



## Nontidal Network Workgroup Monthly meeting

Wednesday, June 15th, 2022

1:00 PM – 2:30 PM

Meeting Materials: [Link](#)

*This meeting was recorded for internal use to assure the accuracy of meeting notes.*

### Actions

- ✓ If you're interested in putting together a session proposal for the National Monitoring Water Conference, email Amy Goldfischer ([agoldfischer@chesapeakebay.net](mailto:agoldfischer@chesapeakebay.net))
- ✓ By next meeting (7/20/22), with your jurisdiction decide which stations you would cut if you had to and bring that list of stations to the next meeting. If you have already done this, please send to Peter Tango ([ptango@chesapeakebay.net](mailto:ptango@chesapeakebay.net)) and Amy Goldfischer ([agoldfischer@chesapeakebay.net](mailto:agoldfischer@chesapeakebay.net))
- ✓ By next meeting (7/20/22), with your jurisdiction decide what the top 5 filters you'd like to see applied for a network optimization (what are you optimizing for). Examples include: representative watershed sizes, geographies, land use land types, nutrient loading, yields, sites on the cusp of development pressures.
- ✓ Amy will update the NTN WG list of members on the website.

### Minutes

**1:00 PM**

#### Welcome and Announcements – *Peter Tango (USGS)*

Ideas for National Water Quality Monitoring Council's 13<sup>th</sup> [National Monitoring Conference](#) - [session proposals](#) due June 24, 2022  
[Global HAB symposium on automated in situ observations of plankton](#) - August 22-26, 2022. Kristineberg, Sweden.  
[A Community on Ecosystem Services](#) - December 12-15, 2022. Washington, D.C. Metropolitan Area.

#### Monitoring Funding Updates – *Peter Tango*

#### PSC Report Updates – *Peter Tango*

- Mindy Neil is the new representative from West Virginia Department of Environmental Protection (WVDEP), replacing John Wirts. Mindy may be sending someone else on staff since she's also a member of another group (Land Use Workgroup) meeting at same time as Nontidal Network Workgroup.
- Water Quality Monitoring Conference proposals are due soon. One theme is what have we learned about long term monitoring and results coming up on 50-year anniversary of clean water act.

- Breck Sullivan (USGS): With the PSC monitoring report, and 10 years ago we did the MRAT (Monitoring Re-aligning Action Team) – a session on the history and transition of the Chesapeake Bay Program monitoring networks would be a possibility, if they're interested in such a specific topic.
- Peter Tango (USGS): that's a good idea. Every 5-10 years we're re-evaluating where we are. Adaptive monitoring to go with adaptive management. Important to give people an awareness of these efforts. Action: if you'd like to work on putting a session proposal together email Amy and they'll organize a meeting to work on session proposals.
- Peter: Virginia environmental measurements conference in August. HAB conference in October with abstracts due soon. A Community on Ecosystem Services (ACES) meeting.
- Monitoring funding updates: high inflation conditions. Some of us got on a call with Lee McDonnell and Lee is hugely supportive of sustaining network operations that we have and finding ways to sustain it. Discussion now is focused on well supported through 1 year to start and immediate conditions. Lee and state agencies are working to make sure the network will be supported for the upcoming year to be at full operation. If you have questions/concerns, feel free to send them along.
- Doug Moyer (USGS): how do we continue this discussion and keep this group informed? I'm getting input on funding that will be increased through 117e grants. If the increases aren't able to keep up with where we are, what's our strategy for reducing scope within our network? The goal is to preserve, but the reality is we may not be able to. This is the group where we make decisions for each jurisdiction's cut in scope. A lot of this will come to a head in 2 weeks when we get new agreements in.
- Peter: we'll keep this as an item for this group every meeting. If we need to gather people for an emergency decision, we will. Lee's been discussing with me daily on questions and concerns, and we can keep reaching out to agencies and jurisdictions on the details. Please reach out if you feel a question is not being answered.
- Peter: PSC report – we're in the final USGS review, as a collaborator report. Putting final tweaks on it given some new information that we got. The grant requests came in highlighting how much inflation there is after we presented to the PSC so may not be immediately reflected in the report but it is not lost in the conversations we're having.

1:20 PM

**Best Management Practice (BMP) monitoring** – Liz Chudoba  
*(Chesapeake Monitoring Cooperative/Alliance for the Chesapeake Bay)  
 will give a presentation and lead a discussion on the Chesapeake  
 Monitoring Cooperative's work together with National Fish and Wildlife  
 Federation (NFWF) on BMP monitoring*

- CMC has worked with over 100 different groups to integrate data into the Chesapeake bay explorer and CBP partnership. We have a base across the watershed to implement community science projects.

- We rolled out a benthic sampling protocol to fill in gaps in the Chesapeake Basin-wide index of biotic integrity or Chessie BIBI. We collect the samples in the field and preserve them onsite. We send them to Wheeling lab to identify to family level. We target places with no data to fill specific gaps. This protocol has been the basis of our restoration protocol.
- Peter Tango noted in the chat that Chessie BIBI is the basis for the CBP 2014 Watershed Agreement Stream Health outcome watershed health assessment.
- As a result of this protocol we partnered with NFWF and Stroud Water Research center to be a technical advisor and partner. Our goal was to create a community based monitoring protocol aimed at tracking practices developed by NFWF. Utilize knowledge we have out there to target monitoring protocol. Tailor local impacts of these practices for local waterways.
- 3 BMPs focused on. Forest buffers includes all kinds of forest buffers, and stream restoration also includes all kinds of stream restoration.
- The last two years we've been focused on background research and study design process. Our CMC is monitoring focused and we wanted to make sure we understood the restoration side. We did a stakeholder survey to ID potential monitoring techniques already used in restoration practices to not reinvent the wheel. That led into the study design process. Right now we're in the protocol and QAPP development phase and about to start ground truthing.
- Sent stakeholder survey to CMC network and NFWF grantees. There were 44 respondents. There was sporadic monitoring (about 50% of respondents were doing monitoring in relation to restoration project). Very little common approaches being used. There was a variety of frequencies, parameters, equipment, methodologies. Temperature was most frequently monitored. This highlighted a need for a consistent dedicated approach.
- The survey identified barriers and hurdles for setting up restoration monitoring. They needed technical assistance, training, capacity building, equipment.
- Identifying the goals of the protocol was key: first assess the status of the intervention, document pre, during and post restoration site status. Is it functioning as it should or are there issues? Help NFWF document visual/physical impact of practices on streams, building out case studies that show how these make a difference for local water quality.
- We wanted to make a community accessible protocol.
- Nuts and bolts: prior to implementation, do a visual assessment. Alliance for Aquatic Resource Monitoring (ALLARM) was spearheading the visual assessment. Originally was based on Stream Visual Assessment Protocol (SVAP) but now they're creating a new one aimed at highlighting impacts from restoration practices. It will include temp, water clarity, water level and pictures. At least one survey, ideally two. Collect macroinvertebrate samples prior to implementation.

- The visual assessment was picked for spring and fall to get leaf out conditions and see vegetation come back with buffers.
- We have a plan for 5+ years but targeting 1-5 years post restoration.
- The goal is to assess the entire reach for the buffer or stream restoration practice.
- We're in the protocol development stage so it hasn't really gotten out in the field yet. We're open to feedback.
- Peter noted in the chat that for benthics - most data we use in the Stream Health assessment come from single-visit sites. Assessing the same area repeatedly for time series are relatively rare - excellent, high value approach for the work to have some time series vision of pre-during-post assessment.
- Peter: in developing the benthic protocol there was work done with Wheeling lab. Julie Vastine (ALLARM) is setting up to do some testing of other elements. Climate Resiliency Workgroup (CRWG) is interested in effectiveness of BMPs for climate sensitivity; some of the temperature information may not fit that assessment. Dan Hit has worked with volunteers in USGS and used some continuous monitors that might be a way to improve type of data coming out of a site. Individual site visits – MD has historically used information like that to look at whether or not sites are meeting a threshold on the day of the visit that's sensitive to brook trout populations. It will have value for folks looking at threshold temperature assessments.
- Liz: this is the starting point to build out the model of getting volunteers involved in tracking restoration sites. We could have additional projects to get additional data sets.
- Peter: a picture is worth a thousand words. Some USGS sites set up cameras to track, looked at ice flows and saw water flows looking different than anticipated.

**1:50 PM**

### **Network Optimization Discussion – all**

*Given updates on network funding, and the work that Qian Zhang and Matt Cashman presented on at the last meeting, the group will discuss how to move forward with the network optimization.*

- *What is wanted out of the network?*
- *What are the goals and possibilities with the current funding allocations, with different scenarios and looking at multiple objectives?*
- Qian Zhang (UMCES): are there specific pieces people want to see this kind of analysis applied to? We have a generalized code. To refresh your memory, our analysis was based on certain values type and we could see how well individual stations represent the network. Heard possibility of looking at high nutrient loading areas. Where do you want us to move the next piece of analysis to?
- Doug: I know that each of the jurisdictions have ranked their own stations and identified which station would be cut. Are those results factored into this network optimization?

- Qian: This has to do with what the partnership wants. The analysis Matt and I did tells us what would change if we remove a station but it depends on what people want. What metric do people want? We could conduct this analysis on multiple metrics not just one and come up with some overall decision.
- Peter: the last time we had a monitoring review, assessment of what we had for land use representation and watershed size showed under representation of small watersheds, and high urban impervious cover, and coastal plain nontidal streams. Each of those received some investment that led to buildout of network. It would be interesting to take each of the jurisdictions' rankings and compare to network overall. Anything with particular long record, high nutrient loading, sensitive to development according to forecast projections, areas sited in watersheds with significant implementation anticipated (with regard to both management and development).
- Doug: is the objective to identify where expansion could occur if funds are available? Or is it if funding continues and we need to make cuts, are we turning to this to identify high or low priority based on metrics that are used based on what might go first?
- Peter: both. It's been 10 years since we asked the jurisdictions about expansion. And we also need to be prepared, by the end of the year, to know what to do if we have to make cuts to our scopes of work.
- Doug: It would be good to see the results of the optimization analysis compared to the priorities coming from the jurisdictions to see if they're aligned or separated.
- Qian: is there a list of stations considered for change? Doug: each jurisdiction was asked to compile a list what is the priority of sites within that jurisdiction. Peter: I don't have the list but we were shaping up for that. Action item for this time.
- Doug: Cindy and I have a list.
- Peter: if you have a list, please forward to us. If you haven't done that, please take time between now and next NTN meeting to do this. And third we'll look at both growth opportunities and reduction if necessary. We have two ways to approach reduction: through jurisdictional priorities and through the whole network analysis, and a comparison of those.
- Tammy Zimmerman (USGS): Was another reason why we were going about this process for having the network optimization the meetings between EPA, USDA and USGS? If the NTN network couldn't expand with current resources, maybe USDA could contribute – maybe not called NTN sites but other stations that could be deployed to help us understand loads.
- Peter: yes. That is in the PSC report. Recommendation for 5 new small watershed high frequency monitoring sites to be funded.
- Tammy: Jamie Shallenberger and I have had conversations with Mark Brickner and we'll get the prioritization in.
- Ken Hyer (USGS): I think about this NRCS, USDA, USGS collaborative team that sprung up a year ago and did some analysis as separate from NTN but complementary to think

about filling small watershed gap. We know moving forward agricultural watersheds are major sources where we're trying to see responses. Don't know if there's resources for this.

- Doug: As far as bringing in the jurisdictional rankings would be good in this process. Any consideration where the shortfall is and what jurisdiction the shortfall is in. Each jurisdiction is coming up with their own rankings. If a jurisdiction has a shortfall that would be first jurisdiction to cut vs taking from another jurisdiction.
- Peter: the greatest shift I've seen like that is when we moved money out of tidal into nontidal. There was a shift with stations in MD and Pa, possibly WV. That was mutual agreement between the agencies. That would be the preference to work it out mutually and not dictate it.
- Doug: that's where the optimization routine will identify objectively but it may not align with where the actual shortfall is occurring. How will we make those decisions as a group?
- Qian: There's been interest in other goals in the agreement. We've mostly been discussing on nutrient side and how that might inform the models. But regarding other goals like climate change and temperature, are people on this call interested in seeing analysis being applied there? This can be applied to any parameter. If there are high priority goals or objectives I can work with Matt and address the question to provide supporting information that can help with scenario analysis. It has to be combined with other knowledge or assessment from the group here.
- Peter: Agreed. In 2016, 30 site climate change tracking proposed network with EPA meant to be long term temperature monitoring sites. Maybe worth coming back to this. Between now and next meeting folks highlight the station ranking, top 3, top 5 types of filters you'd like to see used to consider optimizing the network. Representative watershed sizes, geographies, land use land types, nutrient loading, yields, sites on the cusp of development pressures.
- Qian: for now focus on NTN station in terms of nutrients.
- Peter: Qian could give us an assessment on what the network would look like
- Qian: one month should be sufficient once I get the metrics assuming we have info for them and they're static.

**2:25 PM**

### **Website feedback**

*The Chesapeake Bay Program Web Team will be working on updating and improving workgroup webpages over the next few months. To assist them in their efforts, the Web Team has asked us to solicit feedback and gather responses to the following questions:*

- *What additional features would you like to see on the [Nontidal Network WG page](#)?*

- *Is there any additional functionality that you would like to see added or improved upon?*
- *The current available sections are Upcoming Meetings, Scope and Purpose, Publications, Projects and Related Links. Is there another section/more information you would like to see added?*
- *How could we make the [Nontidal Network WG page](#) better?*

*Please note that any updates or requests would need to be applicable to all workgroups in the CBP.*

Membership list updates:

- Mike Langland has retired
- John Wirts has retired
- Kevin McGonigal has left SRBC. Change to Jamie Shallenberger.
- Bruce Michael retired

**2:30 PM**

**Adjourn**

Participants: Amy Goldfischer (CRC), Doug Moyer (USGS), Peter Tango (USGS), Breck Sullivan (USGS), Doug Chambers (USGS), Carl Friedrichs (VIMS), Ellyn Campbell (SRBC), James Colgin (USGS), Qian Zhang (UMCES), Tammy Zimmerman (USGS), Meighan Wisswell (VA DEQ), Mike Mallonee (ICPRB), Mindy Neil (WVDEP), Tyler Shenk (SRBC), Mark Nardi (USGS), Cindy Johnson (VADEQ), Ken Hyer (USGS), Liz Chudoba (Alliance for the Chesapeake Bay), Kristen Heyer (MD DNR), Curtis Schreffler (USGS), Lucretia Brown (DC DOEE), Durga Ghosh (USGS), Mark Brickner (PA DEP)