

Summary of Comments, WQ Management Strategy (MWCOCG, USGS and EPA)

General Comments:

- Note: Specific PA comments on the management strategy (September 2018) were included in the revised strategy distributed in early October 2018 for review.
Response: Noted.
- The Management Strategy is such a mix of past and present tense now between 2017 and 2025 it is very confusing as to what we are going to do and where we are going to go. The specific priorities are not clearly identified, nor how we are going to document progress towards achieving those priorities. It has gotten so long, I question that anyone outside of our immediate group will want to read it. If our target audience is the general public, we have definitely not reached them with this document. Sorry. [PA]
Response: Please provide specific language changes to address your concern.
- Part V, Current Efforts and Gaps, should state that the watershed did not meet its 2017 nitrogen target—that is clearly a “gap”. [EPA]
Response: Language added to address this comment.
- Current Efforts section: suggest editing tense to indicate actions that are complete
Response: done.
- In general, references to new data streams or collecting new monitoring data should include consideration of Storet/WQX for data collection purposes [EPA]
Response: WQGIT to figure out how to get data into the Water Quality Exchange. Look at how monitoring data can be more accessible, such as through the Water Quality Portal. Both of these resources are available at:
<https://www.epa.gov/waterdata/water-quality-data-wqx>
- CBP should make a statement on whether it believes the 2017 outcome was achieved. [EPA]
Response: Language is already included that the CBP did not achieve the nitrogen 2017 goal.
- In general, BMP implementation references should expand to include wastewater practices as well [COG]
Response: We do not specifically call out the other sectors with the exception that BMP implementation needs to increase in the urban and ag sectors. Not appropriate to specifically and only highlight wastewater practices in the other references to BMP implementation.

Specific Comments:

I: Introduction

- Water quality outcomes include toxics and riparian forest buffers, So, clarify that we are only talking about the 2017WIP, 2025WIP and WQ Standards [EPA]

Response: It's noted in the title of the document that we're referring to the 2017 WIP, 2025 WIP, and Water Quality Standards Attainment outcomes.

II: Goal, Outcome and Baseline

Background

- Remove reference to “integrated approach”: outdated from older version of strategy [EPA]

Response: Done.

III: Participating Partners

- Should Participating Partners include USDA? Should DOD be included? [EPA]

Response: USDA did not participate in the development or review of this management strategy. However, I did add a bullet to include the other members of the WQGIT.

IV: Factors Influencing Success:

Improved Technical Information

- Factor 2: Consider exploring getting more data into WQX/Storet from various grant programs (e.g., 319) so that it can be used by CBP partners for decision making, targeting, measuring progress, etc. Suggest using available WQX/Storet data in decision-making. This should be put into the workplan as an action [EPA]

- This comment also applies to factor 3

Response: Look at ways to be able to share monitoring data amongst jurisdictions and their respective stakeholders. The Water Quality Exchange and Water Quality Portal may be utilized for this purpose: <https://www.epa.gov/waterdata/water-quality-data-wqx>

- Factor 5: Remove references to Phase 7 modeling tools. Phase 7 is premature [EPA]

Response: Done.

- Factor 7 should include references or links for publication efforts [EPA]

Response:

Will link to data dashboard (<http://gis.chesapeakebay.net/wip/dashboard/>). However, no current website postings for presentations of storylines. Appropriate presentations will be posted to the Integrated Trends Analysis Team (ITAT) webpage (https://www.chesapeakebay.net/who/group/integrated_trends_analysis_team) and Phase III WIP development webpage on chesapeakebay.net. USGS will get presentations approved for posting.

Response of Water Quality Conditions to Management Practices

- Factor 11: Modeling references should be consistent with PSC decision to freeze planning targets through 2025 [EPA]

Response: Noted

- Factor 12 should be updated to reflect PSC October 2018 decisions on Conowingo WIP and steering committee, or remove reference to PSC decisions on Conowingo WIP [EPA]

Response: Noted

**Suggested supplemental language:*

The Chesapeake Bay Program convened a steering committee with members from each of the six watershed states and the District of Columbia to develop and implement a separate WIP for the Conowingo Dam. In fall 2018, the partnership decided how to divide the responsibility for accounting for the additional pollution loads entering the Chesapeake Bay from the Susquehanna River.

The Chesapeake Bay Program decided that the best way to address the increased pollution from the Conowingo Dam would be to create a separate Watershed Implementation Plan (WIP) for the dam.

A separate steering committee will be tasked with writing this new WIP for the Conowingo Dam and developing a financing strategy. The committee will have representatives from each jurisdiction and the assistance of a third party. The Environmental Protection Agency will provide oversight in the development and implementation of the Conowingo WIP, evaluate and track the progress being made to reduce the additional pollution from the dam and provide technical and contractual support.

This approach will give all the jurisdictions in the Chesapeake Bay watershed the chance to participate in this massive undertaking and contribute in putting conservation practices in place to help offset the nutrient and sediment pollution loads from the Conowingo Dam.

References:

https://www.chesapeakebay.net/news/blog/who_is_responsible_for_the_conowingo_dam

- Factor 13: If this [James River chla criteria attainment] is a task that CBP intends to support, it should be included in the workplan. I am not clear on what “implementation efforts” the partnership would support beyond the efforts provided to the entire watershed. [EPA]

Response: this issue has been addressed in the WQ Logic Table, under Factor 15 “Addressing chlorophyll in the tidal James River.” CBP partnership is working closely with the principal investigators of the James River chlorophyll-a criteria assessment to determine the criteria necessary to meet water quality standards in the James River.

Section V: Current Efforts and Gaps

- Should state that the watershed did not meet its 2017 nitrogen target—that is clearly a “gap”. [EPA]

Response: Will be completed.

- Assessing effectiveness of implementation actions: Is the partnership doing this through BMP verification or through updates to the BMP expert panels or through on-the-ground monitoring? If so, we should ensure that these actions are clearly documented in the workplan. “Assessing effectiveness” means more than just verifying a practice is still in place. [EPA]

Response: This is being addressed with the following management approaches in the Work Plan:

2.1: Annual implementation progress reporting for inclusion in modeling tools and annual reporting on progress on programmatic milestones.

5.4: Evaluation of BMP implementation and maintenance costs and actual nutrient and sediment reductions

5.6: Provide Support for continued BMP implementation, tracking and reporting on agricultural loads

- Monitoring is a critical piece that seems to get lost in this document and the workplan. In the monitoring section, we could add language to support the use of monitoring data in measuring progress towards the 2025 goal. [EPA]

Response: Noted. This issue is addressed in Management Approach 4 in the Work Plan. Specifically in 4.1, 4.8, and 4.13 the following language has been added “Support measuring progress towards the 2025 goal.”

- Gaps should include septic controls, wastewater treatment, manure technologies in addition to conservation practices [EPA]

Response: Noted.

- COG recommends adding an additional gap: Financial capability to continue to maintain new and existing implementation practices.

Response: Noted.

- Language on necessary new capacity to address gaps should be included in “Lessons Learned” discussions in workplan [EPA]
Response: Noted, this has been addressed in the Work Plan with Management Approach 3.2 “Partnership support and use of new and existing data streams such as those being assembled by the Chesapeake Monitoring Cooperative from volunteer networks and data available in the Water Quality Exchange(WQX)/Water Quality Portal and nontraditional partner efforts will expand spatial and temporal resolution of decision-support assessments.”.
- “more localized monitoring in watershed areas to assess effects of BMPs” should be identified in workplan. Reference use of Storet/WQX for collection of this data [EPA]
Response: Noted. Language has been added referencing the Water Quality Exchange (WQX) and the Water Quality Portal under Management Approach 3 “Enhance monitoring to address data limitations with the use of new data streams to better estimate water quality conditions,” in Management Approach 3.2

Section VI: Management Approaches

Enhancing Monitoring:

- “the CBP has begun developing new methods for assessing incremental progress towards water quality standards attainment” should be included in the workplan [EPA]
Response: Noted
- model uncertainty analysis needs to be more clearly defined in the workplan [EPA]
Response: Addressed in the Work Plan response to comments
- references to air monitoring should be linked to efforts to improve monitoring or be removed from the strategy language [EPA]
Response: Noted, this section has been removed.
- Findings from the 2009 review of modeling are not included in workplan [EPA]
Response: The 2009 report is not cited in the Work Plan. The reference to the 2009 report will be removed.
- USGS recommended addition: “The CBP partnership conducts annual monitoring of river flow to the Bay to help explain yearly changes in DO, clarity/SAV, and chlorophyll-a conditions. Living resources monitoring is used to assess changes in populations of lower trophic levels (SAV and invertebrates) and fisheries (crabs, oysters and selected finfish species) that are dependent on habitat conditions. The CBP nontidal water quality monitoring program monitors nutrient and sediment at 115 sites in the watershed to help document and understand the factors affecting the response to management practices.”
Response: Noted

- USGS recommended addition: “Continue to incorporate continuous monitoring in nontidal tributaries and estuaries in order to better understand the nature and timeframe of estuarine responses to watershed inputs. Recent monitoring has shown differences in short-term loadings from continuous monitoring that differ from those from current models. High frequency monitoring of inputs and the estuary will help better assess the timing and magnitude of responses in the estuary relative to watershed inputs.”

Response: Noted

- USGS recommended deletion: “The STAR team is continuing a project to better measure and explain progress toward water quality improvements. This project will generate and improve understanding of the factors affecting system response (the Bay and its watershed) to implementation of management practices. STAR (under the CBP Modeling Workgroup) is also pursuing with the Scientific and Technical Advisory Committee (STAC) approaches to reduce uncertainties for models. Additional efforts to enhance monitoring are described in the Monitoring Progress section of this document.”

Response: will update to reflect work being done following the Midpoint Assessment, but will not remove from strategy. Will also list Modeling Workgroup and Monitoring Workgroup continuing efforts to better measure progress. Changing “this Project will” to “these efforts will.”

- USGS recommended addition: “Changes in water quality and related parameters, including dissolved oxygen, chlorophyll-a, water clarity, nitrogen, phosphorus, and total suspended solids, across the CBP long-term tidal water-quality monitoring network. These estimates show long-term (up to 35-year) and shorter-term (most recent 10-year) changes by adjusting for seasonal cycles and variability in river flow or salinity.”

Response: Noted

Enhanced Analysis:

- USGS recommended addition: “Continue to support science to understand response times to watershed management. Continue and build upon current efforts to understand groundwater lag times for nitrogen, soil-phosphorus storage and release for phosphorus, and transport times for fluvial sediment.”

Response: Agree this is a worthwhile research effort

Phase III WIP Implementation:

- EPA recommends revising “phase III WIP implementation” Header to read “Phase III WIP and 2-year Milestone Implementation”

Response: Noted

- USGS Recommended Addition: “Work with the jurisdictions to coordinate place-based research activities and insights with the spatial distribution of Phase III WIP implementation.” the idea is that we should mine the Phase III WIPs for content (such as local planning targets and spatial distribution of implementation) that can help inform our workplans. This is also useful to consider for the 2-year milestones, which are opportunities for the states to adjust their strategies and for us to provide more information as it arises. [USGS]
Response: Sounds like a useful applied research opportunity
- USGS recommended addition: “Complete analysis of Conowingo and Estuarine monitoring to support Conowingo WIP development”
Response: Noted
- List all workplan actions for Phase III WIP and milestones implementation here [EPA]
Response: That level of detail is not needed in this document. Please refer to “Management Approach 1: WIPs, and Two-Year Milestones to reach attainment of target loads to reduce N, P, and sediment provided in the Chesapeake Bay TMDL” for additional information.

Approaches Targeted to Local Participation:

- “The CBP partnership is currently exploring how to express programmatic and implementation goals at the local level in the Phase 6 modeling tools to assist the jurisdictions in tracking progress with their local goals, if preferred”; it’s up to jurisdictions to track progress with local planning goals. Consider deleting or editing. [EPA]
Response: That’s incorrect. It is EPA’s expectation, per the Local Planning Goals Task Force recommendation, that jurisdictions are to track progress in meeting local planning goals.

Cross-Outcome Collaboration and Multiple Benefits:

- Define who will compile and approve list of science needs and prioritization [EPA]
Response: STAR Team tasked to complete this

Section VIII: Assessing Progress

2017 WIP Outcome

- USGS and modeling workgroup project to enhance comparisons with modeled and monitored loads; should be included in workplan with a completion date, so that jurisdictions will know if it will be used in 2018-2019 milestones evaluation in Jan 2020 [EPA]

Response: Noted. Relevant information is provided in the Work Plan.

Water Quality Standards Attainment and Monitoring Outcome

- USGS recommended addition: “Analyzing trends in nitrogen, phosphorus, suspended solids, water clarity, chlorophyll, dissolved oxygen, benthic populations, SAV, and related parameters in the estuary and tidal tributaries.”

Response: Noted

- Language related to groundwater data in shallow systems was in previous version— should we investigate use of this data for purposes of informing targeting strategies. I thought Emily T. was using this data in some of her storyline presentations [EPA]

Response: Monitoring STAR leads recommended removing development of groundwater monitoring program. However, existing groundwater data is being used in analysis efforts. Groundwater data was used in developing the Phase 6 model, and used to help jurisdictions in Phase III WIP development.

- Define “integrated approach” term [EPA]

Response: will update with the following definition from the 2015 WA Management Strategy:

Water Quality Standards Attainment and Monitoring Outcome:

The CBP partners have endorsed (PSC, May 2012) an integrated approach that includes three primary pieces of information to measure progress toward water quality standards:

- Reporting of water quality management practices.
- Analyzing trends of nitrogen, phosphorus and sediment in the watershed.
- Assessing attainment of dissolved oxygen, chlorophyll and water clarity/SAV standards.

The integrated approach to quantify and explain water quality trends in the Bay and its watershed relies on monitoring information, enhanced BMP implementation data and use of several analytical tools (including statistical tools, CBP Watershed Model and estuary models, USGS SPARROW model and groundwater models).

Section IX: Adaptively Managing

- Reference to midpoint assessment of 60% implementation of reductions by 2017 should be included in “gaps” section of strategy [EPA]

Response: According to data submitted by the Bay jurisdictions, while the CBP partnership exceeded the 60 percent goals for reducing phosphorus and sediment as measured under the current suite of modeling tools, it did not achieve its 2017 goal for reducing nitrogen.

- CBP should make a statement on whether it believes the 2017 outcome was achieved.
Response: This has been addressed in a previous response.

- COG recommends the following additional question:
 - Are there fundamental changes due to climate impacts or other factors that require reconsideration of the water quality standards that the Bay TMDL was originally based on?

Response: This is a good question. This issue has been mentioned in the recent past in WQGIT calls. Climate change is assessed independently, by adjusting the seasonal wet and dry conditions from 1991 – 2000 based on climate change scenarios. The critical period of 1993 – 1995 has been kept the same, but it considers how climate change impacts (temperature and precipitation) have been adjusted from 1991 – 2000. This approach allows for the water quality standards that the Bay TMDL are based on to keep using the critical period of 1993 – 1995.

- EPA recommends the following additional questions:
 - How do we make the best implementation decisions under economic constraints at the state and local level?
 - How do we best target nutrient and sediment reduction practices to achieve the best outcomes?
 - How do we better leverage resources?

Response: All additional questions have been noted.