for the Chesapeake Bay and the Chesapeake Bay Program are aiming for the start date of May 1, 2015. Several partners were included in the grant proposal including a Maryland chapter of the Izaak Walton League of America, Alliance for Aquatic Resource Monitoring (ALLARM) in Pennsylvania, and the University of Maryland Center For Environmental Science (UMCES). One of the first steps once the grant is finalized, will be to identify the citizens monitoring programs in the watershed. These programs will be mostly water quality focused for now, but the Bay Program is looking to fill monitoring gaps for the Watershed Agreement, and therefore the scope will expand.

DISCUSSION:

- Lea Rubin and Peter Tango attended the Citizen Science Association inaugural nation-wide citizen's science conference on February 10th-12th, 2015. They gave a presentation on insights from the conference to STAR on February 27, 2015.
- ACTION: Lea Rubin will share news about the Citizen Science Association newly established working groups and steering committees that came out of the Citizen Science Conference.
- The DIWG discussed the importance of involving partner volunteer groups in the split sample, USGS reference sample, and blind audit comparison studies.
- VADEQ established a system for developing quality assurance plans with volunteer monitoring groups.
    - The Alliance for the Chesapeake Bay has a quality assurance plan that will apply to volunteer groups as long as they are trained by The Alliance, and therefore don't need an independent quality assurance plan for each volunteer group.

## Non Tidal Network Update

*Six NTN Stations from PA to MD*

There were six Nontidal Network sampling sites that were transitioned from Pennsylvania DEP to Maryland DNR. The Chesapeake Bay Program funded a comparison study of the six sites sampled by both Pennsylvania and Maryland.

DISCUSSION:

*Nontidal Network sampling in inclement weather*

What if the water is frozen during a routine sampling event?

- Two of the PA sites were missed in January and February due to ice.
- VADEQ does not make up the routine samples if they were missed due to ice.
- VA USGS does not make up for missed routine samples due to ice, however they do attempt to make up for storm samples.
- NY experience a lot of ice.
- DE did not have problems with ice.

How should the states report ice during a routine sampling event?

- When reporting to DUET, report as a routine sampling event, but include in the comments section: "ice, no sample, no data associated with the event"
- If the sample was not collected for some reason, there should still be documentation of the attempt and why that sample was not collected.
- ACTION: Mary Ellen will add a section to the guidance document for dealing with ice during sampling.
- ACTION: Mike Mallonee and Kevin McGonigal will contact Molly Pulket to inform her of the decision on dealing with ice when sampling.
- ACTION: Mark Brickner found a spreadsheet with details on field collection methods (i.e. churn, grab) and will share this with Doug Moyer, Mary Ellen Ley, and Molly Pulket.

*Split Sample Studies*

- ACTION: Mike Mallonee will explore the newly found historical split sample study data, however it is difficult to compare to recent split samples because only two split samples were performed per year as opposed to the current split samples conducted quarterly.

## Data Reporting: Turbidity Method Codes

CEDR Turbidity Methods Codes Chesapeake Environmental Data Repository (living resources and water quality database)

**Issue:** The MD-USGS office is using a YSI 6136 turbidity sensor that is a Formazin Nephelometric Unit, but entering their data under the Substance Identification Name: TURB_NTU for a Nephelometric Method.

**Resolution:** There is now a Substance Identification Name for a Formazin Nephelometric Unit: TURB_FNU. However, the TURB_NTU and TURB_FNU appear to retrieve identical data, and therefore the Workgroup must discuss how to proceed.

DISCUSSION:

- The difference between TURB_NTU and TURB_FNU is the substance you're using to calibrate you're YSI meter with, however, the sampling results are equivalent.
- Should we recode all the old data so that all TURB_NTU and TURB_FNU data are under one method code?
    - Having differing method codes cause confusion for analysts. It may cause the assumption that the different method codes for data means non-comparable data.
    - There was a recommendation that the Workgroup continue to identify samples with the NTU and FNU codes accordingly, due to the rigor in which the system was created, and the potential for difference in the data to come out in the future as a long-term trend.

- ACTION: Data providers will rename data, according to the TURB_NTU or TURB_FNU identifier.
- Mary Ellen Ley found a 15 page document with all turbidity sensors/units method codes. Mary Ellen will evaluate the use of the methods codes in the document.
- USGS published a paper identifying a regional suspended sediment turbidity regression equation to use as a baseline when implementing new suspended sediment continuous monitoring stations.
- USGS is trying to couple stream gauges with continuous monitors, by integrating the continuous monitor cost into the cost of establishing a stream gauge.
    - What would it cost USGS to set up continuous monitors to collect nutrient samples along with turbidity?
        - Estimate: $25,000 per site
- Continuous monitoring stations are deployed either at a fixed depth within a PVC pipe, or fixed to a bridge. Most continuous monitors in the Chesapeake are bridge deployments.

*Integrated monitoring Networks Workgroup Proposal:*

Not all states are collecting turbidity measurements for NTN, this is a conversation for the Integrated Networks Workgroup, as well as the move towards more continuous monitoring stations to capture high-frequency turbidity data.

### Designation of isokinetic sample type *(Matt Carter and Cindy Johnson)*

CEDR.SharedData.SampleType Table

**Recommendation:** Add a field to designate whether a sample was collected using an isokinetic instrument or a grab sample.

DISCUSSION:

- Would these designations be considered two different HVIC data codes?
- ACTION: Mike Mallonee will follow-up with data users to see if additional data codes would be useful.

### MD Phytoplankton Monitoring Program

Maryland is interested in reinstituting their phytoplankton monitoring program. Maryland had two historic programs, one of which was a CBP program in coordination with Virginia, and secondly, a program targeted at fungal algal blooms. There is strong interest from Claire Buchanan (ICPRB) in reinstating the Maryland phytoplankton program.

DISCUSSION:

- The counting protocol is the significant difference between the Maryland and Virginia program methods.

- It is imperative that a reinstated phytoplankton monitoring program be comparable with historic data and Virginia data.
- If interested in comparing monitoring data to satellite imagery, the program would need to focus on surface samples rather than a depth integrated samples.
- ACTION: A meeting will take place with representatives from MDNR, VADEQ, CBP and others to begin discussions on reinstating the MD phytoplankton program.

## Quality and Documentation related to CB Watershed *(Bruce Michael)*

*Stream Habitat Assessments*

In support of the Watershed Agreement, watershed state representatives will come together to form a new workgroup for the purposes of managing a collective stream health database and collection program. Bruce along with others are currently identifying those key players to join the workgroup.

## Lower Susquehanna River Enhanced Monitoring Study *(Bruce Michael)*

The Lower Susquehanna River Watershed Assessment is a high profile issue. If nothing is done to mitigate the nutrient and sediment loading from the watershed, the Chesapeake Bay will not meet its standard attainment assessments in 2025. All data being collected for this project will be used in the 2017 mid-point assessment and the dam relicensing. April 6th, 2015 was the first recorded storm event for the LSRWA enhanced monitoring project. The QUAPP's for this project are going through Mary Ellen Ley (Quality Assurance Officer).

For more information: http://mddnr.chesapeakebay.net/LSRWA/index.cfm

## Coordinated Split Sample Program *(Mike Mallonee)*

- November/February Mainstem Results
    - ODU could not determine the reason for the low result in TDP. They double checked their result, and it was reported correctly.
- December/March Tributary Results

## Blind Audit Update *(Jerry Frank)*

- Jerry Frank received the winter samples.
- Corrected DOC samples will be going out this week.
- Final report will go out after winter samples are recorded. Summer samples look good.

**Methods for Wastewaters in the Federal Register** *(Mary Ellen Ley)*

EPA has proposed new rules for the analysis of wastewater samples in the Feb. 19, 2015 Federal Register. The proposal may be accessed here:
http://water.epa.gov/scitech/methods/cwa/index.cfm

Some of the changes that may interest the Data Integrity Workgroup include:

*Method Changes:*

- Total Organic Carbon (TOC) combustion
- Proposed addition of the USGS method "Colorimetric Determination of Nitrate Plus Nitrite in Water by Enzymatic Reduction, Automated Discrete Analyzer Methods" for the analytes nitrate, nitrite, and combined nitrate-nitrite.

*MDL Procedure Changes:*

- Laboratories would be required to evaluate the MDL to account for background levels of contamination. As laboratory methods become more and more sensitive, background levels of contamination are more likely to contribute to the result. This modification would reduce false positive detects. MDLs that represent multiple instruments: if a laboratory uses MDL values that represent multiple instruments, then the laboratory would be required to calculate the MDL using spiked samples and blank samples from all of these instruments. Currently, laboratories can run all of their MDL samples on the most sensitive instrument, and then use that MDL for other instruments. This modification will make the MDL more representative of the laboratory's actual capability.

NEXT MEETING: Tuesday, July 14th, 2015 at Chesapeake Biological Laboratory

## ATTENDANCE:

| Leadership | Affiliation | Email |
|---|---|---|
| Bruce Michael (Co-Chair) | MDNR | Bruce.Michael@maryland.gov |
| Cindy Johnson (Co-Chair) | VA DEQ | csjohnson@deq.virginia.gov |
| Mary Ellen Ley (Coordinator) | USGS/CBPO | mley@chesapeakebay.net |
| Lea Rubin (Monitoring Staff) | CRC/CBPO | lrubin@chesapeakebay.net |

| Participants | Affiliation | Email |
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| Al Robertson | DC DOH | robertson.al@epa.gov |
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