



Integrated Monitoring Networks Workgroup (INWG) Conference Call

Wednesday, March 16, 2016

1:00- 3:30 PM

CBPO Location: 303 Conference Room

Conference Line: 1-866-299-3188 Code 267-985-6222

Adobe Connect: <http://epawebconferencing.acms.com/inwg/> (enter as guest)

Meeting Materials: <http://www.chesapeakebay.net/calendar/event/23765>

Minutes

1:00 Welcome, Introductions, Announcements (*Peter Tango – USGS@CBPO, Coordinator*)

1:10 Citizen-based and Nontraditional Monitoring Survey across the Chesapeake Watershed – (*Lea Rubin, Chesapeake Monitoring Outreach Coordinator, IWLA*)

The citizen-based and nontraditional monitoring integration project is producing a Prioritization Report to catalogue and prioritize 100 monitoring groups in the Chesapeake Bay watershed for integration into the CBP Partnership based on the information gaps of the Partnership. These information gaps will be identified in collaboration with the INWG. The first step to establish how the citizen-based and nontraditional monitoring community can fill some of these information gaps is to take an inventory of what monitoring is taking place. To ensure we are collecting the best information to accomplish this task, the citizen-based and nontraditional monitoring integration project team would like feedback from the INWG on the survey questions going out to the over 550 monitoring groups in the watershed.

- There is a new name for the Citizen Science Monitoring Initiative: **Chesapeake Monitoring Cooperative**.
- There is also a new Project Manager for the Alliance for the Chesapeake Bay- **Anne Dunkel**.
- The goal of the Cooperative: To catalog and prioritize over 100 citizen monitoring groups. A survey will soon be sent to these groups to gain an idea of what information is available, and how to then integrate that data. The goal is to insure that we're getting the highest priority data for the Chesapeake Bay Program and Partners.
- This survey was reviewed by the group to gain feedback on the questions. [See Survey Document. Latest Version as of this Meeting: V6](#) This survey uses Google's Form Plus. This allows for quality assurance documentation, coordinates, etc., to be uploaded along with the survey, as well as easy access for partners. The audience for the survey: Citizen Groups, or any data source not currently being used by the Bay Program

Discussion on Survey and Questions:

- This survey covers monitoring program design, data use and storage, as well as monitoring areas/locations.
- There was discussion about questions that noted location. While the survey includes questions about monitoring locations, attention was given to wording that allowed for some privacy concerns, but to also be able to hone in to town and county levels. To

show location, the survey might use the term “waterbody” instead of “watershed” in these questions. There will be a lot of follow up with these groups regarding these survey questions, so that will hopefully shed more light on narrowing locations.

- This survey would be a good vehicle for other questions beyond water quality and benthic macroinvertebrates. Extra questions are included in the survey that might pertain to other projects in the future (i.e., birds, fish, etc.).
- The group had discussion of adding more text boxes/questions to inform about which groups are utilizing the data, and possibly what data is accessible and to what groups. Furthermore, a question might be added to help elaborate what components (and form) of their data are shared.
- It was mentioned that for the question about who uses the data, an option could be added if their monitoring is for primary or secondary education, to help identify Tier 1 data.
- A suggestion came up of adding the option of “none” to the standard operating procedures to help determine where groups fall in the Tier framework as well.
- If there are any other comments, please contact Lea at lrubin@iwla.org. A beta test of this survey will be released at the end of March, with the full survey going out in the beginning of April.

1:45 Nontidal Water Quality Monitoring Program – (All Discussion)

We would like to have each partner provide a 5-10 minute synopsis of their monitoring effort status, challenges, successes, and highlight needs and directions on the horizon. (PADEP/SRBC, WV, MD, VA, DE, USGS)

Update/Discussion:

PADEP/SRBC:

- Mark Brickner, Rod Kime, and Kevin McGonigal from PADEP reviewed their monitoring and transitioning staff concerns. There is continued focus on the small mouth bass, targeting emerging contaminants. In the last two years, PADEP is performing both passive and grab samples in that watershed and its tributaries. We had a **caddis** run in the last year, with 50 experts, reviewing and summarizing the data in the Susquehanna Basin regarding the small mouth bass issue. Their conclusions lean towards a suppressed immune system of the small mouth bass. In the Water Quality Network, PADEP has added pesticide sampling (atrazines). Bromide sampling, as well as dissolved metals sampling, are also being taken at the Water Quality network sites. This additional sampling is anticipated to continue through 2016, and most likely beyond. Most of the WQN sites in the Susquehanna Basin are part of the Nontidal network sites, so all data is available as part of the non-tidal network. It has been discussed that some sites might be moved to make them more useful starting in 2016.
- The SRBC is maintaining all upper well monitoring sites. There are 50+ continuous monitoring sites in fracking area. Most of the WQN sites in the Susquehanna Basin are part of the Nontidal network sites, so all data is available as part of the non-tidal network.

USGS in West Virginia-

- Doug Chambers with USGS based out of West Virginia gave an update for West Virginia. The USGS sampling program in West Virginia is on track for routine samples, while ahead for storm samples. The water year 2015 data has been reviewed, submitted, and approved through Chesapeake Bay Program. There have been issues with losing some staff. There has also been challenges with funding. Specifically at the site known as the Shenandoah River- Millville, which was originally funded by MDNR, but lost funding from that source. It's an important site because it occurs downstream from the confluence of the North and South Forks of the Shenandoah. The Millville station also adds almost 30% more coverage of the Shenandoah River Basin. Funding has been secured through water year 2016. The Millville site will need funding stabilized for the future beyond 2016.
- A success in the WV monitoring program include the complete staffing of the Leetown field office in the Eastern Panhandle. USGS in WV is also looking to work with WVDEP to help fund ground water and surface water interactions in the Eastern Panhandle. They are currently also looking for funding opportunities to support continuous monitoring in the area, such as nitrate sensors. Currently, in the Non Tidal Network, there are only continuous sensors located at South Branch of the Potomac in Springfield and the Cacapon River near the Great Cacapon.

Maryland-

- Tom Parham reviewed Maryland's current 30 sites in the nontidal network. They picked up 6 PA sites in 2014. At the end of 2015, they dropped two sites, Catoctin Creek and the Shenandoah-Millville site. Maryland has also lost funding for a site in the North Branch of the Patapsco. One of the challenges for Maryland moving forward includes limited information in the Lower Eastern Shore with agriculture issues. Only two sites in that location that have more than 5 years of data, but three more sites are coming online in the near future. For Maryland's **core trend**, they have 54 sites, where they do the monthly grab, which is also tied to benthic macroinvertebrate sampling. Western Maryland is looking at road salt impacting the streams. Maryland also has 4 river input sites also.
- In western Maryland, 5 sites will be added towards Marcellus shale monitoring (not part of non-tidal network). There are stations where they were taking baseline data, as well as a network of about a dozen sites where volunteers use a handheld meter for basic parameters and macroinvertebrate samples in the Marcellus shale impacted areas.
- Joel Blomquist added a RIM Update for Maryland- The 4 monitoring sites are operating normally. The Choptank watershed is now better set for storm sampling, thanks to newly improved cableways. The Susquehanna and Conowingo sampling monitoring has been revamped. There is continuous turbidity monitoring below Conowingo, Holtwood dam, and the Marietta site. However, funding will need to be acquired from different sources soon, since Exelon's relicensing period is coming to a close. More continuous monitoring is also at the Potomac River, including con-mon nitrate data. These sites at the Potomac River are also the location of new technologies being tested out. Joel Blomquist invites anyone to use that data. **The DC monitoring network** is close to maturity to become a reporting station. They are beginning to use the surrogates to produce load estimates for constituent fluxes. There are also several monitoring stations

that are not currently part of the network, but could be soon with some minor changes- some of them have continuous monitoring.

Virginia-

- Cindy Johnson, and Doug Moyer: The VADEQ currently has 36 sites total. They've picked up Cotocin as a secondary site when Maryland dropped it. They would like to secure more funding to make it a primary site. All that is missing are the storm samples. Funding for the Muddy Creek Gauge might need funding. It's important due to the BMP implementation there. As far as collections, they're on target. VADEQ is light on funding for equipment. It would be good to grab more funding to replace old equipment.
- The USGS monitoring in VA includes 24 sites where both routine and stormflow samples are collected. Everything is on target with the routine samples, and ahead of schedule with storm samples. Within the nontidal network in VA, 5 stations have been instrumented with continuous water quality (basic field parameters, plus turbidity. Further, 3 of the stations have continuous nitrate monitoring added as well. All the stream gauges in the state are fairly finalized, so Doug Moyer and Joel Blomquist are currently compiling data for loads and trends updates for the 9 RIM stations. Doug Moyer mentioned that this group should think about how to standardize continuous monitoring data to make sure there's a consistency for that data. Additional 12 urban monitoring stations in the Hampton Roads area have been added, to monitor urban runoff. These sites are very representative of the land uses in that part of the Chesapeake Bay Watershed.

Delaware: No representative to give an update.

Peter Tango added: In regards to funding that the Chesapeake Bay Program can provide, if funding needs are made known, Peter Tango and Rich Batiuk can put forth the request for those dollars. This question will be added when future **material** goes out to the Partners: Be prepared to list what needs you may have, and the dollars required. The anticipated time frame for this funding is usually around the fiscal year.

ACTION ITEMS: Follow up with Mary Ellen Ley, Melissa Merritt, and the group as a whole, to reevaluate what the network status is, and what is considered a network station currently. A question will be included regarding Partners' anticipated needs in the 6-12 month timeframe, so that additional funding might be requested. Finally, in a future meeting, continuous monitoring should be addressed, including: the standardization of collection, classification on what a common site is, and for what purpose that data will be used.

2:45 **Tidal Water Quality Monitoring Program** – (Rebecca Murphy, UMCES@CBPO, Analyst).

The Chesapeake Bay Program Water Quality Attainment Indicator provides an index of water quality changes in the bay, tracking progress toward meeting the goals of the TMDL by removing bay waters from the impaired waters list. A re-examination of the historical attainment records revealed some unusual fluctuations in the open water designated use dissolved oxygen results

from 1985-2014. Because of this, the results for all the DO designated uses were revisited and corrections were made to the list of cruise dates used for grouping samples to more accurately represent the actual sampling dates. The proposed changes corrected the unusual fluctuations, and otherwise have minor impact.

[SEE PRESENTATION.](#)

Discussion:

- There was a change in the long-term patterns of deep water, open water, and deep channel dissolved oxygen water quality criteria due to a corrected approach to dividing the DO data into cruise groups. This is NOT a new method, but consistent with published methodology.
- Claire Buchanan asked, in terms of attainment, which parameter causes non-attainment? What is the major cause of non-attainment in the Chesapeake bay, between the three parameters of dissolved oxygen, chlorophyll, or water clarity? Or in other words, which parameter causes non-attainment the most? Rebecca Murphy responded that that's a great question, since all of those parameters contribute to the answer, but possibly deep channel oxygen would be a leading cause.
- Zoë Johnson asked who did the analysis of what might be causing the non-attainment? Rebecca Murphy responded that we're (Integrated Trends Analysis Team) currently looking at the raw Oxygen and chlorophyll data and the nutrient concentrations over time, with the goal of finding stories that link the data to oxygen concentrations to help explain why attainment does not occur in certain times of the year. The modeling group has also done lots of runs of the model to also help find some answers to this question. Throughout 2016 and 2017, ITAT has goals to help explain and incorporate climate change components in trends analysis.

3:15 Status and Trends WG re-established (Laura Free, USEPA, Coordinator)

The Status and Trends Workgroup is housed under CBP STAR. Historically, the workgroup implemented an Indicator Framework. The group was on hiatus while the coordinator position was being filled by USEPA CBPO. The new coordinator has been hired and we welcome Laura Free. Laura will highlight the mission and next steps of the Status and Trends Workgroup.

[SEE PRESENTATION.](#)

- Laura Free, the Indicators Coordinator for the Chesapeake Bay Program was introduced as the coordinator for the Status and Trends Workgroup. This is the reestablishment of the Status and Trends Workgroup from the previous Indicators Workgroup. This workgroup will ensure up-to-date indicators for Partnership products, implement the Indicator Framework, and facilitate adaptive management by identifying information needs.

Discussion

- It was discussed that the Status and Trends WG should include the Chesapeake Monitoring Cooperative in future meetings/initiatives- the Cooperative's Tiered Framework can help inform future work in gap analysis.
- How do indicators now fit in to this Status and Trends WG? Laura Free responded that the current scope of work for the Status and Trends WG revolves around the indicators- primarily the development of these indicators. Laura will follow up with a presentation at STAR to bring in the STAR leadership, and to help clarify which responsibilities fall into this workgroup's role.

3:30 Adjourn

PARTICIPANTS

Anne Dunckel	ACB
Bill Romano	MDNR
Britta Bierwagen	EPA
Caroline Donovan	UMCES
Cindy Johnson	VADEQ
Claire Buchanan	ICPRB
Doug Chambers	USGS
Doug Moyer	USGS
Joel Blomquist	USGS
Ken Moore	VIMS
Kevin McGonigal	SRBC
Laura Free	EPA
Lea Rubin	IWLA
Lucretia Brown	DDOE
Mark Brickner	PA-DEP
Mark Trice	MDNR
Mary Ellen Ley	USGS/CBPO
Melinda Ehrich	UMCES
Mike Mallonee	ICPRB/CBPO
Rebecca Murhpy	UMCES
Renee Karrh	MDNR
Rod Kime	PADEP
Scott Stranko	MDNR
Sherm Garrison	MDNR
Tom Parham	MDNR
Melissa Merritt	CRC

April anticipated agenda

1PM Welcome, announcements

1:10 PM Citizen Science Directions

2:00 PM Tidal WQ Monitoring Programming - ALL

We would like to have each partner provide a 10-15 minute synopsis of their monitoring effort status, challenges, successes, needs on the horizon.

Virginia, MD, DE, DC

3:00 PM Continuous Monitoring Strategy Outline

We will review the outline and development of a Continuous Monitoring Strategy document toward providing a product to CBP in December 2016.

3:15 PM Nontidal Water quality Monitoring – highlights of storm diagnostics graphs to inform sampling strategies.

3:30PM Adjourn

May anticipated agenda

1PM Welcome, announcements

1:10 PM Citizen Science Directions

2:00 PM Status and Directions on Meeting Science Needs of the new Bay Agreement.

Science needs were highlighted in 2015 by the GITs and have been the topic of STAR, Management Board meetings and STAC workshops held in recent months. During this meeting we will review the feedback from the Management Board, as well as outputs of one or more of the STAC workshops that will update the list of sciences needs to those that are being met and those that will need additional focus by STAR and its workgroups in the near future.

2:45PM Tentatively: Status and Trends workgroup report on workplan and products, indicator approval agreement.

3:15PM Adjourn.