



Nontidal Network Workgroup Monthly meeting

Wednesday, October 20th, 2021
1:00 PM – 2:30 PM

Meeting Materials:

https://www.chesapeakebay.net/what/event/nontidal_network_workgroup_october_2021_meeting

Action Items

- ✓ All jurisdictional members: Before next month's meeting, please highlight one station you would put up for reduction if you were asked to reduce your operations by one station.
- ✓ All members: Revisit our list and add any further metrics you would be interested in seeing included in a network optimization effort to understand the effects of station representation on overall network representativeness across key watershed characteristics.
- ✓ Doug Moyer, Tammy Zimmerman, Cindy Johnson and Tom Parham will work with Qian Zhang as a smaller group effort on network wide optimization
- ✓ Jamie Shallenberger (SRBC) will work together with Tammy Zimmerman, Doug Moyer and Joel Blomquist to make sure the analyses of the SRBC and the Nontidal Network (NTN) members are consistent
- ✓ All members to email any comments on PSC Review to Peter (ptango@chesapeakebay.net) and Amy (agoldfischer@chesapeakebay.net)
- ✓ Doug Moyer will present on the latest updates to Weighted Regressions on Time, Discharge and Season (WRTDS) trend analysis method at a future Nontidal Network Workgroup meeting

AGENDA

1:00-1:10 Welcome, Introductions & Announcements – Peter Tango, Coordinator

1:10-1:50 [Principals' Staff Committee \(PSC\) Monitoring Review updates](#)

Topic and Issues: Peter Tango will go over updates from the PSC Monitoring Review.

1. Deer Creek Station - highlighted as Recommendation #1 for the PSC to consider finding additional support for while creating recommendations for funding directions.
 - a. Good news - Before going to the PSC, funding has been directed to cover this station for the next year without negatively impacting any of our NTN monitoring grants or IAGs.

- b. In the meantime, long-term support for Deer Creek will remain a key recommendation to sustain the NTN
- 2. Optimizing network in case of level funding: What we have done in the past
 - a. Phase 1: Basic chain of considerations before we get to station cutting needs
 - b. Phase 2. ACTION ITEM: While we develop watershed-wide optimization of the network, we are asking each jurisdiction over the next month to please recommend 1 station that would be provided for a pool of stations to eliminate support for if no new funding is available and we need to reduce network operations next year.
 - c. Update - pending decisions in Congress, there is potential for EPA to receive additional funding in CBPO, some of which has been considered in planning to help out the monitoring program. So, stay tuned.
 - d. Designing a decision tree for the process of prioritizing adding/losing a station.
- 3. Optimization support is happening with Matt Cashman and Qian Zhang. ACTION ITEM: Revisit our list and add any further metrics you would be interested in seeing included in a network optimization effort to understand the effects of station representation on overall network representativeness across key watershed characteristics.
- 4. Discuss recommendations from the Modeling WG on monitoring options for:
 - a. DOC and PC at least at RIMP sites in the future, and the possibility of superstation continuous monitoring at the 3 largest tributary fall-lines (Susquehanna, Potomac and James Rivers).

Meeting discussion

Peter said he will aim to have specific numbers regarding the PSC Review to bring to the December meeting of the Nontidal Network Workgroup. Peter Tango asked members to email himself and Amy with thoughts or comments regarding the PSC Review update that he shared.

Peter requested members to select one station if downsizing was required and bring this to the next month's meeting. Doug Moyer commented that he and Cindy Johnson have started this process for Virginia.

Doug Moyer asked, when jurisdictions are identifying a site, is this a within jurisdiction strategy – that if there is a shortfall within a given jurisdiction, this is where a potential solution would be to resolve that shortfall? Or is there going to be some ranking of sites between jurisdictions as to which is most important to the network based on the optimization? Going back to that decision tree, are jurisdictions coming up with their own strategies to address shortfalls or is this a solution to address other jurisdictional shortfalls?

Peter responded that we need a within jurisdiction understanding first, and then a larger network optimization to help rank those and where they fit across the entire network. We haven't done this in the past. By doing the network wide optimization, looking without borders, we're asking how do those stations we're putting as potential reductions fit in the overall understanding of network. So we'll look within jurisdictions first, should that occur, then

network wide to consider can we trade something being of extreme importance network wide whereas within jurisdiction it has a different ranking.

Peter Tango commented that we want to make sure to get input on any of the metrics. A small team will work with Qian, experiment with different metrics and look at different scenarios. Having a small focus group will be quicker than waiting for each of our meetings. Cindy Johnson asked, are you looking to get rid of stations in various jurisdictions and add stations on various jurisdictions according to this network wide optimization schema?

Peter responded that we don't know if we are reconfiguring the network as it stands to move stations and to make new stations. It's a question as to how to maintain the work we have in place to maintain the history that it has. If you would like to propose that as a question to the small optimization focus team that's valid. There are other groups – like the EPA/USGS/USDA/RCS team that is looking at focus areas they're doing specific monitoring for. There are projects trying to address alternative information needs that are complementary but not using our network protocol, they may be using the superstation approach, focusing on multi-station like the small watershed studies. It's fair to ask about NTN using the protocols we do but recognize other groups are tackling related needs for that sort of information.

1:50-2:15 Storyboarding with NTN data and analysis – Jamie Shallenberger, Susquehanna River Basin Commission (SRBC)

Topic and Issues: Jamie Shallenberger will present on SRBC's new story map "Stories in Water Data".

Jamie Shallenberger went through each section of the story map and its key points. The audience is not watershed professionals, but people who are interested in and committed to watershed management activities. The introduction section gives some background around the partnership and total maximum daily loads for the Chesapeake Bay. Clicking on images enlarges them, there are also many external hyperlinks throughout the map. There are also embedded videos, and explanations of some of the more technical terms as well as explanations of analyses and visual representations of data. People are led through various questions that watershed professionals ask as well as some of the trends that we see.

Meeting discussion

Peter Tango asked if they considered adding more explanatory wording to the visualizations of data to assist the audience with interpretation. Jamie Shallenberger responded they have trialed the concepts and various images with test groups and gotten important feedback, but they are always open to more. It's a flexible and adjustable format so they can make changes to the story map easily. Because people take in information in different ways they've tried to present the same information in different ways.

Doug Moyer commented that the NTN team is currently working on the 2020 trends and loads that they've monitored across the entire nontidal network. Would be good to find ways that the SRBC can work with the NTN team. There are concerns with having different results at different stations so want to make sure we're working together on some of the analyses we're generating at these comparable sites and making sure we're evolving consistently on the versions or approaches that we're taking within WRTDS and how we're coming up with the loads and trends at different locations. Much like we're trying to harmonize the monitoring across sites, we're trying to harmonize the analyses as well. Doug, Tammy Zimmerman, and Joel are trying to work on this. There are also a lot of teams working to explain these trends within the Susquehanna, within the PA USGS office. Let's join forces to harmonize our approaches to answer the question as to what is driving the trends in the Susquehanna and beyond.

Tammy Zimmerman seconded that it would be great if we can work together a bit more, sharing things for review, giving each other a heads up on different products that are coming out and even authoring some products together as well. Tammy agreed with Doug that the NTN team is a great forum for this.

Peter Tango commented that it might be helpful to have a presentation for the NTN workgroup on the newest version of Weighted Regressions on Time, Discharge and Season (WRTDS).

Doug Moyer responded yes, that would be a good thing to bring to the group. The biggest change lately is with the load computations using the WRTDS Kalman filter method. Some of the scenarios we're running for the trends. It would be good to bring this into the group and see how this can be implemented consistently.

Another issue we have been investigating is how we bring the constituents together in our analyses— for example, total nitrogen has different fractions, and we're trying to work with James Coleman, the PA USGS center, and Mike Mallonee to say what is our priority constituents that we sum together so we can begin our analysis. There could be some inconsistencies, so we want to make sure we are all on the same page.

Jamie Shallenberger agreed and added there is a lot to unpack when you start to look at parameters that are monitored. Historically we've only looked at reporting just some of what is actually measured.

2:15-2:30 Adjourn

Participants:

Durga Ghosh, Cindy Johnson, Amy Goldfischer, Peter Tango, Jamie Shallenberger, Tammy Zimmerman, Alex Gunnerson, Breck Sullivan, Ellyn Campbell, Doug Moyer, John Wirts, Kristen Heyer, Mike Mallonee, Mark Brickner, Mark Nardi, Tom Parham, Lucretia Brown

Next meeting: November 17th, 2021