



Tidal Monitoring and Analysis Workgroup (TMAW)
Conference Call
Thursday, May 2, 2013
10:00AM – 11:30AM

Meeting Materials:
<http://www.chesapeakebay.net/calendar/event/18989/>

MEETING MINUTES

OBJECTIVE: Discuss where re-evaluation of the current indicators calculated by TMAW may be necessary due to the evolving mission of the Chesapeake Bay Program Partnership and the limited personnel resources of the Program's monitoring team.

ACTION ITEMS:

- Develop a standard protocol and a standard program to be used for the analysis of current conditions. (*L. Hernandez and B. Romano*)
- Send out a written document describing the process for calculating the current conditions indicator to relevant partners. (*L. Hernandez*)
- Statistically compare the two methods used to prepare the raw data for the chlorophyll *a* indicator calculations and present findings to TMAW at the next meeting. (*E. Perry, L. Hernandez, L. Rubin*)

LEADERSHIP:

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Welcome, introductions, announcements – W. Boynton (TMAW Chair)

- May 7, 2013 Dissolved Oxygen Seminar at the U.S. Fish and Wildlife Services Office located in Annapolis, MD

Overview and Discussion of Bay Health (and other) Indicators – L. Hernandez (UMCES-CBPO), Nita Sylvester (EPA) and C. Wicks (UMCES-EcoCheck)
(Attachment: [2013-05-02 Indicators Discussion](#))

L. Hernandez presented a summary of the CBP Indicators reported by the tidal workgroup, including the purpose of each indicator, a description of what is really being measuring, whether the correct data is being used to evaluate the target, whether the target evaluated correctly, and the methodology is being used to calculate the indicator. The purpose of this discussion is to re-evaluate the relevance and methodology used for calculating the indicators with the evolving mission of the Chesapeake Bay Program Partnership.

Please see the Attachment [2013-05-02 Indicators Discussion](#) for a detailed list of the indicators calculated by the tidal workgroup and the responsible analyst.

Indicators Discussed, Questions, and Concerns:

1) Reported CBPO Bay indicators linked to water quality standards and criteria attainment

- Dissolved Oxygen
- Water Clarity
- Chlorophyll *a*

2) Reported CBPO Bay indicators of ecosystem health

- “Bay Grasses” Tidal SAV
- “Bottom Habitat”: Benthic IBI
- “Phytoplankton”: Phytoplankton IBI
- Tidal Wetlands

3) Supporting indicators calculated by CBPO staff but not yet reported on CBPO webpage

- WQS EO Outcome Indicator
- Incremental progress

- Current Conditions
 - **ACTION:** Develop a standard protocol and a standard program to be used for the analysis of current conditions. (*L. Hernandez and B. Romano*)
 - **ACTION:** Send out a written document describing the process for calculating the current conditions indicator to relevant partners. (*L. Hernandez*)

4) Supporting indicators calculated by CBPO staff and [also] reported by other organizations (i.e., EcoCheck, Versar)

- Dissolved Oxygen
- Water Clarity
- Chlorophyll *a*
 - Different methodology used by the Chesapeake Bay Program Partnership and EcoCheck for preparing the input data sets used for the chlorophyll *a* indicator calculations and subsequent reporting:
 - CBPO uses the QA random replicates method; Mike Mallonee, the CBPO monitoring data manager, produces a data set by selecting random replicates.
 - EcoCheck uses an average of the two replicates; Mike Mallonee calculates the mean of the QA replicates.
 - *Question:* When the chlorophyll *a* data is used in the seven Bay segments to determine the criteria attainment, what method is being used?
 - *Answer:* Cumulative frequency distribution method (CFD); neither of the two methods in question use the CFD because the indicator is **not** an assessment of standards attainment.
 - The meeting participants discussed the use of selecting random replicated vs. using the average of the replicates; most agreed that the average of the replicates were a better method due to the allowance of calculating a variance for QA purposes.
 - **ACTION:** Statistically compare the two methods used to prepare the raw data for the chlorophyll *a* indicator calculations and present findings to TMAW at the next meeting. (*E. Perry, L. Hernandez, L. Rubin*)
- “Bottom Habitat”: Benthic IBI
- “Phytoplankton”: Phytoplankton IBI
- Hypoxic Volume Summer Review
- Historical Hypoxic Volume Annual Reports [for monthly averaged and split datasets]

Concluding Remarks

- How can this workgroup be most efficient with our resources, as not to perform duplicate efforts?
 - The development of “Standard Operating Procedures” (SOP’s) for each indicator is necessary for the consistency of indicator calculation from analyst to analyst.

- Collaboration between partners to reduce duplicate efforts by delegating responsibilities and distributing results to interested parties.
 - *Concern:* Redundancy allows for the quality assurance of the analyses; however, certain routine calculations should be standardized using SOP's.
 - When new procedures are being tested, redundancy is important.
 - When using different methods for the same analyses, statistical comparisons of the methods should be performed before publication of the results for quality assurance.
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Update on the Status of the Tidal Monitoring Network – P. Tango (USGS-CBPO)

P. Tango provided the workgroup with an update on the potential funding reduction for the Tidal Monitoring Network. He will provide the workgroup with a clear funding reduction amount when EPA and CBPO have finalized that number.

Discussion, Questions, and Concerns

- MD has less than two months of funding remaining using current EPA grant money.
 - *Question:* Will this funding reduction be a one year reduction, or permanent for the monitoring network moving forward?
 - *Answer:* Currently this particular budget is for FY13, but long-term budget cuts will remain. These two timeframes will be broken up into Phase I, short-term, gap filling measures, and Phase II, when expertise will be required for a re-evaluation of the network and funding options.
 - Once a finalized budget is revealed, TMAW will meet to discuss reductions on the tidal component of the monitoring network.
 - After the new WQS Indicator was presented to the Management Board (MB), they challenged the group to provide them with a cost estimate for a monitoring program that fully encompassed the entirety of Chesapeake Bay, for all standards needing to be met.
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