



**Chesapeake Bay Program**  
**SCIENTIFIC AND TECHNICAL ADVISORY COMMITTEE**  
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August 30, 2024

Dear Principals' Staff Committee,

In its role as an advisory body to the leadership of the Chesapeake Bay Partnership (CBP), the Scientific and Technical Advisory Committee (STAC) respectfully offers the following comments on the draft Beyond 2025 report. We do so before your official review of the report, to highlight the fundamental insights STAC has already offered in our Comprehensive Evaluation of System Response (CESR) report that have significant implications for the Beyond 2025 effort. We do so in the spirit of ensuring that the Beyond 2025 report recognizes the challenges and opportunities called for in CESR so that the partnership can take full advantage of findings for improving the Bay Program's effectiveness included in that report. We understand that a process with broad engagement was used to produce the Beyond 2025 report, and we recognize that the draft report acknowledges CESR by including some of its findings within its list of 2025 potential actions.

As the CESR report notes, Bay regulatory programs, voluntary programs, and funding approaches before and after the TMDL have made improvements in water quality. However, the collective evidence clearly indicates that the current program design will not result in meeting the water quality goals of the TMDL. Advancement is further complicated by significant population growth, land use change, agricultural intensification, and climate change. STAC believes that if the challenges ahead are clearly stated and understood, then that understanding will inspire commitment to the necessary innovation and change. To be certain that the draft Beyond 2025 Report meets the original charge of the Executive Committee to the Principals' Staff Committee (PSC) in "recommending a critical path forward that prioritizes and outlines the next steps for meeting the goals and outcomes of the *Watershed Agreement* leading up to and beyond 2025," we offer our summary of the three most foundational challenges in CESR with their attendant risk of insufficient attention and action. **We request an addition to the draft Beyond 2025 report that would both acknowledge remaining challenges and provide a more balanced view of the road ahead.**

***Recognize and respond to the challenges of generating enough pollutant reductions from non-point sources to meet Bay water quality goals.*** While significant progress has been made in reducing nutrients from point sources and atmospheric sources, meeting the TMDL goal now depends largely on reducing pollutants carried by agricultural and urban runoff. CESR deems that existing programs have not, and likely cannot, generate the scale of change needed to meet the TMDL. The Beyond 2025 report acknowledges the actions presented in CESR to accelerate progress (e.g., incentivizing pollutant removal performance, targeting conservation investments) but needs to emphasize the importance of making these fundamental changes to program

delivery. To meet Bay water quality goals, the CBP must recognize and respond to the myriad social, economic, and behavioral factors that motivate decisions affecting non-point source pollution. According to the most recent CBP model estimates, we have reduced nitrogen loads by only a few million pounds over the past 15 years, compared to our goal of over 40 million pounds. If we want to significantly accelerate our progress, substantive programmatic and policy changes must be designed and then implemented. CESR offers recommendations that would help achieve these.

***Increase management attention on living resources.*** CESR discussed how we can improve the “living resources return” on water quality investments. First, instead of monitoring and reporting only levels of nitrogen, phosphorus, and dissolved oxygen, we should also monitor and report what really matters to people: the capacity of the Bay to support an abundance of life. Living resource losses were the primary motivation for the original Chesapeake Bay restoration effort, and they need to regain that status. Second, we need to prioritize areas (locations) within the Bay that can provide the biggest boost to living resources, like focusing on shallow waters that are crucial habitats for many species and are accessible for people to enjoy. Without renewed attention to those things that matter the most to people, we run the risk of leaving potential living resource benefits unaddressed and potentially losing public support for our efforts. Third, we should consider tiered implementation of the TMDL. While progress is being made to reduce the size and severity of low oxygen conditions (hypoxic zone), full attainment of the Bay water quality standards, especially in the deep channel, is going to take time and resources that only will become available over many years. A path to meeting the TMDL would prioritize an implementation strategy that makes load reductions in places that will offer the greatest near-term and long-term benefits in terms of creating support for living resources. Interim targets would prioritize water quality investments where they make the most difference to living resource response. This approach allows the CBP to focus efforts, utilize results as a goal, and do the necessary scientific learning to adaptively manage the CBP mission. STAC recognizes that this will require a strong commitment and level of effort but believes that many of the necessary tools are already in place.

***Improve the CBP’s ability to “learn while doing.”*** To meet Bay goals, the CBP needs to embrace a management approach that more explicitly acknowledges the critical uncertainties in our decision making and embed an adaptive process that is responsive to new information and knowledge. Critical uncertainties are those gaps in understanding that, if addressed and resolved, would potentially change our actions. While the Chesapeake Bay is one of the best-studied estuaries in the world, there are many examples of what we do not know or are not completely certain about, especially given continual changes in environmental, economic, and social factors that affect the Bay. For example, phosphorus pollution is increasing in many areas where reductions were expected, and we do not fully understand how people are using nutrients across the landscape. Thus, we may be mischaracterizing the effectiveness of our management approaches. The current accountability framework that is based on counting practices, not outcomes, obscures these unknowns and leads to a false sense of confidence. A commitment to improving the CBP’s capacity to ‘learn while doing’ is central to the collective mission of ensuring positive environmental outcomes while our Bay and its watershed continue to change; otherwise, we are destined to follow the path of continued slow and incremental change rather than implementing measures that will accelerate progress toward our goals. Amending and/or

revising our accountability framework will require significant commitment and programmatic change.

Acknowledging these three foundational challenges, and others like them, will require significant modification of the draft Beyond 2025 report. The current draft report does not include clear statements about remaining challenges, resulting in a (perhaps unintentional) positively biased assessment of the status of the Bay restoration effort. STAC recommends a straightforward addition to the report that would address this problem, as was stated in the beginning of this letter. Specifically, the report contains a section entitled “Recognizing our progress toward meeting the Chesapeake Bay Watershed Agreement.” If this section were to be either expanded to include remaining challenges or was immediately followed by a separate section addressing remaining challenges, then it would both provide a place to address the concerns we have raised here and present a more balanced view of the CBP’s path beyond 2025.

Thank you for the opportunity to advise. STAC will continue to offer review and commentary on the draft Beyond 2025 Report as public feedback is made available, and we remain in service as an independent advisory committee to the Executive Committee, Principals’ Staff Committee, and Management Board.

Respectfully representing STAC,

A handwritten signature in cursive script that reads "Larry Sanford".

Larry Sanford  
Chair, Chesapeake Bay Program's Scientific and Technical Advisory Committee