

Discussion Paper: Addressing PSC Request to Improve Monitoring Networks

Based on discussion by L. McDonnell, P. Tango, B Sullivan, and S. Phillips,
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Issue: Lee McDonnell provided an overview to the PSC on March 2 of the status, and potential reductions, of the current CBP monitoring networks. The CBP networks presented included the nontidal network, tidal water-quality monitoring, SAV, and tidal benthic monitoring network. The reduction of stations in the CBP monitoring networks is mostly due to inflation over the past 5 years, and funding for the networks being held constant. There are also newer concerns on loss of partner funding for some aspects of the networks due to COVID-19. Finally, the last comprehensive assessment of CBP networks was over a decade ago, and conducted by the Management Board Monitoring Reallocation Action Team (MRAT), so this PSC request is timely.

PSC request: provide information to improve CBP monitoring networks, including: (1) Current status and threats to the networks, (2) what is needed to improve the monitoring networks.

Addressing the request: STAR will work with leaders of monitoring networks, which are funded both by the CBP and partner organization to gather this information. For each of the networks the following information would be collected:

- (1) What is the status of the network? (including number of stations, funding partners for stream flow and water-quality monitoring at stations)
- (2) How have the networks changed over time past 5-10 years and what are future threats?
- (3) What needs to be done to sustain the current networks (stop the loss of stations and number of samples due to inflation over the past 5-10 years). What are the benefits?
- (4) What is needed to improve the CBP monitoring networks from its status?
- (5) What are some of the newer and innovative approaches that can be considered to improve the networks?
- (6) What are the opportunities to support and fund the improvement of the networks?

Timeline:

- Develop a work plan for PSC to endorse at their May 2021 meeting
- Have a different team to address the questions for each network (Spring-Summer)
- STAC workshop (fall, 2021?)
- Try to complete the effort by the end of 2021.

Networks to be addressed:

Each team would develop and address some focused questions to supplement the 5 general questions listed above. Some example questions and on-going efforts under each network include:

1. Nontidal nutrient and sediment monitoring. Some initial questions:
 - How can we supplement the current NTN sites to better detect water-quality response to implementation of management practices?

- Are there stations where less samples could be collected so more resources could be put into smaller watershed monitoring?
 - Where would continuous monitoring be most useful in the NTN?
 - What is needed for WSM calibration and improvement?
 - Suggested Lead: NTN monitoring team.
2. Tidal water-quality monitoring:
A key improvement is to develop a 4-D interpolator (or similar tool) to improve the assessments. Questions:
- What monitoring improvements are needed for the CBP partnership to be able to assess all criteria in tidal waters.
- Several groups already addressing and should coordinate on this network:
- hypoxia and vertical profilers (NOAA and Peter Tango)
 - Criteria Assessment Protocol Team
 - Interpolator team for standards attainment
3. SAV
- Flight contract for SAV coming to an end so good time to understand options for next RFP
 - SAV workgroup can oversee the effort and there is a path forward
4. Benthic
- Benthic monitoring is now just summer monitoring. What changes should be considered?
 - Probably most related to the fish habitat WGG
5. Citizen Science monitoring
What are opportunities for better integrate roles of citizen monitoring to help tidal network (and others?)
- New RFP is out so already sets expectations
 - Data Integrity WG would help
6. Other networks needed to support the Goals of the Bay Agreement, such as climate monitoring, fisheries, habitat, etc.
Other: temperature network for climate resiliency