Testimony of
Kirk Havens, Ph.D.
Director of the Center for Coastal Resources Management
Virginia Institute of Marine Science, William & Mary

before the
Subcommittee on Water, Wildlife, and Fisheries
Committee on Natural Resources
United State House of Representatives

on
H.R. 8811, America's Conservation Enhancement Reauthorization Act of 2024

July 9, 2024

Thank you Chairman Bentz, Ranking Member Huffman, Congressman Wittman, and distinguished Members of the Subcommittee for the very important work you do and the opportunity to speak today. My name is Kirk Havens. I am a professor of marine science and Director of the Center for Coastal Resources Management at the Virginia Institute of Marine Science, William & Mary. I have served as the Virginia gubernatorial appointee to the independent Chesapeake Bay Scientific and Technical Advisory Committee, known as STAC, for five Governors and have served as the Committee's Vice Chair and Chair.

It is an honor to testify about the 40-year effort to restore the Chesapeake Bay, one of the largest environmental projects in the United States. A healthy Chesapeake Bay supports diverse living organisms, provides recreational opportunities, and enhances community resilience, quality of life, and the economy for the 64,000 square miles that drain into it. A recent scientific report indicates that we have reached a pivotal point where we can apply our decades of learning for further advancement. The Chesapeake Bay restoration effort to improve the health of the Bay's waterways is considered a model for similar efforts worldwide and reauthorization of the America's Conservation Enhancement Act helps ensure that this partnership effort has the appropriate resources for its critical work.

Despite challenges like growing populations, land use changes, and climate issues, significant progress has been made. While there's still more work to do to fully meet the goals set by the Chesapeake Bay Program, the advancements thus far, and the lessons we continue to learn, are clear opportunities for accelerating our progress even in the face of uncertainties such as climate change.

The independent Chesapeake Bay Scientific and Technical Advisory Committee conducted a comprehensive study titled "[Achieving Water Quality Goals in the Chesapeake Bay: A Comprehensive Evaluation of System Response (CESR)](#)" (additional information also can be

found in this [video])." The CESR report, with 60 contributors, synthesized 40 years of scientific and management effort and provides great insight on how the Bay's ecosystem has responded to these efforts, lessons we have learned over the decades, and offers opportunities for accelerating our progress.

Key Findings

The CESR report found the following themes as a result of our research:

1. **Nonpoint Source Pollution:** Current programs aimed at reducing pollution from nonpoint sources, such as agricultural runoff, are not generating sufficient reductions to meet water quality goals.

2. **Slow System Response:** Changes in the Bay's water quality are occurring more slowly than expected, making it clear that achieving the goals will remain in the future.

3. **Management Innovations:** New water quality management strategies, along with improved stewardship of nearshore habitats, could open opportunities for improved living resources in the Bay.

4. **Learning and Adaptation:** Adopting a "learning while doing" approach can help refine pollution reduction efforts and accelerate improvements in the Bay's living resources.

Current Efforts and Challenges

While we have made significant progress in light of major headwinds, we need to accelerate that progress and improve our effectiveness. Despite significant reductions in point source pollution, particularly from wastewater treatment, the focus now needs to shift to the largest manageable sources of nutrient pollution: agriculture and urban areas. New technologies and methods for controlling pollutants can reduce nitrogen, phosphorus, and sediment inputs into the Bay, thereby diminishing algae growth and sedimentation and improving oxygen levels and water clarity, which are crucial for the Bay's ecosystems. However, implementing them will require significant change in existing policies and programs.

Opportunities

There are several opportunities to address these gaps, including:

1. **Address areas where pollutants continue to be stored in increasing amounts.** Some areas input more nutrients than are exported in products, resulting in stockpiled nutrients in soil. Solutions must reduce inputs, increase products, or move nutrients to areas that are lacking.

2. **Targeted Pollution Reduction.** Instead of spreading efforts randomly over 64,000 square miles, accelerate the adoption of practices that effectively reduce nutrient pollution in high-priority areas. Detailed monitoring and refined models can help identify these pollution hotspots and tailor treatment efforts more effectively.

3. **Pay-for-Performance Programs.** Encourage land managers to implement practices that directly reduce pollution, through financial incentives based on measurable outcomes, thereby greatly enhancing program effectiveness.

4. **Change Focus**. Instead of just looking at levels of nitrogen, phosphorus, and dissolved oxygen, focus on what people really care about: the health and number of living creatures. We should be focused on targeting water quality investments on areas that could give the biggest boost to living resources, like shallow waters that are very important for most species. In addition to improving water quality, it will be important to manage habitats to make the most of these water quality investments.

5. **Adaptive Management.** The Bay and its watershed are changing in ways that make the future difficult to predict. The ability to learn and adapt will be critical to our success as we make decisions in an uncertain world. Localized successes, such as increased dissolved oxygen levels in certain habitats, indicate that progress is possible if we can scale proven solutions. To paraphrase Chesapeake Research Consortium Executive Director Denice Wardrop: Not meeting the goal isn't the issue. The real problem would be if we didn't learn how to improve. Success lies in continuing to learn how to do it better.

Conclusion

The effort to restore the Chesapeake Bay is complex and ongoing. While significant progress has been made, there is still much to do. By shifting our focus to the health and abundance of living resources, targeting key areas for intervention that provide the greatest living resources return, and adopting a "learning while doing" approach, we can make more effective use of our resources and achieve greater improvements in the Bay's health.

As we move forward, it is crucial to engage a broad range of stakeholders in defining goals and strategies. We need to redouble our efforts to be inclusive and bring in Tribal voices who have been involved in the stewardship of the Bay for centuries. The upcoming period provides an opportunity to rethink how we define success in restoring the Bay, moving beyond pollution reduction targets to broader ecological, cultural, and community outcomes. The reauthorization of the America's Conservation Enhancement Act is critical to that success.

The Virginia Institute of Marine Science is written into Virginia State Code as the independent scientific advisor to the Commonwealth on marine and coastal issues. We would be happy to meet with Committee members and their staff should you have questions. I truly appreciate the Committee's attention to this important issue and am happy to answer any questions.