Revise the Accountability Framework[1] associated with the Chesapeake Bay Total Maximum Daily Load (TMDL) to improve our management effectiveness.

(Recommendation 1)

Review and revise the accountability framework to improve our effectiveness, particularly in reducing nonpoint source pollution, and increase emphasis on measured outcomes and water quality data in our assessment of progress. The goal is to create space for jurisdictions to pursue opportunities that may improve water quality but are not currently being incentivized when determining progress through the use of the Chesapeake Assessment Scenario Tool (CAST). Another primary objective is to identify resources needed to abide by the Accountability Framework and to effectively manage nonpoint sources of pollution.

Impact to how we work: Significant changes to annual progress assessment and potential future WIPs and Milestones

- Continue to utilize CAST with the incorporation of multiple lines of evidence into progress evaluations.
- Evaluate efficacy of the Chesapeake Bay Program policies and guidance associated with tracking, evaluating, verifying, and reporting progress.
- Increase emphasis on mutual accountability from partners, increased focus on innovation, system learning and how we make connections with people through restoration efforts.
- Explore using social science to better understand and measure how human behavior can drive natural resource use, management and decision-making.
- Document management effectiveness.

Impact on Chesapeake Bay Watershed Agreement: New time horizons to meet the targets of the Chesapeake Bay TMDL will require revisions.

General Level of Effort: High

- Level of effort is associated with the partnership time to develop and evaluate new methods to assess progress, structure of WIPs and milestones, and accountability mechanisms that fully engages with and is supported by the Chesapeake Bay Program partners.
- This is a commitment of staff time dedicated to development, review, communication, and consensus-building of any new processes.

How-to Strategies (Phase 2 Actions):

- Evaluate how accountability should work to improve overall effectiveness:
  - Determine how and what water quality monitoring data could be used in the process.
  - Determine how can living resources and ecosystem services be connected with water quality reductions to provide holistic accountability.
  - How the annual programmatic progress reporting could be leveraged in a more meaningful way.
  - How the Monitored and Expected Total Reduction Indicator for the Chesapeake (METRIC) tool could be used as part of the annual progress review
  - How existing policies and guidance could be revised to improve overall efficiency and effectiveness.

[1] The Accountability Framework includes four key elements: 1) Jurisdictions' development of Watershed Implementation Plans (WIPs), 2) Jurisdictions' development of two-year milestones to demonstrate progress, 3) EPA's commitment to tracking and assessing progress, and 4) EPA's commitment to taking appropriate federal actions if jurisdictions fail to develop and implement WIPs or fulfill milestones. The Chesapeake Bay Program can review and revise the first three of the four framework components.

Adopt a tiered approach to the Chesapeake Bay TMDL which prioritizes living resources response, near term benefits, and climate resiliency. (Recommendation 2)

Since the Chesapeake Bay TMDL was developed to achieve attainment of tidal water quality standards for dissolved oxygen, SAV/water clarity and chlorophyll *a* for the Chesapeake Bay's 92 management segments, identify a tiered implementation approach. Recognizing pollutant reductions are needed throughout the watershed, target improvement strategies based on a phased approach to progressively achieve near-term, mid-term and long-term outcomes adapted to state/regional workplans and resources. This approach will foster alignment with state and/or local water quality priorities, accelerate habitat, living resource, and watershed responses, while addressing cost effectiveness and climate resiliency.

Impact to how we work: This approach will prioritize efforts to identify and implement restoration initiatives with strong living resource benefits and that consider future implications of climate change.

- Identify benefits that align with local goals in order to shape the restoration initiatives.
- Provide opportunities to prioritize system responses to restoration initiatives through pursuing individual pieces of the larger restoration goals.
- Set tiered planning targets based on the segment(s) where efforts are focused.
- Communicate incremental successes to ensure motivation and momentum.

Impact on Chesapeake Bay Watershed Agreement: New time horizons to meet the targets of the Chesapeake Bay TMDL will require revisions.

General Level of Effort: Moderate

- Moderate effort needed to by the partnership to identify what factors should be considered, how they can be defined spatially, and the timescales that would be most beneficial.

How to Strategies (Phase 2 Actions):

- Identify impaired tidal Chesapeake Bay receiving waters (at a scale finer than the segment scale) with important connections to living resources, climate resiliency and other partnership priorities.
- Identify receiving waters with high probabilities for substantive near-term improvements given implementation levels can be put into place.
- Coordinate with jurisdictions and the broader partnership to identify how local 303(d) priorities and associated restoration initiatives align with the 'high-tier' waters noted above
- Establish a process to identify "immediate field", "near field" and "far field" goals in order to promote effective prioritization and connect restoration efforts with outcomes.
- Coordinate with jurisdictions to investigate a method that allows for multiple planning goals in tidal waters that satisfy all water quality criteria so they may be achieved in a step-wise manner

Enhance coordination and use of monitoring and assessment results with an emphasis on guiding implementation through documenting performance. (Recommendation 3)

Establish and promote effective cross-program coordination for water quality monitoring to inform watershed health and water quality restoration programs focusing on data-driven decision-making. Promote the use of state and local monitoring and assessment for incorporation into program goals, as appropriate, which may include learning, status and trends analyses, and evaluation of meeting water quality and living resource goals.

Impact to how we work: Re-envision the way that we utilize our monitoring data to maximize the data collection efforts of the partnership.

- Incorporate the wealth of community/participatory science into the formal feedback mechanisms used by the partnership to evaluate success and drive focused implementation. Make space for and embrace the different tiers of data that this piece of the partnership collects. This includes development and use of robust feedback mechanisms for the use of this data.
    - Change the water quality assessment and monitoring outcome to include quantitative measures for expansion of capacity based on increased coordination.
    - Include more than reporting on response metrics but expand language include stressor metrics (e.g., bacteria, pH/AMD, conductivity, toxics, etc.)
- Enhance coordination among local/state/federal partners data collection.
- Prioritize and focus attention to the work that is conducted by monitoring and assessment working groups.

Impact on Chesapeake Bay Watershed Agreement: Amendments/changes to the water quality and assessment outcome to require actions described above would catalyze this effort.

General Level of Effort: Medium

- level of effort is associated with the partnership time, additional resources to develop new assessment methods that incorporate the expanded collection of data, and resources to provide robust meaningful feedback mechanisms to our community science partners.
- This is a commitment of staff time dedicated to development of these new processes and resources for development of the feedback mechanisms needed.

How to Strategies (Phase 2 Actions):

- Investigate and expand the current coordination strategy between the multi-layered water quality monitoring programs at the local, state, and federal levels.
- Identify case studies that demonstrate significant coordination between local, state, and federal coordination.
- Make community science an integral part of the partnership reporting and evaluation process; encourage greater community science, crowd sourcing and engagement.
- Develop/enhance feedback mechanisms for community science data.
- Define what responses are expected from Partnership management actions; recognize the value of diverse, existing indicators to inform management effectiveness. Develop new indicators in a timely manner when necessary.
- Make this activity a focused task and direct additional resources toward development.

Increase and incentivize nonpoint source management implementation and identify, track, and address nutrient mass imbalances. (Recommendation 4)

Provide opportunities to increase nonpoint source implementation. Incentivize effective and innovative nonpoint source management across all sectors. Demonstrate measurable ecosystem responses. Target and empower small-scale watershed restoration that addresses the needs of the community. Promote outcome-based efforts. Address known challenges associated with nutrient mass imbalances to include fertilizers and unknown sources.

Impact to how we work: Increased emphasis on nonpoint source management and demonstration of measurable system response.

- Build effective coordination and collaboration between the EPA Clean Water Act (CWA) Section 319(h) program, statewide nonpoint source management programs, and the Chesapeake Bay Program (CBP).
- Leverage understanding of watersheds with the highest nutrient loads and sources driving mass nutrient imbalance and target implementation of nonpoint source BMPs.
- Encourage awareness of nonpoint source management programs across the Chesapeake Bay Program. Direct interaction and engagement between state resource managers, trusted local partners, and private landowners are critical to successful implementation.
- Enhance environmental literacy and workforce development through career pathways, readying future generations for jobs in the conservation field.

Impact on Chesapeake Bay Watershed Agreement: No change to the agreement.

General Level of Effort: Medium

- Many jurisdictions are incentivizing approaches to encourage small-scale watershed restoration with measurable outcomes outside of the CBP crediting structure.
- Dedicated approach and directive to coordinate and connect the CWA 319(h) and CBP goals and outcomes.
- Data sourcing and compilation to assist with data-driven decision-making at the catchment scale, including the siting and maintenance of additional water quality monitoring stations, and assessing mass imbalances and identifying potential solutions.

How to Strategies (Phase 2 Actions):

- Incentivize actions and approaches to small-scale watershed restoration and identify nonpoint source BMPs that are most important to water quality improvement through providing funding and staff resources, targeted and enhanced water quality monitoring, and communicating importance of these efforts through the social science lens through use of demonstration sites, workshops, etc.
- Dedicate federal and state staff time and resources to connect the CWA 319(h) and CBP. Develop state-supported recommendations to integrate the programs.
- Identify and support partnership endorsed approach to tracking mass imbalances. A variety of options are available to address these imbalances, including implementing technologies that reduce nutrient inputs, improving manure distribution (from surplus to deficit areas), and exporting nutrients from the watershed.
- Include assessment of mass imbalances as a part of the accountability framework. To the extent there are new or revised WIPs, mass imbalances could be a required element of the WIP: (1) identification of watershed; (2) identification of known sources; (3) address any uncertainties regarding potential sources; (4) identification of existing and potential policies (nutrient input policies, other BMPs, export programs); and (5) adaptive management plan to provide reasonable assurance.

Expand support for local government capacity. (Recommendation 5)

Identify opportunities to expand on existing local liaisons programs that connect, empower, and inform the federal, state, and local partners to grow awareness, educate, provide administrative and technical assistance, and increase implementation efforts across the watershed.

Impact to how we work: Increased focus on local priorities at a smaller scale than the Chesapeake Bay region.

- Connect and empower local governments and communities to address the pollution in their back yards, which will ultimately lead to improvements in the Chesapeake Bay.
- Address the changing environment by planning for and selecting practices with multiple benefits.
- Strengthen partnerships between trusted local partners, government, and community members and leaders.

Impact on Chesapeake Bay Watershed Agreement: No change to the agreement.

General Level of Effort: Medium

- All jurisdictions have some form of existing local liaisons program.
- Staffing support to identify and compile the jurisdictions' existing local networks.
- Develop recommendations for funding strategies and approaches to further support and expand such programs.

How to Strategies (Phase 2 Actions):

- Identify existing networks within and outside of the Chesapeake Bay Program partnership.
- Incentivize, through funding, opportunities to leverage and expand on programs, connecting localities with needed resources to improve fiscal health while advancing restoration initiatives.
- Co-produce assistance tools to maximize their local utility and application complementing regional management needs.
- Ensure long-term institutional knowledge capacity within the public service sector recognizing short and long-term turnover within a skilled workforce.
- Develop and modernize staff capacities with education and training support to address changing workforce requirements through time supporting science, management and policy advances, understanding and implementation activities.
- Subsidize actions fostering local benefits embedded in the fabric of state, federal, and regional implementation needs and efforts.
- Foster social equity with equal opportunities to resources and assets across socio-economic and cultural landscapes of the region.
- Develop or expand on a network of networks to connect small watershed groups throughout the Chesapeake Bay and share best practices.
- Identify successful small watershed groups, what's working, what's not, how can successful programs be replicated throughout the watershed.
- Map organizational capacity of small watershed groups/interventions that improve watershed health.