Status and Trends Workgroup (STWG) Meeting

Monday, March 13, 2023

1:00 PM – 2:30 PM

Join by Webinar

Meeting Materials: Link

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

ACTION ITEMS

- **Catherine Krikstan and Susanna Pretzer will work with Dan Brellis to develop a timeline for getting the new Integrated Watershed TMDL indicator and area graph formatted on the 2025 Watershed Implementation Plan (WIP) page on Chesapeake Progress.**
- **Katheryn Barnhart and Doug Bell will follow up with select indicator point of contacts to discuss funding opportunities to meet their indicator needs.**
    - **After small group meetings with outcome indicator teams, Alex Gunnerson will set up a meeting between Katheryn Barnhart, Doug Bell, Breck Sullivan, and August Goldfischer to ensure indicator needs discussed individually with outcomes are utilized to update the science needs database.**

Meeting Minutes

1:00 Announcements - Katheryn Barnhart (EPA) and Doug Bell (EPA), STWG Co-Coordinators

- Introducing Doug Bell, new STWG Co-Coordinator.
- Brief overview of the new Living STWG Workplan for 2023.
- Theme for this meeting: review identified outcome-specific indicator needs and establish next steps for fulfilling those needs.

Summary

Doug Bell began by introducing himself as the new STWG co-coordinator and providing a short review of his experience in research and the federal government. Katheryn briefly walked through the new living STWG workplan for 2023 that was developed in consultation with core workgroup members. Katheryn explained the priority for the next few months will be providing support for developing new indicators in advance of the Strategy Review System (SRS) Biennial meeting in May. This priority is reflected in action 2 of the living workplan and is a focus of today's meeting.

1:10 Review of Proposed Integrated Watershed TMDL Indicator and Dashboard Products – Gary Shenk (USGS)

Gary presented a modified version of the TMDL indicator his team presented in August 2022 for approval and inclusion as an additional indicator on ChesapeakeProgress.com under the 2025 Watershed Implementation Plan (WIP) outcome.

Summary

Gary noted significant changes have been made since this indicator was last presented to the STWG and each partnership meeting resulted in recommendations that have strengthened the final product. This is an integrated indicator that is based on monitoring data to the extent possible but utilizes modeling to assess lag time and other effects. Qian Zhang was the main architect of this work, but got support Gopal Bhatt, Isabella Bertani, and others at the CBPO.

Gary walked through the different components of the indicator, including the data sources and pollution sources by category (River Input Monitoring (RIM) loads, below-RIM station loads, etc.). Gary then highlighted the reformatted area graph that was suggested by the STWG in August 2022 with the new categories suggested by the Water Quality Goal Implementation Team (WQGIT) in November. The new indicator will go on the 2025 WIP page on ChesapeakeProgress, while the more in-depth data will be accessible to the public via the nontidal data dashboard. Gary showcased the R Shiny App that Qian Zhang produced for comparing these data by station.

The immediate next step for this work includes asking the WQGIT for approval at the March 2023 meeting to include this Integrated Watershed TMDL Indicator as a supplemental indicator under the WIP 2025 Outcome. Once approved, the team developing this indicator will work with the CBP web team to publish the indicator on ChesapeakeProgress.

Discussion

Peter Tango said conceptually, the water quality standards indicator is dissolved oxygen + submerged aquatic vegetation/water clarity + chlorophyll *a* on the combined response linked to the TMDL specific interests.

Peter asked if the public indicator could include a line on the chart for total target reduction? Qian Zhang said the top of the area plot is our target reduction, which is broken down into the different categories. Peter followed by asking if the top value on the Y axis is the target, and therefore, the white space to the top represents the unrealized load reduction? If so, can the threshold target be more obvious? Peter said it is a beautiful summary, but looking for a target is not obvious to me. Qian replied the unrealized reduction is reflected in the colored categories. Qian said it depends on how one defines "unrealized load reduction", which can be anything other than the "realized" category.

Peter congratulated the team on the fantastic work on the indicator and station-level dashboard. Katheryn agreed and thanked Gary, Qian, and the whole team involved for their work on this indicator and for bringing it before the STWG and incorporating feedback before asking for approval from the WQGIT.

Katheryn asked the web team what the timeline is for adding the area graph to ChesapeakeProgress, given the different format. Catherine Krikstan and Susanna Pretzer said they are not sure and need to talk with Dan Brellis about this to get a better estimate of the timeline.

Peter Tango said for sake of communication, 155 million pounds of nitrogen is the most we can expect, we should visually define that to cap the upper expectation. Gary replied that makes sense and suggested adding an arrow or something to demarcate what the reduction target from 1985 is and the limits of what is expected. Qian said based on feedback received, they added the black line to the figure at 145 million pounds and put the purple and gray categories above the line to indicate the adjustments for Conowingo and climate change. Gary said one bar can be the original commitment, and another bar can be additional commitments due to changing conditions (Conowingo and climate change). Peter agreed with this suggestion. Doreen agreed and emphasized this addition will improve the communication of the indicator's message.

Breck Sullivan said it was mentioned there is not a WIP shortfall in the phosphorus loading graph. Breck asked if it should be removed from the legend then, or if it should remain to show the category is zero? Katheryn said one option on ChesapeakeProgress is a hover function, which could present the WIP shortfall for phosphorus as "0." Qian said in the spreadsheet, they wanted to be consistent for the categories. When the category shows up in the figure on ChesapeakeProgress, only non-zero values will be displayed.

Jeremy Hanson asked if the WIP shortfall is a line, or if it is a constant size that visually looks like a line? Katheryn said she thinks it is the difference between realized and unrealized loads and the goal, so it fills the space between the other categories and the goal line. Gary said it looks like a line because it is thin and black, because there is little difference between the current WIPs and the original goal. This category will be visualized differently.

Jeff Sweeney asked why there is a "RIM expected but not seen" category for phosphorus but not for nitrogen? Qian said that category is zero for nitrogen. When the category shows up in the figure on ChesapeakeProgress, only non-zero values will be displayed.

Doreen Vetter said she was surprised to see this indicator being assigned to the 2025 WIP outcome since she thought the intention was to publish on the Water Quality Standards Attainment and Monitoring (WQSAM) outcome page. However, she now agrees that it is better served on the 2025 WIP page, particularly regarding ecosystem

response and factors influencing. Doreen suggested linking this integrated indicator to the WQSAM page as well to emphasize this connection.

Scott Heidel asked if there is any chance a color blindness friendly scale can be used whenever possible moving forward? Katheryn said yes, ChesapeakeProgress has a color pallet that ensures all of our charts are color blindness friendly.

Katheryn said it seems there is general approval of this approach and putting it on the 2025 WIP page on ChesapeakeProgress. Katheryn said a good next step is working with Catherine Krikstan, Susanna Pretzer, and Dan Brellis to understand the timeline for getting this on the webpage. Catherine Krikstan agreed we these next steps.

1:40 **Review and Discussion of Outcome Specific Needs - Katheryn Barnhart and Doug Bell**

Doug briefly presented major themes across identified outcome-specific indicator needs, based on what has been heard so far from indicator point of contacts. Katheryn provided a quick update on the Reaching 2025 efforts and the SRS Biennial Meeting, noting how these efforts connect to the new STWG workplan.

Summary

Doug began with an overview of spreadsheet tracking indicator needs and explained the purpose behind this cataloging effort is to identify types of indicator needs and then address them with available resources or find appropriate resources. Doug then presented a summary of his cross-cutting observations from reviewing the indicator needs and comments from outcome representatives. Some of these observations include there is a wide range in how needs are recorded, it can be difficult to understand the work schedule and funding mechanisms for each need, and common action terms used tend to be design/develop, synthesize/assess/evaluate, execute/implement, and maintain.

Discussion

Breck Sullivan said STAR does want the database to reflect indicator needs so we can help find resources for these needs, and we are hoping this exercise will help inform our database to be up to date in case we are missing something, such as something which came up since the last time STAR spoke with that outcome about science needs. The science needs database is designed to track and help others in the program like STWG.

Katheryn said next steps for addressing these needs include Katheryn and Doug reaching out to select indicator point of contacts to ensure or enhance the need descriptions, so they are helpful for each outcome, and to identify potential resources for that outcome's indicator needs.

1:50 Presentation on Potential Resources to Address Indicator Needs – Doreen Vetter (EPA)

Doreen Vetter presented some of the potential avenues and financial resources to address indicator needs and what information is needed from outcome leads when making decisions on the allocation of these resources.

Summary

Doreen focused the presentation on available funding, funding priorities, and available support. Doreen provided corresponding information needed to evaluate requests and timing/next steps.

Doreen began with an overview of Eastern Research Group (ERG) which currently supports multiple outcome indicators, through indicator development support and indicator updates through data collection, analysis, and documentation. ERG capabilities are listed on slide 6. Doreen then outlined the information needed for securing ERG support (slides 7-8), whether the analyst is directly employed by ERG or through a sub-contractor. Doreen is the contract manager with ERG and anyone interested in using these funds should contact her with questions or note asking to set up a conversation (vetter.doreen@epa.gov).

Other funding and technical support can come from Tetra Tech, the upcoming request for assistance on living resources analysis and documentation, and the Infrastructure Investment and Jobs Act. CBP infrastructure priorities include investing in performance metric development, tracking, and enhanced monitoring. There is a focus on funding and technical assistance for under-resourced outcomes.

Discussion

Julie Reichert-Nguyen said the Climate Resiliency Workgroup (CRWG) really needs a technical analyst to help develop/refine the indicators - can this funding allow for that work? The CRWG also need sampling support. Doreen said there is a possibility this could provide some of the necessary funding, but emphasized a technical lead from the workgroup will be needed to manage a contractor.

Julie asked if EPA provide a project manager or is the workgroup lead expected to do this management work? Peter shared in his last experience with a situation like this, the workgroup led the management of the contractor along with anyone they wanted to co-lead. It could be a mini-team or action team working closely with them for example. Julie said the challenge for the CRWG is the chairs, staffer, and coordinator, are completely overbooked and do not have capacity to manage this project. Pam Mason said the Wetlands WG shares the same concern as the CRWG about not being able to respond to financial opportunities. Pam added the Wetland WG shares a technical lead and staffer with other habitat outcomes. Doreen said since EPA is not a subject matter expert on everything, there must be a technical lead for the project who can evaluate if the deliverables meet the needs of the workgroup.

Peter Tango said metric development aligns with sampling design needs to support them. Does that mean we can have sampling design support assistance through ERG? Doug Bell said he thinks this assistance is available through ERG. Peter said ERG was wonderful to work with during the original climate indicators 2-year project. All those capacities Doreen listed were invaluable from them in the process. Doreen agreed with this characterization, but emphasized the contractor will not be able to make decisions for us - we as a partnership need to make those decisions. Julie said the climate indicator work was an implementation plan, but the CRWG still needs to find the resources to implement. The CRWG did narrow the focus of the climate change indicators based on discussions with the Management Board. Julie said the planned focus is on stream and bay water temperature indicators. Peter Tango said a workgroup, if it knows what the data are, and knows the protocol for processing, may then consider asking for the support and capacity to produce the annual analysis. The workgroup would then want to have meeting opportunities to review the results, and someone needs to be a technical reviewer for Chesapeake Bay Program - ensuring documentation is complete, ensuring the right data are accessed, ensuring the product communications are correct, etc. A group can do amazing work, but someone needs to be a point of contact, a responsible person when the material goes public.

Alison Santoro asked if ERG could do a sole source provider or if it needs to go through a competitive request for proposals process. Doreen said the first question she would ask is if ERG has that person as a sub-contractor, if not, can they negotiate acceptable terms and rates. If they are not already listed as a sub-contractor, it can take a few months to workout, otherwise it would be a quick turnaround.

Breck Sullivan suggested a meeting with Doug, Katheryn, Alex, and August to see what the CBP Science Needs Database might be missing based on known indicator needs STWG has documented.

Pam Mason said she is not sure where the indicator needs came from on the Wetlands WG and who was consulted in consolidating them. Katheryn explained the indicator needs came from the science needs database and the Wetlands WG staffer and coordinator provided input. Pam asked why she is needed at this meeting. Katheryn said it is important for outcome representatives closely associated with developing the indicator, like Pam, to attend so their input on how the science needs are characterized can be considered going into small group meetings and they can learn about the resources available.

2:30 Adjourn

Participants: Alex Gunnerson, Alex Fries, Alison Santoro, Amy Williams, Angie Wei, Ann Foo, August Goldfischer, Becky Golden, Breck Sullivan, Catherine Krikstan, Chris Guy, Chris Mason, Cindy Johnson, Dede Lawal, Doreen Vetter, Doug Bell, Doug Moyer, Gary Shenk, James Webber, Jamileh Soueidan, Jeff Sweeney, Jeremy Hanson, John Clune, Julie Reichert-Nguyen, Katheryn Barnhart, Katlyn Fuentes, Kaylyn Gootman, Pam Mason, Peter Claggett, Peter Tango, Qian Zhang, Rikke Jepsen, Scott Heidel, Stephen Faulkner, Susanna Pretzer.