Nontidal Network WG Meeting Meeting insights and PSC Review updates

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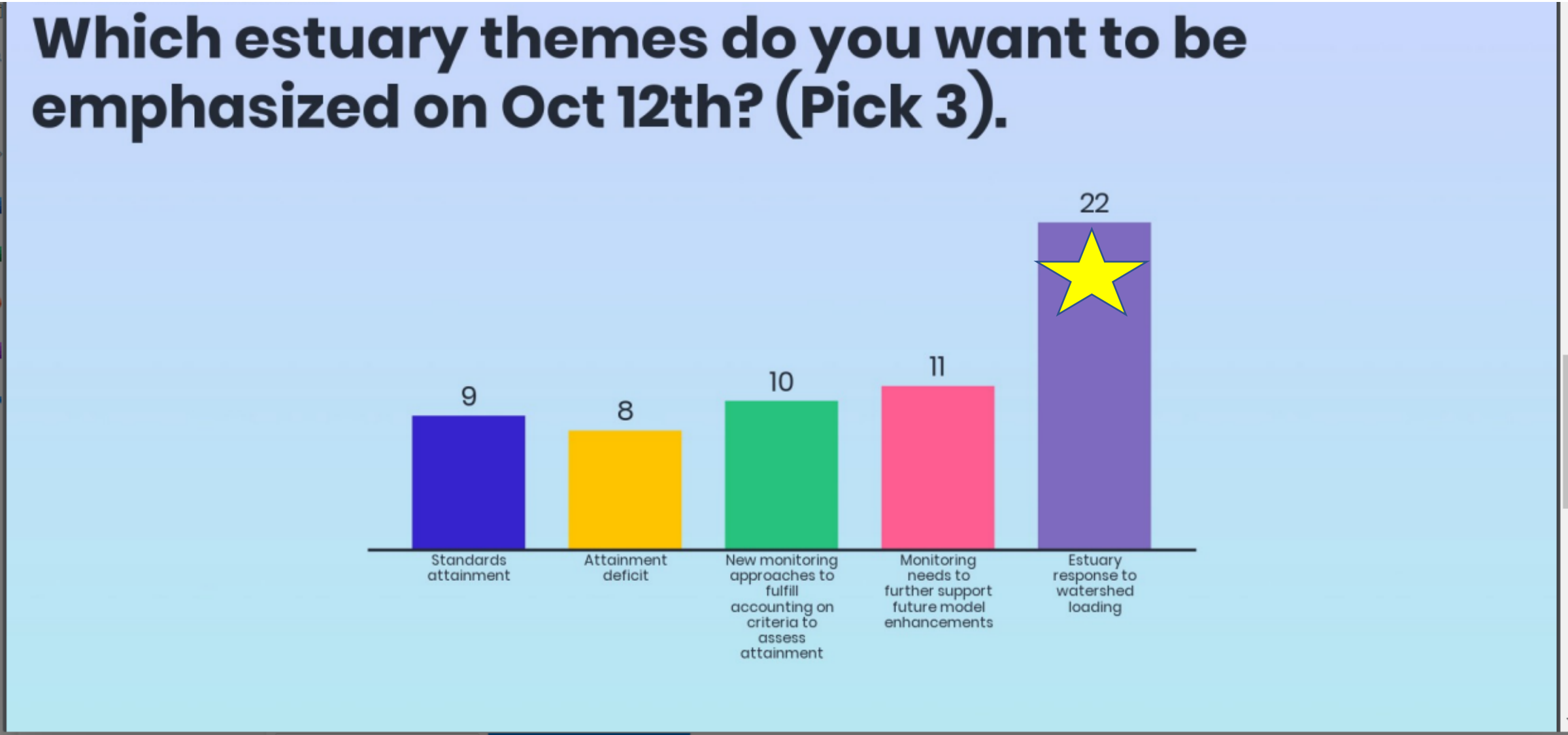
Ongoing work – gathering intelligence on stakeholder needs

- Recent **Water Quality Goal Implementation Team** meetings:
  - Great work from Jimmie Webber and the SIMPLE Team, Rebecca Murphy and the STAR analyst team on syntheses and presentations
  - Scott Phillips for organizing the meetings with the WQGIT

- Recommendations from the **Modeling WG** on monitoring options for
  1. DOC and PC at least at RIMP sites in the future
  2. possibility of superstation continuous monitoring at the 3 largest tributary fall-lines (Susq, Potomac and James R).

  - A lot of relevance in our work
  - Insights into priority needs is always getting updated through these networking meetings

Analysis needs expressed by WQGIT: How is the estuary responding to watershed loads



Needs expressed by WQGIT: Monitoring is important, as are Drivers of Nutrient Responses, Mgt Practices, Climate influences on Water Quality

PSC Review Work: Wrap up and rollout schedule

- October 2021:
  - Filling out the draft 3-section (“8-questions”) document continues (Peter and Breck) with information gathered across many meetings, and editorial input from a PSC Review Leadership Team (Scott Phillips, Lee McDonnell, Denice Wardrop)
- November 2021:
  - A brief PSC meeting update on our report work will be provided in late November 2021. (Lee McDonnell)
  - Tentative presentation: Request by the Chesapeake Bay Commission on network operations, review findings, gaps in programming
- December 2021:
  - Anticipating that we will provide material for NTN WG review (and other workgroups) in December 2021-early Jan 2022 period.
- January 2022:
  - For the CBP Management Board, a report summary overview and recommendations on priority support needed for the monitoring networks that will be going up to the PSC is anticipated for delivery in January 2022.
- February 2022:
  - The PSC presentation on report overview with priority recommendations on network support needs is anticipated for delivery in February 2022.

PSC Review – Developing recommendations on funding needs

- Budgeting highlights thus far:
  - Sustaining existing programming work for 123 stations requires added annual support to address cost-of-living increases that affect our ability to pay for the rise in prices on equipment and services.
    - Estimates of adjustments needed over the next 5 years are being developed based on conversations with grantees. Thank you to those of you we have already spoken with.
  - Near annual challenges occur for potential station losses. A targeted funding mechanism to address the need is recognized in the developing recommendations.
    - Conococheague Creek was an issue for 3 years and new support was designated in 2020 to sustain station operation in the network.
    - Deer Creek, MD was our 2021 crisis. A year of support has been designated to continue operation. Long-term support needs remain.

Beyond the PSC Review –

- Budgeting highlights
  - Program advances are being considered for continuous monitoring sensors at a subset of stations.
    - The present focus of our developing PSC recommendation for network support involves maintaining our existing networks and analyses.
    - The evolving concepts for advanced monitoring have only been discussed in various venues in light of the potential for new funding opportunities related to new bills being considered in Congress.

Beyond the PSC Review – optimization needs remain

- Budgeting highlights
  - In the event that no additional funding arrives and we are in need of tough decisions on the network, our work continues here.

Regarding Decision-Trees on Optimizing. A Brief History in NTN Time on Optimization

- 2004 Memorandum of Understanding established the foundation 85 station network. Consistent protocols across all jurisdictions for a selection of monitoring locations.
- 2009 Monitoring Realignment produced recommendations for network expansion related based on Tributaries Strategies interests, geographic gaps, land cover representation gaps, watershed size spectrum representation, modeling information needs.
  - Investments were made from 2010-2012 to add about 40 stations to bring us up to around 125 and establish some analysis support.
- Since 2012, we have largely been on a glide path aiming to maintain the network investments
- We addressed anomalies along the way

Regarding Decision-Trees on Optimizing. A Brief History in NTN Time on Optimization

- Coincidentally about 2012, there was a funding reduction year that affected tidal and nontidal networks. Downsizing decisions were made in both tidal and nontidal sectors.
  - Funding was restored the following year.

- We have since addressed anomalies along the way

Regarding Decision-Trees on Optimizing. A Brief History in NTN Time on Optimization

- Addressing funding issues at stations, basic steps:
  - First, we check with the State/jurisdiction involved to see if they have a mechanism to backfill an issue of funding loss from a partner at a station. If there is no immediate solution there, then -
  - We alert EPA leadership to the issue. Every winter EPA reviews their budget, asks for monitoring priorities. Issues with station funding are always in the top 1-2 monitoring priorities presented.
  - We further identify the issue with USGS to evaluate opportunities for leveraging other networks and programs for monitoring support in case EPA does not have a support mechanism.
  - We present concerns to the WQGIT and Management Board, who, in the past, have had input on budget items and budget directions for the monitoring programs.

  - We first try to ensure at least a continuation of funding for a year, gap coverage, while working through the issue of long term support. This has happened repeatedly among all partners assisting in maintaining the integrity of the network.
  - Stations have been traded off for support between States (e.g. MD and PA at one point) or States and USGS.

Regarding Decision-Trees on Optimizing. A Brief History in NTN Time on Optimization

- Addressing funding issues at stations, basic steps:
  - When all those avenues (and occasionally others) have been exhausted, and we find no other way to sustain a station, then a decision to reduce the network gets invoked.
  - Station loss is the decision of last resort.
  - We need your help on strategically considering the reduction of network stations if we get to the phase of the decision of last resort.
  - **Please recognize that since I joined the program here in 2006, there have been some trade-offs up and down, but I don't think we have lost more than 4 stations after an increase of about 40 stations.**
  - **Our total network coverage and operations have increased and been quite consistent around 125 stations of total effort in the last decade.**
  - **Reductions have been the exception to the rule.**

Optimization: Action Items

- 1. Network-wide optimization is being developed with the help of Matt Cashman's framework and Qian Zhang's support for analysis as he learns the system.
  - Consider a small team to provide some scenarios we can work with Qian on running to generate example results and discuss interpretation.
    - **ACTION ITEM**: Suggesting we have a small team to work with Qian. Volunteers?
    - **ACTION ITEM**: Revisit our list next time 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.

- 2. Within-Jurisdiction considerations.
  - Your recommendation for a station that would be the first to remove if you had to downsize.
    - Looking for a pool of stations that does not target one jurisdiction but draws from all our resources for options.
    - **ACTION ITEM**: lease use the next month to highlight one station you would put up for reduction if you were asked to reduce your operations by one station.