Beyond 2025 Report Public Comments

The following public comments were submitted in response to the Chesapeake Bay Program's draft Beyond 2025 Report.

Chesapeake Bay Program

Science. Restoration. Partnership.

ALLIANCE for the Chesapeake Bay

August 30, 2024

Beyond 2025 Steering Committee
Sent via email to: comments@chesapeakebay.net

Subject: Comments on "A Critical Path Forward" Report

Dear Beyond 2025 Steering Committee,

The Alliance for the Chesapeake Bay appreciates the opportunity to weigh in on the "A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025" report. As a Chesapeake Bay Program (CBP) partner from day one over four decades ago, we are excited by the conversations surrounding the next generation of priorities for restoration, science, and partnership efforts. This is a once-in-a-decade opportunity for the CBP to continue to demonstrate dedicated leadership in the protection and restoration of the nation's largest estuary.

In this report, many notable partnership accomplishments were included, and the Alliance is proud to have contributed to many of these successes. In our Forest Program, we have prioritized the implementation of riparian buffers, having planted 115,000+ linear feet of streams with our partners in 2023 alone. Our Agriculture Program has successfully helped accelerate and expand on-farm conservation work through our corporate supply chain efforts, helping install more than 120 conservation BMP's on farms in 2023. Our Stewardship & Engagement Program, with the help of our Chesapeake Monitoring Cooperative efforts, supported community scientists in monitoring 1,223 sites in 2023. And our Green Infrastructure Program installed over 1,348 urban BMP's last year.

All of our upstream implementation work has downstream benefits - including helping uplift habitat and water quality conditions for continued success with the blue crab population and submerged aquatic vegetation expansion. With 53 years of experience, the Alliance knows that we will not achieve our collective goals of clean and healthy waterways without engaged constituents, equitable partnerships, and strong, durable collaborations.

We have structured this letter to provide high-level comments regarding the Beyond 2025 effort to date, and have included an appendix with detailed feedback. As a point of reference, we engaged the entirety of the 60 watershed experts that comprise the Alliance team to compile feedback that formed this letter. Our implementation work is built to coincide with supporting the larger restoration efforts, and we are paying attention to the new science, emerging issues, and future direction of this effort.

Overarching Comments:

1. **Reaffirming Commitment to the *Watershed Agreement* -** We are pleased to see that the number one recommendation is for the Executive Council to continue its commitment to meet the goals of the *Chesapeake Bay Watershed Agreement*. We strongly support this recommendation. As practitioners, we have seen firsthand the value of strong leadership from the Program and the importance of Bay-wide goals that can drive policy, funding, and implementation.

2. **Continue to support the existing partners while setting a larger table -** So much of the success in the cleanup of the watershed has been built on decades of collaboration with non-governmental partners, including NGOs, academia, and the private sector. These communities provide support services that specifically help the CBP to go further in implementing goals and strategies, including leveraging federal funding from multiple sources. Much like the importance of re-committing to the *Watershed Agreement,* re-committing to existing successful partnerships and including meaningful engagement for those historically excluded will be critical for continued success beyond 2025. The diversity of perspectives that these non-governmental organizations bring to the CBP will continue to provide invaluable support, leadership, and implementation.

3. **Continue to utilize a holistic approach to CBP's strategy and outcomes -** Our movement has learned an immense amount in the last 40+ years of this cleanup effort. The number one lesson we have learned is that we can go farther when we go together. The Alliance hopes that the CBP will continue to build on the good work over the years, as it helps shape what the future looks like. This is an opportunity for our movement to understand our successes and failures, and adjust accordingly. This means that we have to build on the water quality priorities that make up the foundation of the CBP by more intentionally including people and living resources at the center of the partnership's work. This future also includes a better understanding of the price tag of the *Watershed Agreement,* and a commitment to dedicate appropriate staffing and funding resources to these ongoing efforts. The CBP has achieved 18 of its 31 outcomes, and the future means that we need to intentionally maintain what we have achieved, and provide resources for both existing and future work.

4. **Phase II Recommendations -**
    a. **Focus on robust and intentional outreach with a wider range of stakeholders -** In Phase II, it will be critically important to have an intentional and well-executed outreach process, since this is where the real details will be developed. This outreach process should include those that are not already at the table, organizations and entities outside of the existing partnership structure, and a focus on including underrepresented communities, neighborhoods, individuals, and organizations. To do this as robustly as possible, staffing and funding resources for this effort must be appropriately supported. With existing processes and structures in place to engage people, such as through the Chesapeake Monitoring Cooperative and the

Stakeholders' Advisory Committee, the CBP has an opportunity to continue to build on the successes of the previous decades of work.

b. **Transparency in decision-making -** As we move from establishing this framework and the next steps into more detailed strategic planning, it is imperative that the process includes a high level of transparency. This will be critical as part of robust and successful change management across the partnership, as decisions are being made along the way. Transparency and power-sharing are also critical elements to incorporate in the public outreach process in Phase II. The ERG Report highlights quite a few opportunities for these changes and should be incorporated into the next phase of work. This Report includes many no or low-cost opportunities for incorporating important change opportunities into CBP's efforts.
c. **Resources to facilitate Phase II should be appropriately allocated -** As plans are being made for the specifics of Phase II, it is imperative that the appropriate resources, including staffing and third-party assistance, should be allocated. As this phase will render the specifics of the changes to be made to the CBP, we know that intentional resource allocation will be a critical component of success.

In conclusion, the Alliance for the Chesapeake Bay supports the Chesapeake Bay Program's leadership to embrace new understandings and approaches in response to emerging challenges, living resources needs, and the protection of human health and welfare of the Chesapeake Bay Watershed population. Thank you for the opportunity to weigh in at this critical juncture. Please do not hesitate to reach out with any questions that I can assist in addressing.

Sincerely,

Kate Fritz
CEO
Alliance for the Chesapeake Bay
KFritz@allianceforthebay.org

Encl: Attachment A - Comments specific to recommendations in the report

Attachment A: Comments Specific to Recommendations in the Report

- **Science 1: Optimize monitoring, modeling and analysis**
    - The Chesapeake Monitoring Cooperative (CMC) is a powerful engagement tool, as we have built a successful framework to support thousands of volunteer water quality monitors across the watershed. These volunteers are passionate about their local waterways and can provide valuable knowledge about the health of the Chesapeake Bay watershed. Additionally, the CMC continues to strive to increase engagement and ensure that all people have access to water quality data.
    - Support the revision and update of the water quality monitoring outcome by shifting to a watershed health approach and developing quantitative targets that clearly define metrics to achieve Bay health. The Chesapeake Bay Program (CBP) has robust monitoring networks and it is essential to maintain these networks in order to continue to track progress towards these partnership-approved metrics. Additionally, we support the inclusion of a bacteria-specific outcome as it directly impacts human health and connects many people to their local waters. Many jurisdictions and the CMC already have the frameworks in place to collect high-quality lab data and use this data to inform human contact decisions and impairments.
    - Support the recommendation to develop a long-term strategy to maintain the integrity of core monitoring networks and pursue opportunities for enhancements in monitoring. These monitoring networks, including participatory science monitoring, like the CMC, provide a wealth of data that can and should be used efficiently throughout the CBP partnership. The CMC network fills critical data gaps in the CBP monitoring networks as our volunteers can collect data at sites that most state and federal partners cannot access. It is essential to utilize all possible data within the CBP monitoring networks in order to make informed decisions about the health of the Chesapeake Bay and its watershed. Additionally, the CMC Data Explorer provides a centralized location to store and manage this data, facilitating use by state agencies, and federal partners, and connecting our local communities to the data they need.
    - Support the recommendation to set clear targets and monitoring plans. We believe this creates an opportunity to improve science-based decision-making by integrating multiple sources of data, including participatory science, from the beginning of the assessment process.
    - Shifting the focus to the local scale when characterizing watershed health is a critical next step in accelerating our restoration efforts. Participatory science plays an important role in telling the story of local impacts, and the CMC has six published case studies highlighting the impacts volunteer collected data have on their local

communities. Additionally, the CMC team has created a DEIJ (Diversity, Equity, Inclusion, and Justice) framework as a first step to connect diverse communities to monitoring data that matches their community concerns. It is essential to ensure that everyone in the watershed has access to data to inform their local water quality concerns.

- In accordance with the Memorandum of Understanding regarding the use of citizen and non-traditional partner monitoring data to assess water quality and living resource status and our progress toward restoration of a healthy Chesapeake Bay and watershed, unanimously signed by the Principle Staff Committee in 2018, we expect that participatory science data will be used at all levels of decision-making across the partnership. Participatory science has well documented uses - from community education and outreach, to research and trend analyses, to model validation and regulatory decision-making.

- **Science 2: Integrate existing and new science findings in decision-making, resource allocation, and communication strategies**
  - Feedback loops are essential for transparency and understanding how decisions are being made. The CBP offers a valuable opportunity for participatory science data to be utilized more promptly and effectively in the annual assessments and report cards, complementing the state-specific Integrated Reports, which are updated biennially. The CMC is dedicated to enhancing the integration of participatory science data, ensuring that its benefits are fully recognized and leveraged.
  - New research regarding regenerative agriculture and climate-smart practices should be applied to policy and funding priorities.
  - Research on decision-making will be important for designing programs with low barriers to entry. For farmers, funding and technical assistance programs are most helpful when it allows them to trial new practices, especially practices that require a change in their management style, and gradually increase adoption, rather than immediately requiring adoption across the entire acreage or herd. Programs should also provide support for the farmer's gradual scaling-up across their acreage/herd, as they may need ongoing technical assistance.
  - Clear and transparent communication about emerging and evolving science is critical. Stakeholders, like farmers and local governments, need to understand how new science gets integrated into decision-making.
  - Support the move toward improving adaptive and science-based decision-making and urge CBP to utilize all data available, including participatory science data, in all aspects of the decision-making process. While Tier 3 data are necessary for regulatory assessments, Tier 1 and 2 data can provide valuable information for other

processes, from validating models, such as the 4D Interpolator, to tracking restoration progress to identifying hotspots and ecological trends over time.

- **Science 3: Prioritize research that addresses knowledge gaps in existing and emerging challenges**
    - The Bay Program has a long history of providing cutting-edge science to practitioners. We need the Program to continue filling this important niche, especially regarding climate-smart practices, like regenerative agriculture and biochar. The environmental community needs to develop and agree on a single definition of regenerative agriculture and associated outcomes. We also need a universal system that the entire industry uses and follows. Currently far too many regenerative agriculture and climate-smart models exist.
    - The next iteration of Bay Program science should expand to include social sciences that can help us better understand our audiences, their priorities, their values, and their needs. As practitioners, we need evidence-based strategies for changing behaviors, reducing barriers to entry, and engaging with new and historically excluded audiences.
    - The Bay desperately needs more research on regenerative agriculture and climate-smart practices for small farms. Many manure management BMPs that provide a water quality benefit increase GHG emissions. We need to overcome this obstacle in order to continue to successfully partner with the agricultural industry around shared goals.

- **Restoration & Conservation 1: Support system-scale conservation and restoration planning and implementation for habitats and communities**
    - The Alliance has long utilized a system-scale approach to conservation and restoration. For example, our corporate sustainability initiative provides a holistic and system-scale approach to tackling agricultural restoration through the engagement of the full supply chain. Our experience has demonstrated the value of this approach and its potential to bring the greatest impact to our communities.
    - Focusing on nearshore and shallow waters, where the majority of people interact with their local waterways, is both strategic and valuable. Preserving/restoring these areas will have the greatest impact for our communities and help to forge deeper connections between people and their waterways.

- **Restoration & Conservation 2: Review, and where necessary, revise existing goals, outcomes and management strategies to more effectively guide the partnership's restoration and conservation efforts beyond 2025.**

- It's essential to periodically review goals and outcomes and we commend the Chesapeake Bay program for considering this next step. Stakeholder engagement during the process of revising goals and outcomes will be absolutely critical. Boots-on-the-ground partners, like NGOs, local governments, farmers and others, should have a strong voice in reviewing and revising goals and outcomes. As practitioners, we know that without the support and buy-in of these key partners, future goals and outcomes will not be met.

- **Restoration & Conservation 3: Improve the Program's holistic approach to planning, prioritization, progress-tracking, and accountability.**
  - The Alliance has long focused on holistic approaches to restoration and conservation that align with local priorities. There is a clear opportunity to dovetail this recommendation with increased capacity building and technical assistance at the local level.

- **Partnership 1: Adopt a systems approach to streamline governance and structure**
  - Efforts to streamline the partnership should include a focus on making the program more transparent and accessible to stakeholders, including NGOs, farmers, local governments etc. The final structure/governance should ensure inclusive decision-making, power sharing, and meaningful opportunities for stakeholder participation.

- **Partnership 2: Enhance capacity building and administrative/technical assistance through local networks**
  - Our work with on-the-ground partners shows the significant need for capacity building and technical assistance for community groups, farmers, landowners, local governments, and other key stakeholders.
  - Resourcing local networks to do capacity-building work is essential for this approach to be successful. Investments in local capacity building and technical assistance can have a tremendous impact. Setting up more collaborations in priority regions focused on priority audiences will accelerate action.

- **Partnership 3: Strengthen the program's capacity to ensure watershed restoration is relevant to all communities**
  - We commend the Chesapeake Bay Program for having a DEIJ strategy and for working towards implementation. However questions remain about where funding for implementation will come from, who will do the implementation and how it will be implemented.

- Collaboration with community partners needs to be two-way. Implementation needs to be focused on communities that have historically been excluded from making decisions about and benefiting from watershed restoration and conservation.

- **Partnership 4: Enhance communications and transparency to foster long-term success**
  - As on-the-ground implementers, it is important to the Alliance that the audiences we serve get to participate in a meaningful way in the restoration of their lands and waters. Transparency and communications are the foundation of that meaningful engagement and sufficiently resourcing these efforts is essential to fostering long-term success.

To Whom It May Concern:

Thank you for the opportunity to comment on the *Beyond 2025* Steering Committee's recommendations to the Chesapeake Bay Program Principals' Staff Committee. We applaud the commitment to ambitious progress and, as noted in the response letter from CBF, which we have also signed, see the adoption of a farmer-informed revision by December 2025 as integral to the forward momentum already underway.

Today's farmers, more than a third of whom are 65 and over, are on the front lines of extreme weather, rising input costs, and volatile markets. Additionally, population increases, low-density residential development and utility-scale solar installations mean that many stand to gain from taking land out of production. But we know that farmland is better for the environment than developed land, especially when it comes to greenhouse gas emissions. With regenerative agriculture as a foundational component, *Beyond 2025* can provide a pathway to a healthy Bay, well-functioning ecosystems and communities that grow robust agrarian economies.

We applaud the committee's holistic, systems approach which we agree will better enable a partnership of networks to connect implementation efforts with data, tools, resources, and technical assistance that build capacity at the local level. In particular, the recommendations to support system-scale conservation and restoration planning and implementation for habitats and communities, and to integrate climate data and impacts into Bay program models and programs, are of special interest to AFT and are very relevant to rural and urban agricultural communities.

To promote widespread impact, it will be essential to engage agricultural practitioners, both producers and key service providers, in program design and analysis in ways that advance understanding, support, and communication by leaders in these communities. Our region's farmers are national pacesetters in conservation, their drive for innovation inspired by their role as stewards in the Bay watershed. Though a sector from which significant outcome improvements are expected and anticipated, agriculture is mentioned only once in the current recommendations. AFT is hopeful that farmer leaders--including those from historically and currently marginalized communities--for whom conservation programs are more difficult to access and climate impacts more destabilizing--will be tapped to play a key role in operationalizing these recommendations across the watershed.

For the first time in 20 years, the Chesapeake Bay's water quality has earned a C+ from the University of Maryland Center for Environmental Science's annual report card. Improvements to water quality, habitat, and fisheries, due in part to farmers' efforts to reduce nutrients in waterways, are an indicator of success. Continued gains will depend on collaborating with agricultural communities, on communicating achievements, and on increasing understanding in all populations of the importance of both individual and collective stewardship and conservation efforts.

AFT is developing a comprehensive vision and action plan for its own watershed-wide initiatives, organized around regenerative agriculture, the intersection of the Bay's critical water quality goals with climate-smart agriculture for resilience, adaptation, and mitigation, and, most critically, the long-term future of the region's urban and rural farming and food systems. We see the potential for considerable new public funding to invigorate farming and its contributions to environmental

health. We look to the final *Beyond 2025* report, and the actions the Bay Program will take as a result, to support and engage the farming community as it continues to do its part toward our mutual success.

On behalf of American Farmland Trust and the Mid-Atlantic team, I appreciate your consideration. Best regards,

Jamie Mierau

Jamie Mierau

Mid-Atlantic Regional Director

she/her/hers

American Farmland Trust

ALLIANCE FOR AQUATIC RESOURCE MONITORING

educate. engage. empower

August 30, 2024

To whom it may concern:

The Alliance for Aquatic Resource Monitoring (ALLARM), as a service provider for the Chesapeake Monitoring Cooperative writes to formally comment on the Chesapeake Bay Program Beyond 2025 Steering Committee's recommendation to the Principals' Staff Committee.

Part I: Recommendations for Potential Consideration by the Chesapeake Executive Council

Executive Council Recommendation #1:

- We support amendments to the Watershed Agreement that incorporate new scientific understandings, account for emerging challenges like climate change and more effectively engage the people living within the watershed. The Chesapeake Monitoring Cooperative (CMC) is a powerful engagement tool, as we have built a successful framework to support thousands of volunteer water quality monitors across the watershed. These volunteers are passionate about their local waterways and can provide valuable knowledge about the health of the Chesapeake Bay watershed. Additionally, the CMC continues to strive to increase engagement and ensure that all people have access to water quality data.

- We support the revision and update of the water quality monitoring outcomes by shifting to a watershed health approach and developing quantitative targets that clearly define metrics to achieve Bay health. The Chesapeake Bay Program (CBP) has robust monitoring networks, and it is essential to maintain these networks in order to continue to track progress towards these partnership-approved metrics. Additionally, we support the inclusion of a bacteria-specific outcome as it directly impacts human health and connects many people to their local waters. Many jurisdictions and the CMC already have the frameworks in place to collect high quality lab data and use this data to inform human contact decisions and impairments.

- We support the move toward improving adaptive and science-based decision-making and urge CBP to utilize all data available, including participatory science data, in all aspects of the decision-making process. While Tier 3 data are necessary for regulatory assessments, Tier 1 and 2 data can provide valuable information for other processes, from validating models, such as the 4D Interpolator and Chessie BIBI, to tracking restoration progress, to identifying trends and hotspots in ecological data over time.

Part II: High-level recommendations and considerations for the Chesapeake Bay Program

Science 1:

The Steering Committee recommends developing a long-term strategy to maintain the integrity of core monitoring networks and pursue opportunities for enhancements in monitoring (Monitoring Review).

- We support the recommendation to develop a long-term strategy to maintain the integrity of core monitoring networks and pursue opportunities for enhancements in monitoring. These monitoring networks, including participatory science monitoring, like the CMC, provide a wealth of data that can and should be used efficiently throughout the CBP partnership. The CMC network fills critical data gaps in the CBP monitoring networks as our volunteers can collect data at sites that most state and federal partners cannot access. It is essential to utilize all possible data within the CBP monitoring networks in order to make informed decisions about the health of the Chesapeake Bay and watershed. Additionally, the CMC Data Explorer provides a centralized location to store and manage this data, facilitating use by state agencies, federal partners, and connecting our local communities to data they need.

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The Steering Committee recommends that any updated outcomes have a clear target for reporting and an existing monitoring plan or coincident development of a fundable monitoring and analysis plan to support assessment.

- We support the recommendation to set clear targets and monitoring plans. We believe this creates an opportunity to improve science-based decision making by integrating multiple sources of data, including participatory science, from the beginning of the assessment process.

The Steering Committee recommends better utilizing our monitoring and assessment capacity, with increased emphasis towards characterizing watershed health at the local level as well as for the entire basin.

- Shifting the focus to the local scale when characterizing watershed health is a critical next step in accelerating our restoration efforts. Participatory science plays an important role in telling the story of local impacts, and the CMC has six published case studies highlighting the impacts volunteer collected data have on their local communities. Additionally, the CMC team has created a DEIJ (Diversity, Equity, Inclusion, and Justice) framework as a first step to connect diverse communities to monitoring data that matches their community concerns. It is essential to ensure that everyone in the watershed has access to data to inform their local water quality concerns.

Additionally, there is a wealth of state, local, and participatory monitoring data that may be used for learning, status and trends analyses, and model validation (CW3).

- In accordance with the Memorandum of Understanding regarding the use of citizen and non-traditional partner monitoring data to assess water quality and living resource status and our progress toward restoration of a healthy Chesapeake Bay and watershed, unanimously signed by the Principle Staff Committee in 2018, we expect that participatory science data will be used at all levels of decision-making across the partnership. Participatory science has well documented uses - from community education and outreach, to research and trend analyses, to model validation and regulatory decision-making.

Science 2:

The Steering Committee recommends adaptation to the latest scientific findings as well as improved communication on how these findings are integrated into decision making, resource allocation, and management strategies.

- Feedback loops are essential for transparency and understanding how decisions are being made. The CBP offers a valuable opportunity for participatory science data to be utilized more promptly and effectively in the annual assessments and report cards, complementing the state-specific Integrated Reports, which are updated biennially. The CMC is dedicated to enhancing the integration of participatory science data, ensuring that its benefits are fully recognized and leveraged.

We support the Chesapeake Bay Program Beyond 2025 Steering Committee's recommendations and we would like to thank the Executive Council for the consideration of our comments.

Sincerely,

The Alliance for Aquatic Resource Monitoring

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Dear Bay Leaders,

Thank you for the opportunity to provide feedback on the future of Bay restoration beyond the 2025 deadline. It is critical that the partnership maintains momentum towards swimmable and fishable rivers and streams in the Bay watershed. This is only possible with strong leadership and a bold new vision for the goals and outcomes in the Chesapeake Bay Watershed Agreement. I support the recommendations that the Executive Council should recommit to and refresh the Watershed Agreement, however, revisions should be made by the end of 2025 to ensure the partnership has proper guidance.

The partnership has worked hard to achieve the goals and outcomes in the 2014 Agreement and we've seen success, even against the growing challenges from climate change and development. From acres of oysters planted to a shrinking dead zone, it is proven that partnership and supportive state and federal leadership are effective. But our work is far from complete. Continued progress is only possible through collective efforts. To ensure that this critical collaboration extends beyond the 2025 deadline, Bay leadership on the Executive Council must formally and publicly recommit to the Bay restoration partnership. While past successes should be celebrated, it is critical that goals and outcomes be refreshed to set a path to a healthy Bay for everyone. The revised Bay Agreement must be ready by the end of 2025 and should include a firm deadline for meeting updated goals. Guided by the latest science and with outcomes that benefit all Bay residents, an updated Bay Agreement by the end of 2025 is critical to build continuing momentum for clean rivers and streams.

Thanks to strong collaboration and science-based approaches, we have made progress towards healthy rivers and streams, but we still have a long way to go. I urge Bay leadership to recommit to this partnership and to refresh the goals and outcomes guiding the future of Bay restoration.

Beyond 2025 Steering Committee:

As farmers, and all of us who support agriculture, we appreciate this opportunity to comment on the Beyond 2025 Steering Committee's recommendations to the Chesapeake Bay Program Principals' Staff Committee. The accomplishments listed in the Committee's draft report demonstrate the critical importance of the Chesapeake Watershed Agreement in helping guide the Bay restoration partnership's work to support farmers. We urge you to revise and adopt this agreement by December 2025.

Since the first Agreement was adopted in 1987, the Bay restoration partnership has recognized the extraordinary value of technical and financial assistance that helps farmers implement conservation practices, which improve soil health, make farms more resilient, and restore the quality of our waterways. These practices also help conserve treasured landscapes and sustain working farms and forests, both of which are goals of the current watershed agreement. We support these goals. We also support the Steering Committee's recommendation to develop and adopt approaches to better incentivize practices that maximize benefits to living resources and people, including farmers.

We are pleased to have contributed to the progress being made, even in the face of additional challenges, like excessive rainfall and extended droughts. Since 2010, we have implemented agricultural conservation practices that are estimated to reduce annual nitrogen loads to the Chesapeake Bay by 4.1 million pounds. The partnership must maintain momentum to achieve a resilient watershed for all.

Agriculture is of tremendous value to our culture, economy, and way of life. We urge the partnership to recommit to the goals and outcomes in the Chesapeake Bay Agreement, as it is one of our greatest tools in supporting the work we do every day to steward our environment.

Sincerely,

Asawaba Farms

Baltimore Green Space

Blue Mountain View Farm

Cacapon Institute

Centre County Conservation District

Chesapeake Bay Foundation

Chesapeake Wildlife Heritage

Delaware Nature Society

Forever Maryland

Friends of the Rappahannock

Global Alliance of Latinos in Agriculture

Holterholm Farms, LLC

Lancaster Farmland Trust

Latino Farmers & Ranchers International, Inc.

Lower Shore Land Trust

Mobilize Frederick

NGOZI INC

Open Book Farm, Chester County, PA

PA Association of Conservation Districts

Pasa Sustainable Agriculture

Pennsylvania Farmers Union

Plantation Park Heights Urban Farm, Inc.

Sunbird Farm

The Nature Conservancy Maryland/DC Chapter

The Vineyards at Dodon LLC

University of Maryland Extension

Virginia Association of Soil & Water Conservation Districts

Waterkeepers Chesapeake

Wild Kid Acres

American Farmland Trust

Maryland Association of Soil Conservation Districts

Delaware Association of Conservation Districts

James River Association

Communitas Farm

Future Harvest

Beyond 2025 Steering Committee:

It is a pivotal moment for the Chesapeake Bay watershed. As the 2025 deadline for the current Bay Agreement approaches, critical action is needed to ensure that challenges are met through strong leadership and local, state, and federal investment. As educators, we are thankful that the Bay Partnership has longed recognized that environmental education and literacy are key to ensuring the next generation of stewards are cultivated to protect the Chesapeake Bay and its tributaries. We appreciate the opportunity to comment on the Chesapeake Bay Program Beyond 2025 Steering Committee's recommendations to the Principals' Staff Committee. We support both recommendations made by the Steering Committee, however, believe the revisions to the agreement must be made by the end of 2025.

Beginning with the 1987 Chesapeake Bay Agreement, the partnership has recognized the importance of getting educators and students outside to create an understanding of the Bay system and foster stewardship. The critical goal set in 2014 aimed to "enable every student in the region to graduate with the knowledge and skills to act responsibly to protect and restore their local watershed." While we are still moving towards this goal, hundreds of thousands of teachers and students have been exposed to environmental education. This is due to prioritization of environmental literacy by local, state and federal partners, in part driven and supported by this goal. Additionally, this has been the launching point for collaboration and coordination across the watershed on environmental education and bringing additional funds needed to execute these programs, while sharing best practices across states and school systems.

The benefits of outdoor learning are well-documented and include improved resilience, problem solving, critical thinking, leadership, and teamwork, as well as higher test scores and stronger engagement in school. The dedication by the partnership to get students and teachers outdoors and learning about nature has also led to a focus on making sure that these exceptional learning experiences are provided to underserved students and schools as part of state and local planning. We urge the partnership to recommit working together and look at how we can better address environmental literacy and climate literacy going forward in this next chapter of the partnership.

Sincerely,

Alice Ferguson Foundation

Anacostia Watershed Society

Blue Sky Fund

Cacapon Institute

Caesar Rodney School District

Capital Region Land Conservancy

Chesapeake Bay Foundation

DC Surfrider Foundation Chapter

Delaware Nature Society

Earth Force

Eastern PA Coalition for Abandoned Mine Reclamation (EPCAMR)

Elizabeth River Project

Friends of Huntley Meadows Park

Friends of Little Hunting Creek

Friends of the Rappahannock

Hood College Center for Coastal and Watershed Studies

Howard County Conservancy

Irvine Nature Center

James River Association

Living Classrooms Foundation

Loudoun Environmental Education Alliance (LEEA)

Loudoun Nature Conservation Project

Loudon Wildlife Conservancy

Maryland Association for Environmental and Outdoor Education

Maryland Environmental Literacy Advisory Network

Mountain Castles Soil & Water Conservation District

National Aquarium

National Wildlife Federation

Nature Forward

NatureBridge

Northern Virginia Bird Alliance (formerly Audubon Society of Northern Virginia)

ONE Forest School

One Montgomery Green

Otsego County Conservation Association Inc.

Pennsylvania Association of Environmental Educators (PAEE)

Pickering Creek Audubon Center

Prince William Soil and Water Conservation District

ShoreRivers

Sussex Preservation Coalition

Teacher in Hanover County

Virginia Association for Environmental Education

Virginia Association of Soil & Water Conservation Districts

Virginia Environmental Literacy Network

Virginia Tech

Beyond 2025 Steering Committee:

This is a pivotal moment for the Chesapeake Bay watershed community. As the 2025 deadline approaches, critical action is needed to ensure that challenges are met through strong leadership and continued local, state, and federal investment. We the undersigned, as individuals and organizations committed to oyster restoration, are thankful to the partnership which has made the Chesapeake Bay home to the world's largest oyster restoration project. We appreciate the opportunity to comment on the Chesapeake Bay Program Beyond 2025 Steering Committee's recommendations to the Principals' Staff Committee. We support both recommendations, however, believe the revisions to the agreement must be made by the end of 2025.

Beginning with the 1987 Chesapeake Bay Agreement, the signatories have recognized the importance of restoring the Bay's most beloved bivalve, the Eastern oyster (*Crassostrea virginica)*. Oyster reefs not only provide habitat for over 300 other species of fish and invertebrates, but they also improve water quality, offer crucial economic opportunities, and protect against sea level rise and storm surge. Federal and state partners are on track to fully restore oyster habitat in 11 Bay tributaries by 2025, exceeding the goals established in 2014, with resounding results. This achievement of large-scale oyster restoration work has become a global model -continued research, restoration, and partnerships in the Bay are a critical proving ground for oyster restoration efforts *everywhere*.

Oyster restoration in the Chesapeake Bay is a global model of what can be achieved with collaborative partnership, shared goals, the latest science, and strong leadership. Experience, adaptive management, and cutting-edge research are teaching us more about restoration every year, but many strategies remain to be tested and much work remains to be done. We urge the Chesapeake Executive Council to recommit to working together and set ambitious goals for the next chapter of oyster restoration for the partnership.

Sincerely,

Biohabitats	Autumn Conley
Coastal Technologies Corporation	Betsy McAllister
Galveston Bay Foundation	Bonnie Mitchell
James River Association	Dan Blue
Mere Point Oyster	Daphne Cole
St. Mary's College of Maryland	Don Webster
Technical University of Denmark	Dong Liang
The Sustainability Institute	Dr. Deidre Gibson
Alicia Klages	Evan Pettis
Andrew LaHart	Jacob Cram
Annie Foushee	Jacob Durham

James Dick

Jeffrey Alexander

Jennifer VanDavier

Jolene Gurevich

Julianna Parreco

Julie Trommatter

Kathy Daniel

Kenneth Fortino

Kristine Kainer

Laura Bankey

Leila Avery

Natasha Shangold

Patrick Dorgan

William Ball

Richard Brill

Richard J. Siciliano, Ed.D.

Rob Neumer, Sr.

Robert Abner

Robert Peter Scott

Robin Blake

Ronnie Gist

Ryan St Laurent

Sarah Pappalardo

Shawn Glover

Tom Stiles

Vic Spain

William Atkinson

Beyond 2025 Steering Committee:

It is a pivotal moment for the Chesapeake Bay watershed. As the 2025 deadline for the current Bay Agreement approaches, critical action is needed to ensure that challenges are met through strong leadership and local, state, and federal investment. As classroom and outdoor educators, we are thankful that the Bay Partnership has long recognized that environmental education and literacy are key to ensuring the next generation of stewards are cultivated to protect the Chesapeake Bay and its tributaries. We appreciate the opportunity to comment on the Chesapeake Bay Program Beyond 2025 Steering Committee's recommendations to the Principals' Staff Committee. We support both recommendations made by the Steering Committee, however, believe the revisions to the agreement must be made by the end of 2025.

Beginning with the 1987 Chesapeake Bay Agreement, the partnership has recognized the importance of getting educators and students outside to create an understanding of the Bay system and foster stewardship. The critical goal set in 2014 aimed to "enable every student in the region to graduate with the knowledge and skills to act responsibly to protect and restore their local watershed." While we are still moving towards this goal, hundreds of thousands of teachers and students have been exposed to environmental education. This is due to prioritization of environmental literacy by local, state and federal partners, in part driven and supported by this goal. Additionally, this has been the launching point for collaboration and coordination across the watershed on environmental education and bringing additional funds needed to execute these programs, while sharing best practices across states and school systems.

The benefits of outdoor learning are well-documented and include improved resilience, problem solving, critical thinking, leadership, and teamwork, as well as higher test scores and stronger engagement in school. The dedication by the partnership to get students and teachers outdoors and learning about nature has also led to a focus on making sure that these exceptional learning experiences are provided to underserved students and schools as part of state and local planning. We urge the partnership to recommit working together and look at how we can better address environmental literacy and climate literacy going forward in this next chapter of the partnership.

Sincerely,

Holly Baca, Maryland

Valerie Bandell, Pennsylvania

Hagit Barrett, Maryland

Carole Blake, Maryland

Bridget Bradshaw, Virginia

Michael Brown, Maryland

Kim Brown, Maryland

Diana Burson, Virginia

Genevieve Cartwright, Maryland

Tania Cunningham-Raycrow, Maryland

Sashaum Deprez, Maryland

Lee Derby, Maryland

Robin Dickerson, Virginia

Michael Eversmier, Maryland

Donna Facer, Virginia

Deidra Floyd, Virginia

Larry Foulk, Maryland

Bill Hazy, Maryland

Laura Hennessey, Virginia

Lisa Horrell, Virginia

Susanne Johnson, Maryland

Calvin Jones, Virginia

Cindy Klevickis, Virginia

Kim Kozella, Virginia

Amanda Krantz, Maryland

Janit Llewellyn, Virginia

Colleen Loftus, Maryland

Alexandra Marstall, Virginia

Lisa Marszalek, Pennsylvania

Barbara Marx, Maryland

Cathleen McGarvey, Virginia

Robin Megibow, Maryland

Katya Melnik-Martinez, Maryland

Kari Rowe, Maryland

Doreen Rupp, Maryland

Jennifer Saunders, Maryland

Diana Scofield, Virginia

Susan Spranger, Virginia

Vanessa Sullivan, Maryland

Kenneth Tagyen, Maryland

Michael Thomas, Pennsylvania

Jennifer Tomich, Virginia

Sunila Varghese, Maryland

Lily Wallace, Virginia

Will Willis, Pennsylvania

Tamra Willis, Virginia

Theresa Winter, Maryland

Amy Wolff, Maryland

Neelam Yadav, Virginia

Abby Ybarra, Maryland

Darrell Zook, Virginia

Beyond 2025 Steering Committee:

As the 2025 deadline approaches for achieving goals and outcomes set forth in the current Chesapeake Bay Watershed Agreement, this is a pivotal moment for our community as a whole. Critical action is needed to ensure that challenges are met through strong leadership and that momentum is sustained through continued local, state, and federal investment.

The undersigned organizations, as members of the Keystone 10 Million Trees Partnership (K10), a collaborative effort of over 300 national, regional, state, and local agencies, conservation organizations, outdoor enthusiasts, businesses, and citizens committed to improving Pennsylvania's communities, economy, and ecology by planting 10 million trees in priority areas across the Commonwealth by the end of 2025, are grateful to the Chesapeake Bay Program partnership for their commitment to abundant life and vital habitat goals that include outcomes for tree canopy throughout the watershed. It is inspiring that the efforts underway by K10 partners are being carried on watershed-wide, with a reported cumulative planting of community trees totaling nearly 11,340 acres since 2014. it is clear that the health and vitality of the Chesapeake Bay Watershed is a shared commitment.

Strategically planted and preserved trees alongside streams, streets, and other ecologically sensitive areas is a critical practice for protecting and restoring the health of our rivers, streams, and the Chesapeake Bay, public health and welfare, and community economic vitality. Trees also help mitigate the impacts of climate change by reducing flooding and urban heat islands while sequestering carbon and other pollutants from the atmosphere. As K10 partners, we recognize the importance of collaborative partnerships, strong leadership, and continued investment through the Chesapeake Bay Agreement.

We appreciate the opportunity to comment on the Chesapeake Bay Program Beyond 2025 Steering Committee's recommendations to the Principals' Staff Committee and support both recommendations, however, believe the revisions to the agreement must be made by the end of 2025.

Beginning with the 1987 Chesapeake Bay Agreement, the signatories have recognized the importance of tree cover for urban, suburban, and agricultural land uses. Trees provide countless health, economic, habitat, and environmental benefits. Trees contribute to the resilience of communities in the face of climate change and reduce runoff from farms. As the tree canopy and forest buffer goals within the Chesapeake Bay Agreement highlight, strategically planted trees remain one of the most successful and cost-effective solutions to reducing polluted runoff and cleaning local waterways. In the past two years, both forest buffer and community area tree plantings have increased. We can't lose momentum now.

While both goals have made significant progress and partners continue to find new ways to get trees in the ground, we have a lot of work left to do. In addition to accepting the recommendations of the Beyond 2025 Steering Committee, we urge the Chesapeake Bay Program Executive Council to recommit to working together and continue to strive to get more trees planted throughout the watershed.

Sincerely,

Allegheny County Chapter of the Izaak Walton League

Capital Area Greenbelt Association

Charlestown Township, Environmental Advisory Committee

ClearWater Conservancy

Cumberland Valley Rail Trail Council

First Community Foundation Partnership of Pennsylvania - Rider Park

Friends of Salt Springs State Park

Green Forests Work

Liberty Mountain, Vail Resorts

Michaux Forest Association

Penn State Extension Master Gardeners

Pennsylvania Forestry Association

Potter County Conservation District

Potter's Farm LLC

Snyder County Conservation District

Spring Creek Chapter of Trout Unlimited

Susquehanna County Conservation District

Union County Conservation District

Watershed Alliance of Adams County

City of York, PA Natural Resource Conservation Service

July 31, 2024

Chesapeake Bay Program
1750 Forest Drive, Suite 130
Annapolis, MD 21401

Chesapeake Bay Program Leadership and Partners,

On behalf of the undersigned members of the Chesapeake Conservation Partnership, thank you for the opportunity to comment on the Beyond 2025 Steering Committee draft recommendations. Public involvement is an indispensable component in accelerating the progress of the Watershed Agreement outcomes.

The Chesapeake Conservation Partnership (CCP) is a coalition of more than one hundred partner organizations and entities working at every level within the watershed to extend the conservation of culturally and ecologically important landscapes to benefit a vibrant, healthy, and sustainable quality of life for the Chesapeake region. CCP provides a forum to advance conservation through collaborative efforts, networking, influencing policy and funding, and sharing best practices. It works to build the financial, scientific, social, and policy capacity to achieve both short-term and long-term landscape conservation goals and to support the partners in carrying out specific land protection and living resource stewardship actions.

The undersigned are pleased to see the recommendations to reaffirm commitments in the Bay Agreement as well as refine and refresh the outcomes of the agreement. Thank you for noting the importance of conservation in addition to restoration, shallow water habitats, the impacts of climate change, and benefits to the people who live in and visit the area. We wholeheartedly agree with the recommendation to "Support System-Scale Conservation and Restoration Planning and Implementation for Habitats and Communities." **The undersigned wish to state their support for the recommendation that the Bay Program elevate Conservation as a key guiding pillar alongside Science, Restoration, and Partnership.**

The long-awaited potential for increased focus on conservation and living resources in the Bay Program is supported by sound science and emerging trends in the watershed. In its recent report, "Achieving Water Quality Goals in the Chesapeake Bay: A Comprehensive Evaluation of System Response" (CESR), the Scientific and Technical Advisory Committee noted that "the Bay system faces permanent and ongoing changes in land use, climate change, population growth, and economic development that will challenge notions of restoration based on recreating historical conditions. …Opportunities to meet these challenges exist but efforts require changes and new approaches to implementation, planning, and decision-making." The report focuses efforts for the future on non-point source pollution and shallow water habitats, including the land and water interface, which tend to be where the people are.

The *CESR Report* suggests shifting the emphasis of science and monitoring from tracking water quality standards attainment in the deep trenches of the Bay, to focusing on improving conditions in culturally, ecologically, and economically important places in the watershed with an increased focus on shallow-water areas. Permanent land conservation is fundamental and the most direct way to save these ecologically and economically important places. Without conservation, any restoration of lands can be

fleeting. Conservation leverages additional resources from conservation partners and private landowners with those of local, state and federal agencies throughout the Watershed. Without permanent conservation, and the associated protections and partner investments it attracts, the initial benefits of restoration are often lost over time.

Stormwater runoff is also the fastest-growing source of pollution in the Bay watershed due to urban and suburban sprawl replacing natural areas, forests and farmland. Land use change, development and growth have far-reaching effects on Bay recovery efforts and exacerbate the impacts of climate change. Thanks in part to the efforts of Chesapeake Bay Program partners, the rate of loss has fallen, but the Chesapeake Bay Watershed still loses 70 acres of forested land a day. Emerging threats such as the increased energy needs of data centers, sprawling development, and sea level rise are intensifying the demand for land and are poised to accelerate the loss of rural and natural land. Existing mature forests and natural lands are some of the most valuable assets we have for meeting the Chesapeake Bay Program's water quality, habitat and climate resilience goals. In addition to conserving these high-quality lands, we must protect what we have restored, to ensure return investments in restoration.

However, the recommendation in the Beyond 2025 Steering Committee Report would benefit from more details ahead of the Chesapeake Executive Council meeting in December. Please consider the following recommendations as the Beyond 2025 Steering Committee and Executive Council add needed details and move forward in the process to ensure that restoration of the watershed is long-lasting and benefits the people and living resources that call the watershed home. Many of these are specific recommendations to shape the Phase 2 process.

The undersigned members of the Chesapeake Conservation Partnership ask:

1. **Add more details on how the Bay Program will make conservation foundational to the Bay Program's efforts as we look beyond 2025.** *(Chesapeake Bay Watershed Agreement)*

We need more permanent land conservation to serve the needs of living resources and people in this watershed. We are pleased to see the Beyond 2025 recommendations acknowledge this need. Truly elevating conservation to support land protection and living resources more holistically is no small feat and requires strategizing and support from the Bay Program throughout the process. In Phase 2, a clear roadmap should be developed on how the Bay Program will change on this foundational level to elevate Conservation as a key guiding pillar alongside Science Restoration, and Partnership. This would include potentially amended outcomes, management strategies or actions that embed permanent conservation and land use planning considerations as the goals and outcomes of the 2014 Watershed Agreement are analyzed and revised during phase II of the Beyond 2025 work.

2. **Incentivize Conservation.** *(Restoration and Conservation)*

The Beyond 2025 Steering Committee recommends that the Bay Program elevate Conservation as a key guiding pillar alongside Science, Restoration and Partnership (HW 4). To do this effectively, the Bay Program must increase incentives around holistic conservation. In order to conserve the most important areas and ensure on-going stewardship of ecological benefits, there should be more robust crediting for conservation actions as BMPs, additional financial support and incentives for conservation planning, coordination and practices in the Bay program and funding mechanisms.

Finding suitable sites for restoration activities can be challenging particularly given access and ownership restrictions. However, land trusts, land conservation programs, and natural resource management programs, including agricultural land protection programs, are vital means to reach landowners who have the opportunity to improve the stewardship of their lands, including already protected lands, by installing water quality and habitat best management practices.

According to the Beyond 2025 Steering Committee Draft Report, "In addition to sustaining ecosystem-wide management, the Steering Committee recommends planning for the restoration and conservation of nearshore habitats, inclusive of tributary rivers and streams– some of the most important places for people and the most productive habitats for living resources." Providing explicit credit, funding, and other incentives for conservation would help ensure that these most important and productive places are not lost to sprawling development or other emerging threats in the watershed.

The Bay Program should assist Land Trusts, landowners, and other conservation organizations in accessing federal and state funds to conserve these important areas and ensure ongoing stewardship of ecological benefits. Additionally, if the Bay Program invests in the recommendations of the Beyond 2025 Steering Committee to pursue and support local liaisons for technical assistance to communities and private landowners, we would suggest that multi-disciplinary approaches and expertise be incorporated so that land use planning and conservation and land protection options are part of the holistic approach. Chesapeake Conservation Partnership members are poised as trusted sources at the local level and could also play a role in the holistic local liaison approach.

The Bay Program and its partners have invested heavily in mapping healthy watersheds and optimal places to protect and restore based on different criteria. These maps should be used to target and incentivize protection and restoration. This recommendation is in line with the B25 Synthesis Report's second science recommendation to "Integrate existing and new science findings in decision making, resource allocation, and communication strategies." Please ensure that science, as well as existing and new mapping efforts, inform landscape conservation and restoration with an emphasis on priority farms, forests, access for outdoor recreation, and key habitat types.

3. **Modify the Protected Lands Outcome beyond 2025. We recommend 2030, 2040, and 2050 goals for permanently protected acreage.** *(Chesapeake Bay Watershed Agreement / Restoration and Conservation)*

Thanks in part to the tireless efforts of many of our partners, we are pleased to see that the goal of protecting two million additional acres beyond 2010 levels in the watershed by 2025 is on track to being achieved. However, there is much more work that needs to be done to restore and sustain the living systems of the Bay that benefit millions throughout the watershed. We have the opportunity to update our goals to help drive resources and enthusiasm towards voluntary conservation measures. Land conservation should not stop at the 2025 goal of 2 million acres. Additional emphasis is now placed by CCP and across the nation on conserving large forest tracts and wetland acres. There is support for the more expansive goal to protect 30% of the watershed by 2030, in line with America the Beautiful Initiative as called for by both President Biden's Executive Order 14008, Tackling the Climate Crisis at Home and Abroad, and the Chesapeake Executive Council's Directive No. 21-1: Collective Action for

Climate Change. The Chesapeake Bay Program should work with partners to set ambitious, measurable and equitable conservation goals with clear objectives, targets, and timelines.

4. **Prioritize achieving goals for forest buffers, wetland restoration and protection, and other living resources.** *(Restoration and Conservation)*

We recommend focusing on nonpoint source pollution and prioritizing forest buffers and wetlands as crucial to meeting the water quality goals. Goals for forest buffers, wetlands, streams, brook trout, and black ducks will not have been met by 2025, so we urge renewed focus on these unfulfilled goals, and a process to collectively modify habitat and species indicators and metrics. The *Charting a Course to 2025* report notes that "the achievement of the forest buffers and wetlands outcomes are critical to meeting the Bay Program's water quality goals… In fact, 10% of planned nitrogen reductions are estimated to come from forest buffer plantings alone." However, it also states that "while progress shows that wetlands are being restored and created across the watershed, the total acres of wetlands are also decreasing due to land subsidence, climate change and development pressures." This reinforces the point that additional conservation is essential for the achievement of Bay Program goals over the long term. Private land protection is now among the most reliable options for stopping wetlands loss and sustaining their water quality benefits.

5. **Ensure that acres are protected equitably and that investments in living resource stewardship and recreational access are equitably distributed. Focus efforts on the most important lands necessary to support the needs of living resources and people.** *(Partnership/ Miscellaneous / Restoration and Conservation)*

We support the Beyond 2025 Steering Committee recommendations on an inclusive process, including the recommendations stating, "The Program and partnership should commit to inclusive and meaningful engagement of people and communities that have been historically underrepresented, under-resourced and underserved." We support the recommendation "that the partnership institutionalize and actualize the Program's Diversity, Equity, Inclusion and Justice Implementation Plan."

The most important lands to protect and manage can vary depending upon the goal. People across the watershed cherish protected lands for different reasons. Each landscape provides a variety of values to people across the watershed. Lands prioritized for conservation may include rural, ecologically important areas that are under threat from development and urban green spaces that provide refuge to people and migratory birds. CCP welcomes all who share our conservation values, whether to protect wildlife and human health, to ensure that we continue growing food sustainably in the region or to advance any of the myriad other conservation values we share. The Chesapeake Conservation Partnership created a set of watershed-wide, inclusive, cumulative and mappable features to further inform and support land conservation and stewardship. The Chesapeake Conservation Atlas reflects the highest priority places in the watershed to protect these important assets - farms, forests, human health, habitats and heritage.

Nature's role in protecting our air and water supplies is well known but not always acted upon equitably. Research continues to accumulate on the health benefits of being in and near nature. To be more equitable, we need to accelerate the rate of protection of the lands and waters that will improve quality of life in underserved communities, as well as in the communities that have received focused

conservation in the past. We need safe places in our communities to walk, run, sit, play, read, rejuvenate and reconnect. We need places with widespread trees to cool and clean our air, protect our drinking water and keep us healthy. We need an interconnected network of trails, pocket parks, big parks and natural areas. We need access to the water for boating, swimming, fishing, and camping nearby. We need these places as a daily part of our lives — inviting us to be more active, healthy and connected as individuals and communities. According to the Chesapeake Bay Program, in total, there are 1,387 public access points that provide permanently protected public access to the main tributaries throughout the watershed. Most people living within a wide swath of land near the bay and its tributaries are within a 30-minute drive of one or more public access sites. However, some have no access to a car or do not live with equitable access to green space. As we work to incentivize conservation throughout the region, extra care must ensure that all are able to equitably enjoy the benefits of conservation.

Conclusion

Chesapeake Bay Program partners envision an environmentally and economically sustainable Chesapeake Bay watershed with clean water, abundant life, conserved lands, access to open space, a vibrant cultural heritage, and a diversity of engaged stakeholders. The CCP and its partners support this vision and agree that all parts are interconnected and reliant upon one another. And we must ensure that the gains we make together are enduring. Permanent land conservation, together with proper habitat management and other forms of natural resources stewardship, will ensure that the progress we make together stands the test of time.

The draft report outlines the importance of using data to inform our decisions and considering climate change across all our work while recognizing the need to more effectively advance diversity, equity, inclusion and justice. We wholeheartedly agree with these recommendations. We see conservation across the landscape as a key strategy to achieve these goals, as measures taken on the land significantly affect conditions in the water.

We urge the Chesapeake Executive Council and Principal Staff Committee to accept the thoughtful recommendations in the Beyond 2025 Steering Committee Report. We believe our additional recommendations outlined above enhance and add focus and will be helpful, particularly as Bay Program partners begin to implement the Steering Committee's recommendations together. Conservation and stewardship are imperative to ensure that the progress we have made together so far, and the progress we will continue to achieve together, is lasting. If you have any questions or would like more details, please reach out to the CCP program director, Ben Alexandro at balexandro@chesapeakeconservation.org.

Sincerely,

Kate Wofford, Executive Director, **Alliance for the Shenandoah Valley**

Adam Schellhammer, Mid-Atlantic Region Director, **American Rivers**

Vincent O. Leggett, Founder & President, **Blacks of the Chesapeake Foundation, Inc.**

Marika Suval, Deputy Director, **Cacapon & Lost Rivers Land Trust**

Parker C. Agelasto, Executive Director, **Capital Region Land Conservancy**

Kelly Collins Choi, Director of Policy & Land Conservation, **Casey Trees**

David Lillard, Executive Director, **Catoctin Land Trust**

Alisa L. Webb, Executive Director, **Cecil Land Trust**

Jason Andrew Beale, Executive Director**, Central Pennsylvania Conservancy**

Joel Dunn, President & CEO, **Chesapeake Conservancy**

Elizabeth Crisfield, Executive Director, **ClearWater Conservancy**

Marcia Fox, Executive Director, **Delaware Wild Lands, Inc.**

Steve Kline, President, **Eastern Shore Land Conservancy**

Josh Hastings, Executive Director, **Forever Maryland**

Kristin Kirkwood, Executive Director, **Harford Land Trust**

Justin Doyle, Director of Community Conservation, **James River Association**

Fritz Schroeder, President & CEO, **Lancaster Conservancy**

Dennis J Coker, Principal Chief, **Lenape Indian Tribe of Delaware**

Matthew Heim, Executive Director, **Lower Shore Land Trust**

Will Dingman, Executive Director, **Manada Conservancy**

John Turgeon, Director, **Maryland Environmental Trust**

Elizabeth Hughes, Director, **Maryland Historical Trust**

Pamela Goddard, Senior Program Director Mid-Atlantic Region, **National Parks Conservation Association**

Lydia Lawrence, Conservation Director, **Nature Forward**

Amy Wyant, Executive Director, **Otsego County Conservation Association**

Hedrick Belin, President, **Potomac Conservancy**

Sarah Knebel, Executive Director, **Scenic Rivers Land Trust**

Mark Platts, President & CEO, **Susquehanna National Heritage Area**

Francis Gray, Piscataway Conoy Tribal Chairman, **The Official Piscataway Conoy Tribe of Maryland Inc.**

Christopher Miller, President, **The Piedmont Environmental Council**

Owen Franklin, Vice President, **Trust for Public Land**

Kristin Saunders, Chesapeake Bay Cross-Program Coordinator, **University of Maryland Center for Environmental Science**

Renée Hamidi, Executive Director, **Valleys Planning Council**

Adam Webster, Stewardship Director, **West Virginia Land Trust**

Autumn Vrowe, Interim Executive Director, **West Virginia Rivers Coalition**

CC: Principals' Staff Committee and Chesapeake Executive Council

Choose Clean Water
COALITION

July 29, 2024

To Whom it May Concern:

The undersigned members of the Choose Clean Water Coalition (Coalition) write to formally comment on the Chesapeake Bay Program (the Program) Beyond 2025 Steering Committee's recommendation to the Principals' Staff Committee (PSC). The Coalition proposes our own recommendations and a new vision for our work to achieve our goals beyond 2025.

We envision a thriving watershed for people and nature stewarded by a diverse partnership that protects and conserves our land and water resources, promotes innovation, and confronts the impacts from climate change through strong, inclusive, and collaborative leadership.

EXECUTIVE SUMMARY

When the Coalition was created in 2009, our charge was two-fold: 1) provide oversight to ensure the Chesapeake Bay jurisdictions and federal agencies are held accountable to their commitments under the soon to be created Total Maximum Daily Load (TMDL), and 2) advocate for the state and federal resources necessary for those jurisdictions and agencies to achieve those goals. Over the last 15 years, the Coalition, and our now more than 300 member organizations, have worked tirelessly to do both.

The collaboration and partnership provided by the Program has delivered many successes. These include achieving several of its outcomes under the *2014 Chesapeake Watershed Agreement (2014 Agreement),* including increased public access sites, land under conservation, blue crab abundance, and number of oyster reefs created. While we have made progress, the broader restoration of our rivers, streams, and the Chesapeake Bay is off track, and we will not meet many of the commitments in the *2014 Agreement*.

While goals and outcomes were not met, the Coalition views these difficult moments not as defeats, but rather as opportunities; a chance to celebrate what we have achieved, and more importantly reinvigorate and reimagine our collective work to ensure we achieve a thriving and healthy watershed.

The undersigned members of the Coalition believe this moment calls for innovation, creativity, and bold leadership as we embark down a path to the next era of our work. One that will incorporate new science and research from the *Comprehensive Evaluation of System Response* (CESR) report,

consider our work based on the impact of climate change and population growth, address new and emerging challenges in issue areas like toxics and land use, and ensure our work addresses the issues that have the greatest impact on the people in our local communities and watersheds.

The undersigned members support the work of the Beyond 2025 Steering Committee but feel the recommendations do not go far and move quickly enough. The undersigned offer the following additions to the recommendations for the Chesapeake Executive Council to consider adopting at their annual meeting in December:

1. At the December 2024 meeting, the Executive Council signs a recommitment to all 10 goals and 31 outcomes in the *2014 Chesapeake Watershed Agreement.*

2. The Executive Council signs a directive to the Principals' Staff Committee to:

    a. Lead a revision of the current 10 goals and 31 outcomes and identify suggested changes to bring to the Executive Council at their 2025 meeting.

        - Sunset the Beyond 2025 Steering Committee and begin an open stakeholder-centered process.
        - Incorporate the impact of climate and population growth, and ensure our goals are viewed through the lens of diversity, equity, inclusion, and justice.

    b. By December 2026, facilitate a process to streamline decision-making, eliminate duplicative systems, and ensure the Program is built to advance our goal of thriving living resources, healthy communities, and clean water.

        - Address barriers to progress within the structure of the Program (Management Board), elevate living resources, and prioritize stakeholder engagement, including the role of the Program's Advisory Committees.
        - Re-engage all federal leadership with consistent convenings of the Federal Leadership Committee.

    c. By the 2026 Executive Council Meeting, assess the current TMDL Accountability Framework of the Chesapeake Bay Program and identify opportunities for additions and improvements to ensure the signatories are meeting their clean water commitments. Create an implementation structure that tracks progress and provides mutual accountability toward all the goals and outcomes in the *2014 Agreement.*

        - Consistent implementation of the authorities currently outlined in the Accountability Framework
        - Institute currently defunct roles such as the Independent Evaluator and Senior Advisor of the Chesapeake Bay and Anacostia River

- Clearly define the different roles of Region III and EPA Chesapeake Bay Program to ensure broad and consistent enforcement of the Clean Water Act and authorities under other EPA statutes.
- Develop an implementation structure that includes mutual accountability to ensure progress towards all the goals and outcomes in the *2014 Agreement.*

CHOOSE CLEAN WATER COALITION RECOMMENDATIONS

For almost a year, the Coalition staff and several members have participated in official convenings within the Program (currently serving as an advisory member of the Beyond 2025 Steering Committee) and have provided formal and informal comments and feedback throughout the Beyond 2025 visioning process. We held several internal discussions among our membership, and we urge the expeditious adoption of these recommendations.

Recommendation 1: Formal recommitment to the *2014 Chesapeake Watershed Agreement*

For 40 years, the Bay jurisdictions and federal agencies have collaborated knowing the work to restore the Chesapeake Bay has tangible benefits to their local waterways. Coalition members can demonstrate how the hundreds of millions of dollars in investments into each state and the District of Columbia have resulted in real improvements in local communities. These include providing much needed flood mitigation, fish and wildlife habitat, public access points, safe drinking water, and more benefits throughout the entire 64,000 square mile watershed.

Out of the 31 outcomes, 18 have been achieved or are on track, and 13 outcomes are off track or have an unknown status. While we should celebrate the 18 outcomes we have accomplished, we must look forward and recalibrate to set our next benchmarks. We must also reassess the 13 outcomes we will not achieve by 2025 and determine the course corrections needed to achieve them by a new deadline.

While work on an amended agreement should begin as soon as possible, **we are asking the Executive Council to formally sign a recommitment to the *2014 Agreement* at their meeting this December.** At this critical juncture, the public and stakeholders need to see that the jurisdictions and federal partners are committed to this partnership and are making the restoration of all the rivers and streams in the watershed a long-term priority.

Recommendation #2: Executive Council Directive to the Principals' Staff Committee

Much has changed since the signing of the *2014 Agreement* a decade ago. Issues that were once deemed "emerging" are now having a measurable impact on the watershed. We face new challenges we are struggling to address, and the restoration and conservation community itself has changed. There is also new science and research we must use to

inform our work, including but not limited to the CESR report, the *Rising Watershed and Bay Water Temperatures* report, and ERG's *Chesapeake Bay Program Beyond 2025 Evaluation* (ERG Report).

Under the *2014 Agreement,* the Program finds itself several years behind the rest of the environmental and conservation community and there will only be continued delay of our success if the Program does not take swift action to recalibrate its work.

The undersigned members of the Coalition ask that the Executive Council lead the Chesapeake Bay Program into this new era by issuing a directive to the Principals' Staff Committee requesting they:

1. Conduct an evaluation of the current 10 goals and 31 outcomes and identify suggested changes to bring to the Executive Council at their 2025 meeting.

The Coalition is supportive of the signatories using the current *2014 Agreement* to continue to guide our work, but, as reported in ERG's Report, there is widespread concern about the current goals and outcomes. For instance, while there are 10 goals and 31 outcomes in the *2014 Agreement* that span a wide range of issue areas and priorities, the TMDL has dominated the focus of the restoration effort and had the unintended consequence of pulling expertise and resources away from the other goals and outcomes of the *2014 Agreement*. It also alienated certain state and federal partners, stakeholders, and the public who are focused on living resources, like habitats and wildlife.

In addition to the concerns raised in the ERG report, the Program must acknowledge what has changed since the *2014 Agreement* was signed 10 years ago. For instance:

- **Toxic Contaminants:** The current Program outcomes on Toxic Contaminants reference research on contaminants of "emerging and widespread concern," including polyfluoroalkyl substances (PFAS). This issue is no longer considered "emerging", as reflected in the Environmental Protection Agency's (EPA) April 2024 nationwide drinking water standards for PFAS and designation of PFAS as a hazardous waste.

- **Land Conservation:** The Program is set to reach its Land Conservation outcomes by 2025. However, the goal was created long before land conservation commitments were made, like 30x30. The goal was also created years before the proliferation of data centers, warehouses, and utility-scale solar farms in this region. We are now experiencing a rapid conversion of land, which will not only impact water quality, but take us one step forward, two steps back on land conservation.

  Stormwater runoff is also the fastest growing source of pollution in the Bay watershed due to ongoing urban and suburban sprawl and the growing conversion of farmland. The jurisdictions must implement real requirements and guidance to

curtail this increased source of pollution. This includes requiring actual impervious surface removal in MS4 permits and prioritizing redevelopment over new development.

- **Climate Resiliency:** The current Program outcomes on Climate Resiliency and Climate Adaptation fail to acknowledge the very real interactions between the pollution of Greenhouse Gases (GHGs) and water quality concerns. Carbon dioxide is the only GHG named in the Management Strategy or Beyond 2025 Climate small group recommendations. Meanwhile, the impact of one pound of nitrous oxide on warming the atmosphere is 265 times that of one pound of carbon dioxide. Nitrogen runoff not only pollutes our waterways but is also consumed by bacteria that produce nitrous oxide as a byproduct contributing directly to climate change.

  There is also an incredible opportunity to harness the influx of federal funding for climate resilience if the Program can fully embrace the connection between climate and water quality. For example, investing in regenerative agriculture and local food systems provides co-benefits to people, conservation, and water quality, and can be supported through new USDA climate-centered funding opportunities.

- **CESR Report:** The CESR report is one of the most comprehensive evaluations of the Chesapeake Bay restoration effort. The Program's goals and outcomes must reflect the findings of this report, address the nutrient mass imbalance, and confront the misalignment between modeling and monitoring.

- **Refreshing Achieved Goals:** The Program must refresh goals that are set to be achieved, such as public access and sustainable fisheries, developing new outcomes through the lens of climate and population growth impacts, as well as through the lens of diversity, equity, inclusion, and justice. This is an opportunity to think creatively about new challenges, such as the impact on our fisheries from invasive species like Blue Catfish and how our work is equitably improving all communities across the watershed.

The Bay Program must conduct this audit of the goals and outcomes by the end of 2025 to ensure no more ground is lost against these and other challenges. This review should:

- **Start with a public feedback/engagement period on the 31 outcomes and create an iterative process for feedback.**
  Having stakeholders engaged at the beginning of this process not only addresses the concerns raised in the ERG report on how the Program is prioritizing public engagement, it makes the overall product stronger. Stakeholders and communities experience the successes and challenges of the restoration effort firsthand and are already working on new and emerging issues.

- **Be evaluated through the lens of the emerging challenges (climate change conditions, increasing population growth), and diversity, equity, inclusion, and justice considerations, as requested by the Executive Council in their 2022 directive.**
  The 2022 Executive Council directive asked the Principals' Staff Committee (PSC) to "review the work of the program through the lens of climate change, increasing population growth, and diversity, equity, inclusion, and justice (DEIJ)." These three issues have only grown in importance and impact over the last ten years, and we ask that this is the lens through which we review the current outcomes and goals of the agreement.

- **Be done through an inclusive process that utilizes the most publicly accessible aspects of the Chesapeake Bay Program.**
  It is critical that the review process for the *2014 Agreement* is done in a way to maximize innovation, expertise, and a diversity of opinions. The Program's Goal Implementation Teams, Advisory Committees, and Workgroups are currently the most accessible way for the public and stakeholders to participate in the Program, which helps foster innovation and is the ideal environment to introduce new ideas.

- **Result in the sunset of the Beyond 2025 Steering Committee.**
  With its sunset, interested members of the Steering Committee will have more capacity to engage in the collaborative process outlined above and the recommendations for amendments to the *2014 Agreement* can be brought directly to the Principals' Staff Committee for consideration.

2. <u>By December 2026, facilitate a process to streamline decision-making, eliminate duplicative systems, and ensure the Program is built to advance our ultimate goal of thriving living resources, healthy communities, and clean water.</u>

   Recent reports and discussions suggest that part of the reason the Program is not reaching its goals is due to a lack of focus on the health of living resources and a complicated structure and governance framework. This was made clear throughout the Beyond 2025 process, as both participants in the Partnership, Coalition members, and other stakeholders expressed their frustration with the complexity of the Program and the allocation of capacity and resources.

   As states consider how to implement the CESR report and shift focus to shallow water habitats, it's critical to shift our framework for planning, monitoring, and evaluating living resource responses. The ERG report suggests there are too many teams, workgroups, decision making bodies, and ad hoc committees. This expanding bureaucracy is often confusing, not well publicized to stakeholders, and duplicative, resulting in lost time and capacity, as well as frustration from both within and outside the Program.

To address these concerns, the Coalition suggests a reorganization of the Bay Program structure and a revised governance which would:

- **Elevate the emphasis on living resources and healthy communities by revising the structure and governance of the Program to make it more inclusive, efficient, and effective.**
  As expressed in the ERG report, current membership of decision-making bodies within the Program (especially the Management Board) prioritizes the water quality outcomes and do not provide "the appropriate expertise and experience" necessary for the Program to track **all** goal and outcome progress.

  To restore the focus to living resources and address impediments to progress, the Coalition suggests a structure that is based in a social science framework and better reflects all the goals and outcomes within the *2014 Agreement*. This could include changing the membership of the Management Board or elevating the role of the Goal Implementation Teams. A new structure would ensure a diversity of subject matter experts are engaged in the decision-making process and provide increased opportunity for stakeholder engagement and leadership.

- **The new structure and governance should allow for and inform a revised strategy for stakeholder and public engagement within the partnership.**
  The existing Advisory Committees (Stakeholder Advisory Committee, Local Government Advisory Committee, and Scientific and Technical Advisory Committee) for the Program include a wide range of stakeholders from across the watershed, but their knowledge and expertise are underutilized. A new structure and governance must include a revised role for these Committees that better incorporates their critical perspectives.

  The broader nonprofit and stakeholder community across the watershed can also provide more capacity, knowledge, and resources to the Program if engaged more intentionally. This includes working with existing networks to build capacity and outreach capability and developing a formal process that the Program must follow when it comes to public engagement, feedback, and comment periods. Right now, the Coalition must continually advocate for public and stakeholder engagement, which results in frustration from the stakeholders and a loss in resources for the Program.

- **As directed in Executive Order 13508, regularly convene the Federal Leadership Committee (FLC) to ensure all federal agencies are engaged and to recalibrate the focus of the Program beyond water quality.**
  In 2009, the Chesapeake Bay Protection and Restoration Executive Order (E.O. 13508) was issued to bolster the federal agencies' efforts to collaborate on protection and restoration of the Chesapeake Bay and created the Federal Leadership Committee (FLC). The FLC determined the roles and commitments of the

federal agencies leading up to the *2014 Agreement*, which is once again needed as the next chapter of the restoration effort is determined.

Given the current concerns "raised about the dominant role of the Environmental Protection Agency and the lack of input from other federal agencies and partners," regularly convening the federal partners will help to not only engage all agency leadership, but also ensure that EPA is truly reflecting the position of all of the federal agencies.

3. By the 2026 Executive Council Meeting, assess the current TMDL Accountability Framework of the Chesapeake Bay Program and identify opportunities for additions and improvements to ensure the signatories are meeting their clean water commitments. Create an implementation structure that tracks progress and provides mutual accountability toward all the goals and outcomes in the *2014 Agreement.*

When the TMDL for the Chesapeake Bay was created, it was often called "the last and best hope for the Bay" because there was one thing it could provide when laws and regulations, funding opportunities, legal decisions, executive orders, and studies fell short - real accountability. However, since its inception in 2009, few of the authorities listed in the Accountability Framework have been utilized.

Widespread noncompliance and the extent of expired permits shown by federal data (*see* EPA Environmental Compliance History Online database) is an enduring barrier to achieving our clean water goals. This includes the most recent example of the violations at the Back River and Patapsco Wastewater Treatment Plants in Baltimore, Maryland. The total nitrogen loads discharged illegally from those two plants alone in 2021 exceeded the total amount of nitrogen that was reduced by the entire agricultural sector in Maryland between 2009 and 2021. This is a stark illustration of what could become more common if pollution from point sources is deemed "no longer an issue."

These failures go beyond not achieving our nitrogen, phosphorus, and sediment reduction goals. Over the last 15 years, the cumulative burdens of toxic pollution have increased, the pace of climate change has accelerated, and the biodiversity crisis has worsened. However, the Partnership has failed to adequately embrace the role its efforts have in creating healthy and resilient communities, while also losing sight of our goals related to living resources.

The Coalition believes the current TMDL Accountability Framework laid out by EPA is strong, and a more faithful adherence to its mechanisms would result in major advancements toward creating thriving waterways and communities across the watershed. The undersigned also believe the Program must fully embrace the recommendations of the CESR report and bring mutual accountability to the living resources and people-centered outcomes of the Bay Agreement. This is reflected in the below recommendations, which include:

- **The TMDL Accountability Framework should include all aspects of Section 117, E.O. 13508, the TMDL, and accountability framework documents, including mandatory reporting, the selection of an Independent Evaluator, and filling the position of the Senior Advisor of the Chesapeake Bay and Anacostia River to the EPA Administrator.**
  This recommendation reflects the strength in the current TMDL Accountability Framework and asks for a recommitment to the authorities it contains. There are also several mechanisms not currently being utilized that would provide a great benefit to advancing our collective goals. This includes the selection of an Independent Evaluator (as directed in the E.O. 13508 and *Chesapeake Bay Accountability and Recovery Act of 2014*) and the appointment of the Senior Advisor of the Chesapeake Bay and Anacostia River to the EPA Administrator.

- **Clearly define the roles of EPA Region III and that of the EPA Chesapeake Bay Program Office to ensure the Chesapeake TMDL is supplementing, rather than supplanting, the ongoing work of Region III and the states with respect to their statutory obligations.**
  The Bay TMDL is not the only justification for oversight and accountability actions in the watershed. Beyond enforcing the Clean Water Act, EPA Region III should look to other tools, such as the Office of General Council's *EPA Legal Tools to Advance Environmental Justice*, which contemplates the full use of EPA authority under multiple bedrock environmental statutes, such as the Clean Air Act and Resource Conservation and Recovery Act. What is good for environmental justice is good for water quality throughout the Bay watershed and we strongly urge EPA to recommit their strategies to advance environmental justice.

  The TMDL does not preclude states or the EPA from developing or approving additional TMDLs throughout the Bay watershed, which will only help uplift our restoration effort. We strongly urge EPA Region III to redouble its focus not only on its own compliance activities but, far more importantly, to push the states to adhere to their delegation agreements separate and apart from all the many *"*heightened expectations*"* under the TMDL.

- **State regulators use their own traditional authority under state and federal water quality laws to improve permitting, compliance, and local TMDL development.**
  While much attention given to the CESR report has focused on the "response gap," the report also highlighted an equally important "implementation gap" caused by insufficient jurisdictional investments in BMPs, programmatic enhancements, and regulatory decisions.

  As support builds for another CESR recommendation that prioritizes shallow waters, we urge the Partnership to consider the importance of establishing new local TMDLs for those areas. This would ensure that any such investments made to

restore a specific shallow water are not wasted by inadequate attention to pollution reductions. By doing so we will fully realize the immeasurable social and environmental co-benefits that comes from a reduction in water pollution.

- **The Partnership will develop an implementation structure that includes mutual accountability to ensure progress towards all the goals and outcomes in the *2014 Agreement*.**
  The current Strategy Review System process is designed to track progress on all the *2014 Agreement* goals and outcomes. As highlighted in the ERG report, the process needs improvement to strengthen its efficiency and efficacy and ensure challenges to goal and outcome achievement are addressed efficiently.

  Creating an implementation structure that requires the signatories to also report on their progress regularly to Program leadership provides mutual accountability to all the *2014 Agreement*. It will also bring more resources and capacity to the program as more state and federal agencies see their knowledge and expertise reflected in the work. This is an opportunity for innovation and creativity, where the jurisdictions can work together to collaborate on programs and projects toward shared goals.

SUMMARY

As a Coalition of more than 300 organizations across the entire region, we are all too aware that the Chesapeake watershed restoration effort is not just about the Bay. While as an environmental and conservation community we care deeply about the Bay's health and sustainability, it is just as important that our work is impactful at the local level, from Cooperstown, New York to Norfolk, Virginia, and everywhere in between. This work is about more than the Bay; people are depending on this movement to ensure they have access to clean drinking water, that their children can safely play in a public greenspace, that their outdoor recreation business can operate, and that their communities develop the resiliency to face stronger and more frequent storms.

There is no other option than to take bold and immediate action to recalibrate our work and the undersigned members of the Coalition are ready to support the Program in these renewed efforts. We have been a supporter and an accountability partner for this movement for the past 15 years and we are ready to continue our important work together. We ask the Executive Council to lead us into this new era by embracing and enacting the Coalition's recommendations outlined in this letter.

Sincerely,

Action Together Northeastern Pennsylvania
Alliance for the Shenandoah Valley
American Canoe Association
American Chestnut Land Trust
American Rivers
Anacostia Parks & Community Collaborative
Anacostia Watershed Society
Audubon Mid-Atlantic
Audubon Society of Northern Virginia
Baltimore Green Space
Baltimore Tree Trust
Beaverdam Creek Watershed Watch Group
Blue Ridge Watershed Coalition
Blue Water Baltimore
Butternut Valley Alliance
Cacapon and Lost Rivers Land Trust
Cacapon Institute
Capital Region Land Conservancy
Casey Trees
Catoctin Land Trust
Centro de Apoyo Familiar
Chapman Forest Foundation
Chesapeake Bay Foundation
Chesapeake Conservancy
Chesapeake Conservation Landscaping Council
Chesapeake Legal Alliance
Chestnut Hill United Church
Citizens to Conserve and Restore Indian Creek
Clean Fairfax Council
Clean Water Action
Coalition for Smarter Growth
Conservation Foundation of Lancaster County
Conservation Voters of Pennsylvania
DC Environmental Network
Defensores de la Cuenca
Delaware Center for Horticulture
Delaware Nature Society
Delaware-Otsego Audubon Society
Earth Force
Eastern Pennsylvania Coalition for Abandoned Mine Reclamation
Eastern Shore Land Conservancy
Environmental Defense Fund
Environmental Integrity Project
Environmental Policy Innovation Center

Envision Frederick County
Forever Maryland
Friends of Accotink Creek
Friends of Dyke Marsh
Friends of Lower Beaverdam Creek
Friends of Quincy Run
Friends of Sligo Creek
Friends of the Cacapon River
Friends of the Chemung River Watershed
Friends of the Nanticoke River
Friends of the North Fork of the Shenandoah River
Friends of the Rappahannock
Friends of the Rivers of Virginia
Interfaith Partners for the Chesapeake
Interfaith Power & Light (MD. DC. NoVA)
Izaak Walton League of America
James River Association
Lancaster Clean Water Partners
Lancaster Farmland Trust
Land Trust Alliance
Latino Outdoors
Lower Shore Land Trust
Lower Susquehanna Riverkeeper Association
Lynnhaven River NOW
Maryland Academy of Science at Maryland Science Center
Maryland Conservation Council
Maryland League of Conservation Voters
Maryland Nonprofits
Maryland Pesticide Education Network
Mattawoman Watershed Society
Montgomery Countryside Alliance
Muddy Branch Alliance
National Aquarium
National Parks Conservation Association
National Wildlife Federation
Nature Forward
Neighbors of the Northwest Branch
New York League of Conservation Voters
Otsego County Conservation Association
Otsego Land Trust
Parks and People Foundation
Patuxent Tidewater Land Trust
PennFuture
Penns Valley Conservation Association

Pennsylvania Council of Trout Unlimited
Pennsylvania Interfaith Power & Light
Phillips Wharf Environmental Center
Piedmont Environmental Council
Potomac Conservancy
Potomac Riverkeeper Network
Potomac Valley Audubon Society
Preservation Maryland
Protect Hanover
Rachel Carson Council
Restore America's Estuaries
Rivanna Conservation Alliance
River Network
Rock Creek Conservancy
Save Our Soils
Scenic Rivers Land Trust
ShoreRivers
Sidney Center Improvement Group
Sierra Club
Sleepy Creek Watershed Association
Southeast Rural Community Assistance Project
Southern Maryland Audubon Society
SouthWings
St. Mary's River Watershed Association
Sussex Preservation Coalition
Sweet Springs Resort Park Foundation Inc.
Sweet Springs Watershed Association
The 6th Branch
The Downstream Project
Theodore Roosevelt Conservation Partnership
Town Run Watershed
Transition Howard County
Trout Unlimited
Virginia Conservation Network
Virginia League of Conservation Voters
Virginia Organizing
Ward 8 Woods Conservancy
Waterkeepers Chesapeake
West Virginia Citizens Action Group
West Virginia Land Trust
West Virginia Rivers Coalition
Wetlands Watch
Wild Virginia

Saving the Chesapeake's Great Rivers and Special Places
Earl Conservation Center | 1212 West Street | Annapolis, MD 21401
www.chesapeakeconservancy.org | 443.321.3610

August 30, 2024

Chesapeake Bay Program
1750 Forest Drive, Suite 130
Annapolis, MD 21401

Dear Chesapeake Bay Program Leadership and Partners,

On behalf of the Chesapeake Conservancy, I extend our sincere appreciation for the opportunity to comment on the Beyond 2025 Steering Committee draft recommendations. The proposed elevation of Conservation as a key guiding pillar alongside Science, Restoration, and Partnership marks a significant and much-needed step forward in our collective effort to protect and restore the Chesapeake Bay watershed.

As we move into the next phase of the Chesapeake Bay Watershed Agreement, it is critical to recognize that permanent land conservation is not merely a supportive element but a foundational strategy essential to the long-term success of our shared goals. Conservation is the most direct and effective means to safeguard the ecologically and culturally significant landscapes that underpin the health of the Chesapeake Bay and its watershed. By prioritizing conservation, we ensure that the benefits of restoration efforts are enduring rather than ephemeral.

The Chesapeake Bay Program's renewed focus on conservation is timely, particularly considering the challenges outlined in the recent "Achieving Water Quality Goals in the Chesapeake Bay: A Comprehensive Evaluation of System Response" report by the Scientific and Technical Advisory Committee. This report underscores the need for a shift in our approach—from merely tracking water quality standards in the deeper waters of the Bay to addressing the more immediate and pressing issues of non-point source pollution and shallow water habitats where human activity is most concentrated.

To truly elevate conservation within the Chesapeake Bay Program, we must increase incentives for holistic conservation actions, including more robust crediting for conservation practices as Best Management Practices (BMPs). We should also focus on BMPs that provide benefits toward multiple goals of an updated Chesapeake agreement, such as water quality and carbon sequestration. Financial support and incentives for conservation planning, coordination, and practices are essential to engaging landowners and communities in protecting the most critical areas within the watershed. Additionally, the use of existing and new mapping efforts to target and prioritize conservation and restoration actions should be a cornerstone of our strategy.

A prime example of successful conservation is the recent preservation of Fones Cliffs, an effort that not only protected an ecologically valuable property but also balanced DEI principles by returning the land to the Rappahannock Tribe. This approach demonstrates how conservation can simultaneously achieve ecological preservation and social justice, and better engage tribal communities in the effort to protect and restore the Bay.

We fully support the Beyond 2025 recommendation to set ambitious, measurable, and equitable conservation goals that align with the national 30x30 initiative. This goal, which aims to protect 30% of the nation's lands and waters by 2030, is a bold but necessary target to address the increasing pressures from development, climate change, and other emerging threats. The Chesapeake Bay Program should work with its partners, especially including those in the Chesapeake Conservation Partnership, to establish clear objectives, targets, and timelines that reflect the urgency of this task. We need to employ the Iroquois philosophy of thinking seven generations ahead and to strategically protect lands today that the ecosystem will need tomorrow.

Moreover, it is essential to prioritize the achievement of goals related to forest buffers, wetland restoration, and the protection of other critical habitats. These goals are integral to meeting the Chesapeake Bay Program's water quality targets. For example, forest buffers alone are expected to contribute significantly to nitrogen reduction efforts, yet we still face challenges in meeting these targets by 2025. In addition, we must redouble our efforts with regard to our wetlands goals, which are woefully behind. Renewed focus on these unfulfilled goals, coupled with a process to collectively modify habitat and species indicators and metrics, will be crucial in driving progress.

In addition to these conservation priorities, we recommend taking an outcomes-based approach to restoration by utilizing high-resolution data and artificial intelligence technologies. AI can be employed to align the ecological benefits of key habitats with the travel patterns of migrating species, thereby enhancing land and water quality while improving survival prospects for species that depend on the Bay for migration and reproduction. Targeted restoration informed by precise data will ensure that our efforts yield the greatest possible benefits for the Bay's ecosystem, such as the profoundly successful Rapid Stream Delisting effort pioneered in Pennsylvania.

The Comprehensive Evaluation of System Response (CESR) report acknowledges that opportunities exist to improve the effectiveness of pollution reduction efforts and accelerate improvements in living resources by building on the data, knowledge, and experience gained over decades of effort. The report also states that capitalizing on these opportunities will require adoption of new policies, procedures, and programs and expanded capacities to address uncertainties around system response in decision-making. This matches up seamlessly with the Conservancy's enduring partnership with the Chesapeake Bay Program to develop high resolution land cover land use and hydrography data and analyses, now using both Geographic Information Systems and artificial intelligence through our Conservation Innovation Center.

Equitable access to conservation benefits is another vital consideration. The Chesapeake Conservancy supports the Beyond 2025 Steering Committee's recommendations for inclusive engagement and the implementation of the Diversity, Equity, Inclusion, and Justice (DEIJ) Plan.

We must ensure that the most important lands necessary to support the needs of both living resources and people are protected and that investments in stewardship and recreational access are distributed equitably across the watershed.

Ensuring equitable access includes providing public water access to the Bay that is accessible to all, regardless of whether individuals have access to a car. With more and more of the Chesapeake Bay's waterfront being controlled and developed privately, it is becoming increasingly important that we safeguard and expand public access points. This will inspire and engage the next generation of Chesapeake Bay stewards, ensuring the long-term success of our restoration and conservation efforts.

The Chesapeake Conservancy envisions an environmentally and economically sustainable Chesapeake Bay watershed, with clean water, abundant life, conserved lands, accessible open spaces, a vibrant cultural heritage, and a diverse community of engaged stakeholders. We believe that the thoughtful recommendations in the Beyond 2025 Steering Committee Report, particularly those related to conservation, are critical to achieving this vision. By working together to implement these recommendations, we can ensure that the progress we make today will stand the test of time.

Thank you for your leadership and commitment to restoring and conserving the Chesapeake Bay and its watershed. The Chesapeake Conservancy stands ready to collaborate with you and other partners to ensure that conservation remains a central pillar of our collective efforts as we move beyond 2025.

Sincerely,

Joel Dunn
President & CEO
Chesapeake Conservancy

Chesapeake
OYSTER ALLIANCE
10 Billion for the Bay

Beyond 2025 Steering Committee

This is a pivotal moment for the Chesapeake Bay watershed community. As the 2025 deadline approaches, critical action is needed to ensure that challenges are met through strong leadership and continued local, state, and federal investment. As members of the Chesapeake Oyster Alliance (COA), a coalition of non-profits, academic institutions, and oyster growers committed to adding 10 billion oysters to the Bay by 2025, we are thankful to the partnership which has made the Chesapeake Bay home to the world's largest oyster restoration project. We appreciate the opportunity to comment on the Chesapeake Bay Program Beyond 2025 Steering Committee's recommendations to the Principals' Staff Committee. We support both recommendations, however, believe the revisions to the agreement must be made by the end of 2025.

Beginning with the 1987 Chesapeake Bay Agreement, the signatories have recognized the importance of restoring the Bay's beloved bivalve, the Eastern oyster (*Crassostrea virginica).* Oyster reefs are habitat to over 300 other species of fish and invertebrates and they improve water quality, provide economic opportunities, and protect against sea level rise and storm surge. Federal and state partners are on track to fully restore oyster habitat in 11 Bay tributaries by 2025, with resounding results. For example, in Harris Creek on Maryland's Eastern Shore, the restored reef is now capable of filtering an equivalent of the entire volume of the creek every 10 days during the summer months and removing 1 million pounds of nitrogen over a decade. In Virginia, the work completed on the Piankatank River made it the single largest oyster restoration project on the planet. There have also been promising trends in oyster reproduction in both Maryland and Virginia over the last several years, alongside a decade of below-average mortality from oyster diseases. With oyster restoration expertise and experience now in place and significant resources available, we can continue the momentum to restore oyster populations.

Oyster restoration in the Chesapeake Bay shows what can be achieved with collaborative partnership, shared goals, and strong leadership. Experience, adaptive management, and cutting-edge science are teaching us more about restoration every year, but much work remains to be done. We urge the Chesapeake Executive Council to recommit to working together and set ambitious goals for the next chapter of oyster restoration for the partnership.

Sincerely,

Abner's Crab House
Accomack-Northampton Planning District Commission
Annapolis Aquaculture
Annapolis Oyster Company
Barretts Neck Seafood
Calvert Soil Conservation District
Cape Conservation Corps

Chesapeake Academy
Chesapeake Beach Oyster Cultivation Society
Coastal Conservation Association Maryland
Commonwealth Brewing Co.
F/v PorkChop
First Landing Seafood Company
Friends of St. Clements Bay
Friends of the Rappahannock
GO2 Delivery
Hampton University
Lambert Shellfish
Living Classrooms Foundation
Lynnhaven Oyster Club
Lynnhaven River NOW
Monolith, LLC
Nansemond River Preservation Alliance
National Aquarium
Natrx
Ocean Equities
Oyster Girl Oysters
Pearmund cellars
Phillips Wharf Environmental Center
Portsmouth Public Schools Oyster Project
Severn River Association
Shore Thing Shellfish
ShoreRivers
Solar Oysters
St. Mary's River Watershed Association
Tidewater Oyster Gardeners Association
True Chesapeake Oyster Co.
University of Maryland Center for Environmental Science Horn Point Oyster Hatchery
Walker’s Seafood
Waterfront Partnership of Baltimore

Greetings:

I was pleased to read this document to learn more about how science, policy and people are integrated by the Chesapeake Watershed Agreement's partners and advisors.

A couple of copy editing suggestions before some broader thoughts:

On page 1 the "Table of Contents" has mixed styles when it comes to initial capitalizations.

Part 11 under "Restoration and Conservation," #1 uses initial caps on words e.g.

"1. Support System-Scale Conservation and Restoration Planning and Implementation for Habitats and Communities"

whereas none of the others share this format.

Likewise under Part II "Partnership" item #2 and #4 use initial caps whereas none of the others do.

Conclusion: just pick one style and stick with it.

Some of the underlined titles in the body of the report also show mixed styles when it comes to initial caps.

Under "Partnership" on pages 13 and 14, # 2 and #4 use initial caps in the titles but #1 and #3 do not.

Again, just pick one and use it consistently.

Some broader reflections:

There is an emphasis on "emerging science" and "emerging issues" in the draft that warrants a more formal approach.

Just counting on scientists to "flag" issues may not be sufficient. My vote is that you retain a consultant or dedicate internal teams to develop an emerging challenges/horizon scanning program to identify, vet, evaluate and assess the relevance of emerging challenges to weigh their importance and see how they impact other watershed goals. For example, PFAS chemicals are getting a lot of press. Does that fit just in the "water quality" goal area or should there be more evaluation? Are there hotspots in the bay? Did Sparrow's Point and other industrial facilitiies discharge PFAS? etc. How do these chemicals get taken up by living resources and with what impacts? A more formal approach would help triage, test and make emerging knowledge like this more robust and useful (and save resources so you don't overreact to every new false positive).

Likewise there is an appropriate emphasis on communication but it might be worthwhile to ensure your answering the question: who should be communicating more with whom and about what? Saying jurisdictions should communicate more to innovate is all well and good but what divisions or programs specifically? Bland calls for more communication are lame. Pro tip: it's easier to get funding when you're specific. Likewise, if "communication" is just a euphemism for establishing better relationships across jurisdictions, you might use different terms.

Finally, there's a fair bit of rosy jargon in this report -- "synergies," "innovation," "holistic," "capacity-building" and "systems approaches." On occasion these may need further elucidation to ensure they're not just shorthand jargon used between insiders. For the most part you have specifics that follow the use of these terms but the report creeps right up to the edge of comprehensibility at times when using jargon. When using such terms, ask "how would I explain that to my grandmother?" and see if you pass the test?

Finally, I support the addition of "conservation" to the focal areas of the partnership as recommended. However, if adopted, it might make for clunkier branding. The below would have to read "Science, Restoration, Conservation, Partnership" -- a bit of a mouthful.

All the best with the next Watershed Agreement.

That Third Bay Bridge is going to release a lot of road building providing “access” for new sprawl in the sensitive Chesapeake Bay watershed no doubt. Got no point source pollution? There need to be ecological urban planning done for the new growth in the Bay’s watershed that is not like the same old laissez faire suburban county road driven growth.

We need a new model which is denser, pedestrian friendly and more town like in keeping with historic patterns we have in the Free State. Maybe consider marine transit oriented development as a model vs. auto dependent growth.

One cannot just keep building in the same pattern we have done in the past which has shown to kill off the Bay and it’s sensitive watershed.

The Chesapeake Bay is very clean as compared to the early1950's when I started on local waters. Often ships would pump their bilge which resulted in a heavy ring around all of the rushes in the river. One day I retrieved a 55 gallon drum partially filled with Creosote, another time twice I found 40 foot timbers 4"X10" and towed them in. To hide mud at low tide the City of Portsmouth filled part of a drain pipe.

The Government came up with the Idea that "retention ponds would eliminate dirty rivers." The one on Taylor Rd in Chesapeake works so well that it never has any water in it. I wander where the water carries the dirt?

Going forward with 2014 watershed agreement it would be good to look at the success the public fisheries have had in the past 8 years in the restoration work done on public fisheries bottom. First and most importantly is the success has come at a fraction of the cost spent in sanctuaries.

Historically there are 5 major spat producing tributaries, the Manokin, St. Mary's, Little Choptank, Harris Creek and Broad Creek. Of the five, four are sanctuaries and Broad Creek is open to the public for harvest. It is maintained by monies from the public fisheries seed and shell Replenishment program purchasing oyster shell and planting it on oyster bars in Broad Creek.

Each year thousands of bushels of oysters are removed from the Creek by hand tongs and power dredge. This helps to fund the seed and shell program with tax from each bushel and also produces more shell to return to the bottom. Even after taking oysters out of the Creek since the 2010 sanctuary agreement, there are more oysters in Broad Creek than any of the other sanctuaries. This can be confirmed in the 2016 to 2020 Oyster Management review. Broad Creek was named best tributary. This can not be overlooked. The science clearly shows that working the bottom and returning the shell is the most cost-effective way to move forward. There is plenty of shell available on Man of War shoals or if that is too politically sensitive there is a new source now from the West Coast.

First off, commendable effort all around, but yes much more work to be done. (Identifying information removed) I would have been expected to know of the 2014 study, but unfortunately did not. So, I got myself familiar at least at a high level with the 2014 report - a tall order for sure. I noted 5 themes, 10 Goals, and 31 Outcomes (objectives) on the table - some now being updated, etc but same focus. Nowhere did I see any indication of identifying the relative priority of these themes, goals, and objectives. Given limited resources and time being of the essence, this surprised me. What is the critical theme? What of its associated goals are the most important in priority order? Then, what associated objectives should be pursued in priority order? As it stands, it looks to me that all themes, goals, and objectives carry the same level of importance making it difficult in my view to secure the best and timely outcomes especially with limited resources. Divide and conquer may sort this out if enough resources are involved. But even then, what is the most critical item(s) to address when all weigh in?

(Identifying information removed) In that line of work, I have encountered of client's numerous themes, goals, and objectives associated with climate change and utility grid modernization. Clients are flummoxed about how and where to focus efforts on those 'items' that will give them the highest level of success in achieving outcomes and solutions in the face of limited resources. I have found the use of a very simple application of analytical hierarchical preferencing (AHP - one of many techniques that can be applied) to be exceptionally helpful in getting appropriate focus and traction for these clients.

Anyway, thought I'd offer my tow-cents here. I fully understand and support the governance and management strategies and initiatives put forth including for 2025 and beyond, especially required with multiple stakeholders, potential competing interests, etc. But my practical self looks to cut through this with a keen focus on what is most important and what tool/tools are available to get to identify critical need and subsequent actions. I know we can all agree that for our Bay, time is of the essence and sustainability is paramount.

Thank you for the opportunity to comment. I'd be happy to support your efforts in any way, gratis if there might be an interest.

Please see my comments below on the draft "Critical Path Forward for Chesapeake Bay Program Partnership Beyond 2025."

I recognize that the draft document is policy oriented. But the two recommendations seem of limited value given their unspecific nature.

1. Recommendation #1. Beyond 2025 makes liberal mention of the 2014 Chesapeake Bay Watershed Agreement. Yet, nowhere in the Beyond 2025 was I able to find the 2014 goals expressed. Without seeing the 2014 goals, how can the Beyond 2025 goals be concretely displayed. I recommend a simple summary of all 2014 goals and how these goals will be presented in the Beyond 2025 document
2. Recommendation #2. ". . . simplify and streamline the partnership's structure and processes . . .
    - Comment. Would it be possible to show many more specifics in how the partnership structure and processes can be simplified and streamlined? For example:
        i. How often does partners meet?
        ii. Are members of the partnership too high or too low within their respective organizations to have any substantive impact on Bay health?
        iii. What is the partnership budget?
        iv. Is budget data available from each partner to assess % contributions toward Bay improvement?
        v. How is partnership budget used?
        vi. Does any one person or group of persons have final responsibility to achieve partnership goals?
        vii. Can we include a color-coded map at various scales showing level of improvement and where most work is needed state-by-state?
        viii. Who composes the Management Board?
        ix. Who composes the Goal Implementation Teams (GIT)?
        x. Who composes the Advisory Committees (AC)?
        xi. What is the differences between GIT and AC? Why are both needed if overall recommendation is to simplify and streamline partnership?
3. General.
    - Pages 5-6. Only specific accomplishments cited are shown on Page 5-6. This is excellent proof of success. However, I recommend that the final document show the reasons for these successes, i.e., multi-state budget commitment, full/part time

commitment of personnel to achieve goals, unique solutions proposed and achieved, federal/state/local coordination, private sector contributions.

- Page 7 - 15. Part II – High-Level Recommendations. This entire section does not address specific types of science, restoration, or partnerships to be implemented. Highly recommend that the information be presented showing much greater levels of specificity on each area of science, restoration, and/or partnerships. Who is going to implement, what, where, when, why, how? I'd very much like to see specifics. Each person on the Steering Committee, GIT and AC certainly has many ideas on how to implement improvements.
- Recommend showing names/affiliation of persons on the Steering Committee, GIT, and/or AC.

(Identifying Information Removed)

Executive Council Recommendation 1:

- The Reaching 2025 report should be better reflected in the report and used to guide next steps for the partnership especially for how GITs should report on progress for 2023 and 2024, and for greater specificity of how to best integrate the latest scientific findings into decision making.
- Changes to Goals and Outcomes may need to be considered at the same time as re-structuring of Goals and Outcomes and breaking down silos.
- The focus should be on making changes to existing Outcomes *and* how they are interpreted, but the language in this recommendation should also reflect the possibility of new Outcomes.

Executive Council Recommendation 2:

- The complexity of the CBP may need to be better managed rather than simplified. Efforts to streamline and simplify have the potential to cause unintentional consequences. New teams have been added despite talk about simplifying, creating workload issues. The third-party described in this recommendation may provide more support than just facilitation if the one enlisted has experience on program restructuring too.

Science:

- The recommendations don't fully acknowledge all of the reports and new data that is available already.
- More specific recommendations and specific examples are helpful when recommending integration of scientific findings in decision making. For example recommendation language could be, "identify the latest scientific advances that could be used to better inform decision-making."
- Social science is a highly desired need and the addition of social scientists to the partnership can increase CBP capacity for productive engagement with stakeholders and communities.

Restoration and Conservation:

- The pillars of "science, restoration and partnership" are not actually codified in the Watershed Agreement, but have acted as guiding posts, so elevating conservation in this way would still be impactful. The CBP needs to utilize conservation as a framework for their work.

- STAR generally supports the addition of conservation but would like to note that it is important to consider the value (ecologically, socially, culturally) of what is being conserved.

Partnership:

- Utilization of external contractors to address CBP challenges should involve them working very closely **with** CBP rather than doing something **for** CBP.
- Partnering with NGOs more to enhance our capacity to deliver technical assistance and community engagement.

This is a comment regarding the July 2024 draft, “A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025.”

Part II, the high-level recommendations section, includes a number of abbreviations related to specific recommendations, such as HW, CW, SW, STAC, and ERG, with numbers attached. I assume these refer to complementary reports, but I do not see in the draft report any place where all the abbreviations are explained. I suggest you add a box or table of explanation.

YES, stop allowing\selling and make it illegal for all of these lawn and garden shops, home depot, lowes walmart etc. to just sell OTC pesticide, insecticides, herbicides, fungicides etc etc and all those nasty chemicals and poisons, where anyone can buy and misuse it. As a professional we have to go through certifications and licensing just to even enter the room the stuff gets stored in, LET ALONE actually to use or apply it, but yet any SMOE on the block can go buy this stuff and spray it all over the country killing everything in sight!!! That' be a GREAT HELP! MAKE IT ILLEGAL to sell n purchase w/o credentials that prove they know how to use it!

Greetings!

Thank you for the opportunity to comment on the report. The report contains excellent insight, wonderful wisdom, and suggested guidance to carry the CBP forward in effective, engaging work towards achieving Bay and watershed restoration goals and outcomes beyond 2025. The guidance supports the importance of maintaining and growing investments, insuring capacity for activities, further engaging the public, integrating new science, and considerations on strengthening partnership effectiveness considering its structure and functions. After reading and reviewing the report, please find below my considerations and suggestions that may help improve the presentation. Attached is the document representing a proposed Executive Summary for the report respectfully aimed at improving the delivery and impact of the presentation to its readers.

1. Respectfully – Management Board, Principals Staff Committee and Executive Council members will not want to look through 18 pages in search of the more than 20 recommendations addressing the EC charge. The Beyond 2025 Steering Committee can help them quickly grasp the key messaging here by using an opening synthesis. I suggest an Executive Summary that represents the Cliff's Notes version of the report up front, focusing the reader on the most impactful, critical messages and information by consolidating recommendations into a few tables for ease of reference.
    a. Please see my attached document for a *proposed Executive Summary* to inform final product development based on information in the 18 page draft page report.
2. Recommendations should be focused, concise, and succinct in their presentation. Many recommendations in this draft report are presented as compound statements with multiple ideas intertwined which reduces interpretability and clarity regarding their intention.
    a. In my proposed Executive Summary I provide suggestions for breaking recommendations into their core, essential message, and by doing so creating tight, concise, clear and singular statements of each recommendation.
        i. Note that even in the overarching recommendations, if you study the text, EC Recommendation #1 is really 2 recommendations rolled into one – there are 2 actions here – an affirmation activity and a follow-on work directive of the PSC. For simplicity and clarity I suggest the original statement should be broken out into 2 recommendations to create 3 independent, concise overarching recommendations. I presented them as such in my proposed Executive Summary for your consideration.
3. Recommendations provided in the draft report are sometimes redundant in their information with mixed issues blended across themes making them confusing to follow and understand.
    a. I provided some suggested text here retooling the language of all the recommendations to provide each recommendation as its independent issue for clarity and simplicity in messaging.

4. Recommendations can be general in their concepts but benefit the reader to include explicit, clear, concise impact statements associated with the expected effect associated with their implementation. By separating out the recommendation from its intended impact it creates a more focused, concise set of statements regarding what the action is (the core concept of the recommendation action(s) needed) and then showing its intended purpose upon adoption and implementation (Impact)

    a. I made a stab at using the report information to provide short, simple impact statements for each recommendation.

5. There are recommendations that – for example - are grouped under one theme (e.g. Restoration and Conservation) but if you really take their core intention they are truly partnership administrative activities (e.g., reviews of outcomes, goals, overall partnership structure, logic model review).

    a. In my proposed draft of an Executive Summary, I offer a consolidation and restructuring of some recommendations to group statements that are more similar to each other in their intention than the way they are presented in the draft report today. In my view, consideration for the revised grouping of recommendations provides more unified message of like-concepts and adds consistent flow to understanding the body of recommendations under each theme.

        i. If the committee and writers find it useful, the adjustments and reorganization of recommendations provided in the proposed Executive Summary may offer a guide to simplifying and reorganizing the structure of the body of the draft report if further work is conducted on the report presentation pending the input of the public comments period results.

6. Jargon reduces impact of the messaging. Avoid jargon in the report please. Management Board, Principals Staff Committee, and Executive Council members will struggle to understand what is being referenced and discussed and lose the meaning of the recommendations while attempting to understand undefined text or acronyms as a result.

    a. There are undefined acronyms that will challenge even the informed reader.

    b. There are undefined codes throughout the text (e.g. CW4) related do other documents that are confusing to an outside reader.

    c. For the overall draft report, I suggest limited use of acronyms even if defined, avoid jargon, and create a glossary of key terms for reference in creating the final product to support improved outreach, communications and transparency of the report information.

7. Be consistent with the language – agree on one term to consistently speak to the "Program"/" Partnership"/Chesapeake Bay Program. In creating a draft Executive Summary, I did not attempt to make the decision on a singular term.

8. One specific comment regarding the report to suggest a text correction please: on page 13 the report language states the following: **Contract an independent party to review and**

revise the CBP governance and structure. Please note: This statement is incorrect as a recommendation; it is not an accurate reflection of what the report language indicates. The report says the partnership will be informed with support by an independent party, not for the independent party to be in charge of revising CBP governance and structure. (*Page 13 text for reference with the recommendation, "With the support of an independent systems expert, the partnership can create an updated logic model that works backward from the Goals and Outcomes to their corresponding actions.").* Handing over control to a contractor is *very different* than highlighting a supporting role in guiding the partnership on governance and structure review and revision. Accurately reflecting the report text then, a suggestion for a more accurate recommendation here is: **"Update the CBP logic model for achieving goals and outcomes using partnership processes with the support of an independent systems expert."**

In closing, if needed, I have working versions of the proposed Executive Summary to highlight where and why suggestions for text grouping and/or editing is provided. We could also discuss anything as needed at your convenience. Thank you to the Beyond 2025 Steering Committee and its writing team for all your time and efforts. Looking forward to implementing the guidance proposed and accelerating recovery of the bay and watershed health, engaging the public, protecting our living resources, and improving the administration and health of our programs and partnership.

Dear Sir or Madam,

I write to comment on the future of the Watershed Agreement now available for feedback.

Should the Chesapeake Executive Council (CEC) wish to meet the goals of the Chesapeake Bay Watershed Agreement, **it should take into account the presence of 13 industrial-scale solar power plants with almost two million Cadmium Telluride solar panels that have the potential to leach 47 tons of Cadmium into the Bay watershed.**

Should the Chesapeake Executive Council wish to restore and protect the Bay watershed, i**t should take into account that Cadmium and Telluride are toxic heavy chemicals that three federal government agencies have declared hazardous and that seven Virginia counties have banned.** (I attach a slide deck that supports these claims.)

The specific comments in red text pertain to the Chesapeake Bay Watershed Agreement and fall into its four themes and seven goals.

Chesapeake Bay Watershed Agreement

Theme: Abundant Life
Goal: Sustainable Fisheries: Protect and sustain fish and fisheries

Goal: Vital Habitats: Protect land and water habitats to support fish and wildlife

Cadmium is harmful to aquatic life and to wildlife that drink from contaminated water sources on land.

How would 47 tons of Cadmium that leached into the Bay watershed impede CEC's goal of protecting fish and fisheries?

How would 47 tons of Cadmium that leached into the Bay watershed impede CEC's goal of protecting land and water habitats?

Theme: Clean Water

Goal: Water Quality: Reduce pollutants to achieve water quality to support living resources of the Bay and its tributaries

Goal: Toxic Contaminants: Ensure that Bay and its rivers are free of effects of toxic contaminants

Goal: Healthy Watershed: Sustain state-identified waters and watershed

Cadmium, a toxic heavy metal, has the potential to leach into water sources and could impede Bay efforts to sustain a healthy watershed. (List of laboratory experiments that prove Cadmium and Telluride leach is attached.)

How would 47 tons of Cadmium that leached into the Bay watershed impede CEC's goal of water quality?

How would 47 tons of Cadmium that leached into the Bay watershed impede CEC's goal of a toxic-contaminant-free Bay?

Theme: Conserved Lands

Goal: Land Conservation: Conserve landscapes in order to maintain water quality and habitat, sustain working forests, farms.

Industrial-scale solar power plants may decimate agricultural land and forests and run counter to the sustaining of both. It takes 10 acres of land to produce one megawatt of power. So, a 20-megawatt power plant would require 200 acres of land. The grading of the land may render it unsuitable for previous agricultural activities. Furthermore, the felling of two hundred acres of trees for a solar power plant may destroy habitats and ruin the ecosystem.

Theme: Climate Change:

Goal: Climate Resiliency: Increase climate resiliency of CB watershed, its living resources, habitats to withstand adverse impacts from changing environmental conditions

One solar developer, Energix Renewable Energies, has been fined by the Department of Environmental Quality (DEQ) three times in three consecutive years for violations of state environmental laws. The total violations, that amount to almost $350,000, include those that, if not mitigated, could severely undermine habitats to withstand adverse impacts from the climate crisis. (May 2024 DEQ Consent Order is attached.)

Because adaptive management supports decision making in the face of uncertainty, the CEC should advocate for the ban of CdTe solar panels in the Chesapeake watershed. We believe that the 47 tons of Cadmium currently in play have the potential to leach, which could prevent CEC from attaining its goals for a sustainable Bay watershed with clean water, abundant life, and conserved land. Advocating for this ban may eliminate that "uncertainty" and help CEC meet its goals of supporting public health and the health of the Bay watershed.

Dear Members of the Beyond 2025 Steering Committee,

(Identifying information removed)

You have been tasked with developing recommendations for the next steps in an action plan for restoring the Chesapeake Bay by examining the 2014 Chesapeake Bay Watershed Agreement and its 31 specific commitments. The Chesapeake Executive Council decided at its October 2022 meeting to not recommend any state actions to prod the states to meet their commitments under the 2014 document or to achieve the 2025 TMDL mandates for N, P, and S.

Rather, they decided to appoint your group to study and recommend what should be done beyond 2025, postponing new initiatives to achieve the TMDL nutrient and sediment caps by 2025 or even after that date. This was after the states had been given 15 years from 2010 to 2025 to meet the nutrient and sediment caps.

Another watershed agreement in 1987 had hard reductions agreed upon on nutrients—a 40% reduction in N and P by 2000—with specific measures to achieve those reductions agreed upon. Then, to settle a Clean Water Act lawsuit when the nutrient reductions and many of the implementing measures were not achieved, the EPA and Bay states adopted another Bay Agreement known as Chesapeake 2000.

The 2000 Agreement had hard N, P, and S caps to be achieved by 2010 and more than 100 discrete measures the states were to implement by then. Once again, the states failed to achieve the required nutrient and sediment reductions and many of the critical implementing measures.

The EPA imposed no sanctions and instead, was forced under the terms of the lawsuit, to impose the current TMDL in 2009. EPA listed 6-pages of potential sanctions for failure to implement the measures to achieve the N, P, and S reductions—60% by 2017 and 100% by 2025. Once again, EPA failed to impose any meaningful sanctions even though most states failed to meet the 2017 goals or even on the most recalcitrant states that had unacceptable Watershed Implementation Plans.

Despite the acknowledgement that most states will not meet the 2025 TMDL, especially for nitrogen, and despite the huge gap in meeting the overall TMDL nitrogen cap requirements, EPA is refusing to impose sanctions or to force meaningful measures to deal with the main reasons for the abject failure to meet Clean Water Act requirements for Bay water quality—agriculture and developed lands stormwater.

Greatly exacerbating this problem and clearly establishing a greater urgency to implement significant regulatory measures to curb agriculture and developed land nutrient and sediment flows is the new EPA Bay Program evidence concluding that such nitrogen reductions from all sources have been grossly overstated by nearly 50%. This is partly linked to increased farm fertilizer use, more farm animals and their excrement, and the ineffectiveness of farm best management practices despite $2 billion in grants to farmers since 2010.

Global warming and the Conowingo Dam reservoir exceeding capacity are also factors accounting for the significant overstatement by EPA computer models over actual water quality in situ monitoring for nutrients.

The result is that EPA Bay Program data document that 71.9% of Chesapeake's tidal waters remain impaired (polluted) under the CWA— an improvement of just 1.6% since 1985 when 73.5% of Bay waters were impaired. This, more than any other measurement, tells us we are failing in our efforts at Chesapeake Bay restoration.

In the May 2023 Comprehensive Evaluation of System Response (CESR) report, 50 top bay scientists on the Bay Program's Scientific Advisory Committee reported that Bay Program claims that phosphorus reductions were nearly achieved are contradicted by river monitoring stations finding limited evidence of reductions in phosphorus concentrations. The scientists also disputed significant gains in nitrogen reductions particularly from agriculture and other nonpoint sources.

The Report noted that the best that can be said is at least the Bay has not gotten worse over the last 40 years. The CESR report also concluded that voluntary efforts to fund nonpoint source reductions from agriculture and developed lands have not and will not work to achieve the meaningful nutrient reductions required. This is despite $2 billion the Bay Program notes were granted to farmers since 2009.

Despite this scientific consensus, the EPA and Bay states are proposing no new regulatory initiatives to curb farm pollutants and those from developed lands, only the tried and failed efforts to throw more money at voluntary actions.

(Identifying information removed) None of us could have imagined how 40 years later and after more than $10 billion spent, the Bay would still be in such poor condition.

Even worse, the political will to restore the Bay has shrunk to its lowest ebb and all too much greenwashing is occurring as so many folks have learned to monetize the bay restoration blocking bold actions so as not to jeopardize their funding largesse. All too many folks and organizations have their hands out for federal dollars and have become environmental mercenaries rather than warriors for the Bay.

The results after 40 years are the proliferation of flesh-eating diseases fueled by excessive nutrients in warm water leading to deaths and severe infection threatening the loss of limbs. I must wear gloves and a long-sleeve shirt to avoid such infections while tending my two crab pots daily. To see and hear from victims and from a widow of a victim who died from a vibrio infection contracted in the Severn River withing a few miles from Bay Program offices, go to: https://www.blackspotnyc.com/ It is only 7 minutes.

Fisheries have collapsed or are collapsing. Critical Bay grasses at 82,937 acres in 2023 are nowhere near their 185,000-acre target. NOAA scientists state on their website that as a result of disease, overfishing, and degraded water quality, only about 3% of the historic native oyster population remains. This is despite the 2000 Bay Agreement goal of a 10-fold increase by 2010 that was agreed upon. This is after more than $110 million spent on oyster sanctuaries.

As you meet on August 10 with the Chesapeake Management Board and at your Steering Committee meeting on August 29 in the Oyster Room at Bay Program headquarters in Annapolis, I ask that you consider these comments on your Beyond 2025 Plan including my column below in The Capital newspaper on the draft Beyond 2025 plan. I also will send specific recommendations for inclusion in the Plan next.

Sorry to report, but the draft plan reads like an EPA-sugar coated nothingburger designed to ensure no adverse reactions from the states or the regulated community, especially agribusiness.

First, the draft report fails to mention the most important overall goal of the 2014 Chesapeake Bay Watershed Agreement: having all practices and controls installed to restore the Bay's water quality by 2025.

Second, The draft is devoid of any mention of the TMDL and its water quality goals for DO, water clarity, and chlorophyll a. It also fails to mention the failure of the states to meet the TMDL N, P, and S requirements and their WIPs. It is as if the report has been censored from mentioning or documenting the shortfalls in meeting the TMDL which should be at the core of the report.

Third, I cannot find even one recommendation that specifically suggests any initiatives that would help accomplish the nutrient reductions preventing restoration of water quality. There is widespread agreement that curbing nutrients from agricultural operations and development land runoff are critical to meeting the TMDL, but nothing is suggested to deal with these nonpoint sources.

The lack of specific proposals to meet the TMDL to achieve water quality, which is at the core of the 2014 Agreement, renders the draft pretty much useless as a policy document.

Four, the draft chooses Greenwashing supposed successes and minimizing failures to meet critical commitments among the 31 measures in the 2014 Watershed Agreement. Oyster restoration is but one. See above. Also, see my column below for others.

Five, A Critical Path Forward For The Chesapeake Bay Program Partnership Beyond 2025 convinces me that the entire Bay restoration, including the Bay Program, has hit rock bottom. Many Bay leaders in the conservation community agree. This is tragic.

I will next send specific recommendations of what should be in A Critical Path Forward For The Chesapeake Bay Program Partnership Beyond 2025 to give it any semblance of putting the Bay Program, the CEC, PSC, and the Management Board on a path to restore the Bay and meet Clean Water Act requirements.

Members of the Steering Committee,

Here are my suggestions for inclusion in the Beyond 2025 Plan:

1.The 2010 TMDL for the Chesapeake Bay should be kept intact and the states be given another three years, until January 1, 2029, to implement all measures necessary to meet their caps for N, P, and S.

2. The measures to achieve the reductions contained in each state's latest WIP should stay in place and be required to be implemented in full by January 1, 2029, along with the additional nonpoint agricultural and land development regulatory measures attached. These attached new measures should be included in revised WIPs. This is to ensure the TMDL caps are met by the delayed deadline and to ensure that the N, P, and S caps are never exceeded as required under the TMDL.

3. That all the terms of the 31 measures agreed upon in the 2014 Chesapeake Bay Watershed Agreement shall be implemented by January 1, 2030, including the goals for installations of forest buffers on 900 miles of riparian areas and for the establishment of wetlands and Bay grasses (SAV).

Despite these commitments to these critically important ecosystem elements to help restore the Chesapeake, these goals were missed by wide margins and with no penalties imposed by EPA, the enforcement agency under the Clean Water Act. This allows the states to act with impunity.

The critical goal of 900 miles per year of forest buffers has only been met once, in 2002, often achieving less than 10% of the annual goal. The overall goal of 70% forested riparian areas will not be met any time in the near future and the trend is a net loss despite its inclusion in the 2014 Chesapeake Bay Watershed Agreement and state WIPs. The states put 190,557 acres of cumulative forest buffer implementation in their Phase III WIPs to achieve by 2025. As of 2023, states had reported a cumulative total of 57,911 acres of forest buffers. This reflects a gap of 132,645 acres or 10,943 miles.

The 2014 Chesapeake Bay Watershed Agreement committed the states to create or reestablish 85,000 acres of tidal and non-tidal wetlands and enhance the functioning of an additional 150,000 acres of degraded wetlands by 2025. Between 2014 and 2022, 4,310 acres of wetlands were gained, 57% of the 85,000-acre goal. Only 60,666 acres of wetlands have been enhanced from 2014 to 2022. This represents 40% of the goal of 150,000 acres.

The 2000 Bay Agreement and 2014 Chesapeake Bay Watershed Agreement committed the states to restore 185,000 acres of submerged aquatic vegetation (SAV). But this goal was reduced to achieve a target of 130,000 acres by 2025 and meeting the 185,000 goal in the future. But in 2023, only 82,937 acres of SAV were mapped, 64% of the 2025 target and 44% of the 185,000-acre goal.

All of the above data is from the Bay Program Progress Reports on these three crucial Bay state commitment components.

4. That the EPA commits to impose sanctions (termed back stops) upon any state that fails to take the measures in their WIPs, the revised 2014 Watershed Agreement and the newly added measures to accomplish the N, P, and S reductions by January 1, 2029. That list of sanctions is attached as proposed by EPA Region 3 in December of 2019. The new plan must emphasize that such sanctions will be imposed upon failure to meet the TMDL.

5. The Beyond 2025 report and plan acknowledge that after 40 years of formal efforts to restore the Chesapeake Bay and after more than $10 billion spent, the Chesapeake's water quality has hardly improved despite repeated voluntary agreements to restore the Chesapeake's waters. Bay Agreements were signed in 1987 and 2000, dictating specific reductions of 40% in N and P, first by 2000, and then similar N and P reductions along with specific S reductions by 2010.

These deadlines were set for each state and EPA imposed no sanctions when the states failed to meet these deadlines. A court settlement then required the EPA to impose a TMDL in 2010 with specific N, P, and S reductions to be achieved—60% by 2017 and 100% by 2025. This TMDL for N and P is far from being met and will not be met by 2025 despite the states being given 15 years to do so.

And yet EPA has imposed no meaningful sanctions for this failure. Any new plan with the TMDL must be enforceable and have sanctions guaranteed for failure to meet the plans to remove 100% of the Bay's waters from the CWA impaired list or the new plan will fail.

6. That the new plan acknowledge recent Bay Program data including that of Ator et al., USGS scientists in their published May 20, 2020 water quality monitoring report, the findings of the Bay Program Scientific and Technical Advisory Committee (STAC) scientists in their May 9, 2023 CESR report to the Bay Program leaders, and that of Jon Mueller in the June 2024 Environmental Law Reporter scholarly article: *40 Years of Chesapeake Bay Restoration: Where We Failed and How to Change Course.* I can

provide copies or citations for this published information and the findings below upon request. These findings should be included in any new document summarized as follows:

a. 40 years after the Bay Program began, 71.9% of Chesapeake's tidal waters remain impaired under the Clean Water Act—an improvement of only 1.6% since 1985 when 73.5% of Bay waters were impaired.

b. Nearly 50% of the nitrogen reductions allegedly achieved under the TMDL since 2009 have been negated by previously unaccounted for factors including greater agricultural fertilizer use, more farm animals, global warming, Conowingo dam reservoir filling to capacity, more development of land, and less effective farm BMPs than presumed.

c. Under the TMDL, states needed to reduce nitrogen reaching the Bay by about 71 million pounds annually by 2025. The Bay Program computer modeling showed a supposed reduction in nitrogen of 40 million pounds. But the new EPA data in b. above cuts the achieved reduction by nearly half.

d. Phosphorus reductions since 2009 are computed at 4 million pounds but also are grossly overstated. While Bay Program modeling suggests that phosphorus reductions are nearly achieved, analysis of water quality at riverine monitoring stations finds limited evidence of observable reductions in P concentrations.

The May 2023 report by 50 scientists in the CESR Report noted “limited evidence of observable reductions in phosphorus concentrations. The Ator et al. 2020 USGS report noted that while the Bay Program considers phosphorus reductions to be largely on track to meet cleanup goals, their USGS analysis showed that overall phosphorus loads actually increased 9% during the study period. The Bay Program estimated phosphorus declined by nearly a third during that time.

e. Ator et al. found in their May 20, 2020 report that Bay Program computer models overstate nutrient reductions, in some cases by wide margins. Rivers dominated by agriculture have shown little if any improvement in N, including in the Choptank. The USGS scientists found no overall nitrogen or phosphorus reductions from the region’s vast agricultural lands. But the Bay Program model estimated a 17% nitrogen reduction from farms during the study period. The STAC report confirmed the lack of success in nonpoint source nutrient reductions.

f. The Smith Creek watershed in Virginia was seen as a model for widespread application of farm BMPs but water quality samples do not show a decline in nutrient pollutants, instead it has increased. Several other closely monitored watersheds across the Bay region show that the amount of nutrients reaching the Bay from farms has increased or remained steady in recent years despite the promotion and use of various BMPs.

g. The STAC scientists' CESR Report concluded that additional funding of voluntary BMPs on farms or developed lands has not and will not work to significantly reduce nutrients. This is after the Bay Program noted the expenditure in BMP grants to farmers of $2 billion since 2009. But the Bay Program and states continue to see funding voluntary BMPs as the way forward in lieu of better regulations and enforcement of existing ones. More voluntary grants for BMPs have been seized upon as the “safe” way forward by the EPA and the states follow. The evidence is clear concerning the abject failure of this strategy.

h. Across the Bay watershed, livestock produce about 10 times more excrement by mass volume than the human population, and yet the law requires advanced wastewater treatment for most human waste to reduce nutrient content. See the CESR Report.This is why the land application of animal manure should be required to meet all the regulatory requirements for land application of advanced

wastewater treatment biosolids in effect since 1985 under the Maryland Department of Environment. See the attached regulations.

1. 90% of necessary N reductions under the TMDL are to come from farms but this is impossible without better regulation, especially of animal manure.

7. The nonpoint sources of agriculture and developed land stormwater have not been effectively addressed causing little progress in nutrient reductions. As the STAC CESR Report scientists concluded, as well as other scientists conducting water quality monitoring, paying farmers for voluntary BMPs has not and will not meaningfully reduce nutrient loads to the Bay.

These agricultural and developed lands nonpoint sources must be aggressively addressed in a new plan with new regulations and better enforcement of existing regulations, or the majority of Bay waters will remain impaired and will very likely worsen. There is no escaping this conclusion. Further, any grants for BMPs must be pay-for-performance with certification of the N, P, and S reductions of the implemented BMP by independent assessors before any payments for reductions are made.

How to restore the bay to a healthy, productive system is addressed well, with one exception. The report needs to expand on how to deal with the increasing area of the bay from sea level rise. This is a fundamental problem for bay health and shoreline communities. The expanding bay will cause severe pollution as it inundates septic fields, sewage treatment facilities, and structures of many kinds. Moreover, inundation of artesian wells will allow saltwater intrusion of aquafers.

Push for public beaches on the Potomac

This will much increase interest in cleaning up the whole Chesapeake watershed.

Chesapeake Bay Program,

Restoring the environment will be your most important legacy, your most critical missed opportunity, or your most lasting failure. The water we drink, the food we eat, the air we breathe are all already fouled. We feel it, we see it, we smell it. You are in a position to improve what happens from here. What will you do?

Chesapeake Bay Program,

I’m writing as a community member who has experienced first-hand how regional forces such as unchecked development, poor enforcement, climate-driven storms, and agricultural pollution have overwhelmed local gains in reducing water pollution. Now is the time for bold leadership and innovation to chart a new course for the Chesapeake Bay Agreement and to implement real change that will lead to the achievement of the Chesapeake Bay Total Maximum Daily Load (TMDL) targets, while emphasizing progress in shallow water habitats. There needs to be a shift from a practice-focused approach to one that measures actual load reductions. Most importantly, we need to recognize the recommendation of the leading Bay scientists to take a more holistic focus on the threats to living resources and the toxic and emerging contaminants threatening our communities, especially those communities impacted the most by pollution due to historical environmental injustices.

After four decades of tireless effort, our waterways and communities are still far from the Bay Agreement restoration goals. Recent findings detailed in the Comprehensive Evaluation of System Response (CESR) report, show that while some areas have seen improved water quality since 1985, overall progress has been slow and uneven. There are significant challenges in achieving restoration goals due to inadequate enforcement of violations from point sources and implementation of actions to reduce nonpoint sources of nutrients. Today, 71.9% of Chesapeake's tidal waters remain impaired under the Clean Water Act—an improvement of only 1.6% since 1985 when 73.5% of Bay waters were impaired. Agriculture, the largest remaining source of nutrient loads, and urban and suburban nonpoint sources, which are rapidly expanding, pose substantial obstacles.

Now is the time for state leaders and the Bay Program to recommit to the Chesapeake Bay Agreement, and revise goals and strategies to prioritize top-down accountability, climate change data and resiliency projects, and solutions for communities who face the same environmental threats as the Bay. For the future health of the Bay, local waterways, and our communities, there is no other option than to take bold and immediate action to recalibrate the Bay Program’s work. The Bay Program, and state and federal leaders must ensure a Beyond 2025 strategy that is accountable, addresses the impacts of climate change, and has real solutions for communities facing often catastrophic environmental threats.

Citizens have watched governments avoid enforcement of environmental regulations and evade responsibility for controlling development and certain industries pollution. Billions of dollars spent over two-plus decades have been marginally effective. The Chesapeake Bay Program must step up in its' guidance to the status quo, greenwashed environmental community. Our future on the Bay depends on you.

Chesapeake Bay Program,

I have experienced first-hand how unchecked development, poor enforcement, climate-driven storms, and agricultural pollution have overwhelmed local gains in reducing water pollution. Now is the time for bold leadership to chart a new course for the Chesapeake Bay Agreement and to implement real change.

Today, 71.9% of Chesapeake's tidal waters remain impaired under the Clean Water Act—an improvement of only 1.6% since 1985 when 73.5% of Bay waters were impaired. Agriculture, the largest remaining source of nutrient loads, and urban and suburban nonpoint sources, which are rapidly expanding, pose substantial obstacles.

We need to achieve the Chesapeake Bay Total Maximum Daily Load (TMDL) targets, while emphasizing progress in shallow water habitats. We need methods that measure actual load reductions.

Most urgently, follow the recommendations of leading Bay scientists who take a more holistic focus on the threats to living resources. Focus on the toxic and emerging contaminants threatening our communities, especially those communities impacted the most by pollution due to historical environmental injustices.

After four decades of tireless effort, our waterways and communities are still far from the Bay Agreement restoration goals. Recent findings detailed in the Comprehensive Evaluation of System Response (CESR) report, show that while some areas have seen improved water quality since 1985, overall progress has been slow and uneven. Inadequate enforcement of violations from point sources is a real problem, and implementation of actions to reduce nonpoint sources of nutrients has been inadequate.

Now is the time for state leaders and the Bay Program to recommit to the Chesapeake Bay Agreement.

Revise goals and strategies to prioritize top-down accountability, climate change data and resiliency projects, and solutions for communities who face the same environmental threats as the Bay.

There is no other option than to take bold and immediate action to recalibrate the Bay Program’s work. The Bay Program and state leaders and federal leaders must ensure a Beyond 2025 strategy that is accountable, addresses the impacts of climate change, and has real solutions for communities facing catastrophic environmental threats.

Clean water for all is a god-given right and, if agencies continue to favor corporate and political demands over nature's necessities, I promise you that I will work toward instituting Rights of Nature laws that WILL hold agencies, corporations and citizens accountable.

Hello,

My state of Pennsylvania has not provided adequate service to the Susquehanna River and its tributaries. This directly affects the Chesapeake Bay by polluting it and dirtying it with tons of sediment and debris. I believe a solution to this issue could begin with the CBF organizing and possibly funding the restoration and cleaning of the river. This would promote conservation as well as go hand in hand with restoring native and endemic species to the river ecosystem that have been extirpated. I believe that the process could begin in the Lower Susquehanna region, as it is the closest to the Bay. I live in Lancaster City, and I know that my county alone would jump at the opportunity to make a difference in our river and for the Chesapeake Bay, something we all benefit from and is a part of our lives here in South PA. Please consider this idea, the benefits will provide all of us with a better and healthier life.

Act now to reverse the pollution before the bay catches fire and watermen die.

PLEASE -- I URGE YOU TO TAKE STRONGER STEPS TO IMPROVE & SAVE THE BAY'S HEALTH!! IT"S A TREASURE & ITS HEATH IS VITAL TO ALL OF US!!

I have lived around the Chesapeake bay for all my 77 years, and like all of us, I have depended upon this precious resource for food, recreation, employment, and beauty. And ever since I was old enough to see around me with some comprehension, I have seen the damage we humans are inflicting - and been deeply troubled by what I saw. In spite of great efforts and programs - many of which I have supported directly - the quality of the Bay's waters has not improved nearly enough to move us toward an adequate goal. I am therefore writing as a community member who has experienced first-hand how regional forces such as unchecked development, poor enforcement, climate-driven storms, and agricultural pollution have overwhelmed local gains in reducing water pollution. Now is the time for bold leadership and innovation to chart a new course for the Chesapeake Bay Agreement and to implement real change that will lead to the achievement of the Chesapeake Bay Total Maximum Daily Load (TMDL) targets, while emphasizing progress in shallow water habitats. There needs to be a shift from a practice-focused approach to one that measures actual load reductions. Most importantly, we need to recognize the recommendation of the leading Bay scientists to take a more holistic focus on the threats to living resources and the toxic and emerging contaminants threatening our communities, especially those communities impacted the most by pollution due to historical environmental injustices.

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Now is the time for state leaders and the Bay Program to recommit to the Chesapeake Bay Agreement, and revise goals and strategies to prioritize top-down accountability, climate change data and resiliency projects, and solutions for communities who face the same environmental threats as the Bay. For the future health of the Bay, local waterways, and our communities, there is no other option than to take bold and immediate action to recalibrate the Bay Program's work. The Bay Program, and state and federal leaders must ensure a Beyond 2025 strategy that is accountable, addresses the impacts of climate change, and has real solutions for communities facing often catastrophic environmental threats.

I'm providing the following three comments on the "Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025" from the perspective of the (Identifying information removed).

1. In the first sub-bullet under Executive Council Recommendation #1, the document states: "...the members of the Chesapeake Executive Council should each affirm their continued commitment to work together in partnership to meet the goals of the Chesapeake Bay Watershed Agreement". While it may be implied, I think it would be beneficial to be explicit and clear that the Steering Committee wanted a commitment to "... meet the goals of the whole of the Chesapeake Watershed Agreement" [my suggested amendment added and highlighted in red text] and not just the goals and outcomes related to water quality as expressed by some PSC members.

2. In the fourth paragraph of the Additional Background for Executive Council Recommendation #1 (page 4), the first sentence states: "The partnership should continue to set targets..." I would recommend that this language be amended to say "... set specific, measurable, achievable, relevant, time-bound and equitable targets..." [my suggested text amendment added and highlighted in red] in keeping with the analysis and need for improvement identified in the ERG Chesapeake Bay Program Beyond 2025 Evaluation report.

3. In Part II: High-level Recommendations and Considerations for the Chesapeake Bay Program, in the Restoration and Conservation section, sub-section 2 entitled "Review and, where necessary, revise existing goals, outcomes, and management strategies to more effectively guide the partnership's restoration and conservation efforts beyond 2025", the second paragraph" (pg. 12) states: For outcomes that have been achieved, strategies should be developed to ensure continued success, new targets should be identified where appropriate, and any amendments should ensure restoration priorities reflect the needs of the public." It's unclear if the reference to "amendments" would include new species-specific outcomes and suggests this text needs additional information for clarity. For example, the oyster outcome is on track to meet its goal for restoration of habitat in 10 tributaries by 2025. However, the goal is tailored to one species of water-filtering shellfish. Could the proposed language be used to expand the current goal to "Protect, restore and enhance finfish, shellfish and other living resources, their habitats and ecological relationships to sustain all fisheries and provide for a balanced ecosystem in the watershed and Bay" and/or the species-specific oyster outcome to include a new outcome for enhancement of Atlantic ribbed mussels in tidal estuaries or freshwater mussels or clams in watershed streams? Atlantic ribbed mussels are reported to provide even more water-filtering ability than oysters and they have the benefit of not being sought or harvested for commercial fisheries. Freshwater mussels and clams are a more relatable "iconic" species for non-coastal communities and are found in the majority of the watershed as opposed to oysters (only found in tidal estuaries). This is just one example of why the proposed language might be expanded or clarified to allow for these anticipated goal and outcome changes in the evolution of the Bay Agreement.

Chesapeake Bay Program,

The Chesapeake Bay has been a part of my life since I was six years old. As I child I spent countless hours swimming, playing, sailing and crabbing in her waters. The beauty o saw in that wonderful environment lead me to pursue a degree in Biology. As an adult, I have continued to spend time on and around the bay. It breaks my heart that I can no longer see into the water. Where are the fish, the sea nettles, the seaweed, the crabs?
Why does my swimsuit remain permanently stained after swimming in the Bay? How can these observations be a sign of a healthy aquatic environment? I'm writing as a community member who has experienced first-hand how regional forces such as unchecked development, poor enforcement, climate-driven storms, and agricultural pollution have overwhelmed local gains in reducing water pollution. Now is the time for bold leadership and innovation to chart a new course for the Chesapeake Bay Agreement and to implement real change that will lead to the achievement of the Chesapeake Bay Total Maximum Daily Load (TMDL) targets, while emphasizing progress in shallow water habitats. There needs to be a shift from a practice-focused approach to one that measures actual load reductions. Most importantly, we need to recognize the recommendation of the leading Bay scientists to take a more holistic focus on the threats to living resources and the toxic and emerging contaminants threatening our communities, especially those communities impacted the most by pollution due to historical environmental injustices.

After four decades of tireless effort, our waterways and communities are still far from the Bay Agreement restoration goals. Recent findings detailed in the Comprehensive Evaluation of System Response (CESR) report, show that while some areas have seen improved water quality since 1985, overall progress has been slow and uneven. There are significant challenges in achieving restoration goals due to inadequate enforcement of violations from point sources and implementation of actions to reduce nonpoint sources of nutrients. Today, 71.9% of Chesapeake's tidal waters remain impaired under the Clean Water Act—an improvement of only 1.6% since 1985 when 73.5% of Bay waters were impaired. Agriculture, the largest remaining source of nutrient loads, and urban and suburban nonpoint sources, which are rapidly expanding, pose substantial obstacles.

Now is the time for state leaders and the Bay Program to recommit to the Chesapeake Bay Agreement, and revise goals and strategies to prioritize top-down accountability, climate change data and resiliency projects, and solutions for communities who face the same environmental threats as the Bay. For the future health of the Bay, local waterways, and our communities, there is no other option than to take bold and immediate action to recalibrate the Bay Program's work. The Bay Program, and state and federal leaders must ensure a Beyond 2025 strategy that is accountable, addresses the impacts of climate change, and has real solutions for communities facing often catastrophic environmental threats.

Chesapeake Bay Program,

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After four decades of tireless effort, our waterways and communities are still far from the Bay Agreement restoration goals. Recent findings detailed in the Comprehensive Evaluation of System Response (CESR) report, show that while some areas have seen improved water quality since 1985, overall progress has been slow and uneven. There are significant challenges in achieving restoration goals due to inadequate enforcement of violations from point sources and implementation of actions to reduce nonpoint sources of nutrients. Today, 71.9% of Chesapeake's tidal waters remain impaired under the Clean Water Act—an improvement of only 1.6% since 1985 when 73.5% of Bay waters were impaired. Agriculture, the largest remaining source of nutrient loads, and urban and suburban nonpoint sources, which are rapidly expanding, pose substantial obstacles.

Now is the time for state leaders and the Bay Program to recommit to the Chesapeake Bay Agreement, and revise goals and strategies to prioritize top-down accountability, climate change data and resiliency projects, and solutions for communities who face the same environmental threats as the Bay. For the future health of the Bay, local waterways, and our communities, there is no other option than to take bold and immediate action to recalibrate the Bay Program's work. The Bay Program, and state and federal leaders must ensure a Beyond 2025 strategy that is accountable, addresses the impacts of climate change, and has real solutions for communities facing often catastrophic environmental threats.

It's appalling to see how limited the outcome is for improvement in our water ways. As a nurse, good health has always been a priority for me. As a community member of Maryland, I see how important it is for all of us to take part in the processes for keeping our environment clean and safe for the benefit of good health. Clean water is necessary for life. We elect our government officials to help protect us by enacting laws and necessary measures to keep us safe. Our ecosystem has suffered many an insult from people pollution. It's time we all become responsible and do what needs to be done for us and generations to come to be able to enjoy our lives and this planet. Let's let Maryland show this country and the world how much we care and how much we can do starting with clean waters.

Dear Bay Leaders,

We've made a lot of progress in cleaning up the Chesapeake Bay over the last decade, but the work is far from done. Here on the Indian River, a tributary to the Elizabeth River, we have seen measurable improvements in our water quality and an encouraging recovery of oyster populations. However, our waterway still received a meager "C" on its last report card, with failing scores for phosphorus and ever-increasing pressure on our watershed's tree canopy.

I support the recommendations that the Executive Council should recommit to and refresh the Watershed Agreement, with revisions made by the end of 2025 to ensure the partnership has proper guidance. These revisions need to be science-based, and I hope they include strong nature-based solutions, such as growing our tree canopy and giving wetlands room to recover. To build support for these efforts, we should also consider how Bay restoration efforts have the dual benefit of restoring water quality and improving the quality of life for people and communities across the watershed by providing space to discover and enjoy nature.

To ensure that this critical collaboration extends beyond the 2025 deadline, we need each state governor and the DC mayor on the Executive Council to formally and publicly recommit to the Bay restoration partnership.

Dear Bay Leaders,

My family and I took the opportunity to take a late summer vacation at Cape Charles. The gentle waves of the Bay at the local beach are particularly attractive as we have a three-year old child with us and bathing would be relatively safe. Unfortunately, we were not able to fully enjoy the beach because bathing is prohibited due to pollution of the water. We can and should do better. I urge you to employ measures to reduce pollution and improve water quality not only for humans but for all the plant and animal species on which human survival depends. This is not a "nice" thing to do. It is absolutely imperative.

Chesapeake Bay Program,

I am extremely worried that we are not doing enough to preserve and enhance our natural environment. We need to focus more on conserving habitats, species and water quality, and demonstrate real improvements.

I'm writing as a community member who has experienced first-hand how regional forces such as unchecked development, poor enforcement, climate-driven storms, and agricultural pollution have overwhelmed local gains in reducing water pollution. Now is the time for bold leadership and innovation to chart a new course for the Chesapeake Bay Agreement and to implement real change that will lead to the achievement of the Chesapeake Bay Total Maximum Daily Load (TMDL) targets, while emphasizing progress in shallow water habitats. There needs to be a shift from a practice-focused approach to one that measures actual load reductions. Most importantly, we need to recognize the recommendation of the leading Bay scientists to take a more holistic focus on the threats to living resources and the toxic and emerging contaminants threatening our communities, especially those communities impacted the most by pollution due to historical environmental injustices.

After four decades of tireless effort, our waterways and communities are still far from the Bay Agreement restoration goals. Recent findings show that while some areas have improved, overall progress has been slow and uneven. There are significant challenges in achieving restoration goals due to inadequate enforcement of violations from point sources and implementation of actions to reduce nonpoint sources of nutrients. Today, 71.9% of Chesapeake's tidal waters remain impaired under the Clean Water Act—an improvement of only 1.6% since 1985 when 73.5% of Bay waters were impaired. Agriculture, the largest remaining source of nutrient loads, and urban and suburban nonpoint sources, which are rapidly expanding, pose substantial obstacles.

Now is the time for state leaders and the Bay Program to recommit to the Chesapeake Bay Agreement, and revise goals and strategies to prioritize top-down accountability, climate change data and resiliency projects, and solutions for communities who face the same environmental threats as the Bay. For the future health of the Bay, local waterways, and our communities, there is no other option than to take bold and immediate action to recalibrate the Bay Program's work. The Bay Program, and state and federal leaders must ensure a Beyond 2025 strategy that is accountable, addresses the impacts of climate change, and has real solutions for communities facing often catastrophic environmental threats.

Dear Bay Leaders,

Thank you for the opportunity to provide feedback on the future of Bay restoration beyond the 2025 deadline. It is critical that the partnership maintains momentum towards swimmable and fishable rivers and streams in the Bay watershed. This is only possible with strong leadership and a bold new vision for the goals and outcomes in the Chesapeake Bay Watershed Agreement. I support the recommendations that the Executive Council should recommit to and refresh the Watershed Agreement, however, revisions should be made by the end of 2025 to ensure the partnership has proper guidance.

The partnership has worked hard to achieve the goals and outcomes in the 2014 Agreement and we've seen success, even against the growing challenges from climate change and development. From acres of oysters planted to a shrinking dead zone, it is proven that partnership and supportive state and federal leadership are effective. But our work is far from complete. Continued progress is only possible through collective efforts. To ensure that this critical collaboration extends beyond the 2025 deadline, Bay leadership on the Executive Council must formally and publicly recommit to the Bay restoration partnership. While past successes should be celebrated, it is critical that goals and outcomes be refreshed to set a path to a healthy Bay for everyone. The revised Bay Agreement must be ready by the end of 2025 and should include a firm deadline for meeting updated goals. Guided by the latest science and with outcomes that benefit all Bay residents, an updated Bay Agreement by the end of 2025 is critical to build continuing momentum for clean rivers and streams.

Thanks to strong collaboration and science-based approaches, we have made progress towards healthy rivers and streams, but we still have a long way to go. I urge Bay leadership to recommit to this partnership and to refresh the goals and outcomes guiding the future of Bay restoration.

Your time and commitment to revitalizing our water systems and the Chesapeake Bay is very much appreciated.

Comments on "A CRITICAL PATH FORWARD FOR THE CHESAPEAKE BAY PROGRAM PARTNERSHIP BEYOND 2025"

The following comments are organized by the categories identified in Part II of the Steering Committee's Beyond 2025 Draft Report.

Comments on Part II: High-level Recommendations and Considerations for the Chesapeake Bay Program, Science

The Cost, Size, and Ineffectiveness of Stream Restoration Program

Some Background on "Stream Restoration" Projects

Since about 2014, cities, counties and other local jurisdictions in the Chesapeake Bay watershed have frequently used stream restoration projects as part of their plans to meet their regulatory requirements under the Chesapeake Bay Total Maximum Daily Load (TMDL) program. While there might be some "restoration" during these projects, the work is often a wholesale re-engineering of a stream valley that damages or destroys existing plant and animal communities. Cities and counties with Municipal Separate Storm Sewer System (MS4) permits are required to reduce the major Bay nutrient pollutants in phases over the years. The major nutrient pollutants are Total Nitrogen (TN), Total Phosphorous (TP) and Total Suspended Sediment (TSS).

The Cost and Extent of the Stream Restoration Program

Huge amounts of state and local taxpayer dollars are being expended on these projects. In Virginia alone, from fiscal year 2014 through 2024, the Commonwealth of Virginia has given approximately $131,217,620 to local governments to conduct these projects. Since local governments are required to match state funding in most cases, the total cost of the Virginia Stormwater and Local Assistance Fund (SLAF) program over the past ten years likely exceeds $262,435,240, and this figure does not include the administrative costs of running the state and local programs. If one adds the cost of the Delaware, New York, Maryland and Pennsylvania programs for stream restorations, the cost of these projects over the entire watershed must be extraordinary.

The physical extent of these projects is also extraordinary. EPA estimates that stream restorations performed in the Chesapeake Bay watershed from 2015 through 2023 have covered 2,465 miles, approximately the straight-line distance from Washington, DC to San Francisco, CA.

Are Stream Restoration Projects Effective Measures for Reducing Chesapeake Bay Nutrient Pollution?

Given the large size of this program, a critical question is: Are these projects effective at reducing Chesapeake Bay nutrient pollution? We don't believe they are effective. Here is why.

The U.S. Geological Survey (USGS) has been conducting an intensive stream monitoring program in Fairfax County, Virginia since 2007. That water quality monitoring work showed no significant reduction of Bay pollutants after stream restorations were performed. The USGS report titled, "Evaluating Drivers of Hydrology, Water Quality, and Benthic Macroinvertebrates in Streams of

Fairfax County, Virginia, 2007–18," provides insightful analysis of the impact of stormwater management practices on water quality. Page 127, of the report states:

> The average credited effect of management practices across the 14-station network was not related to TN, TP or SS concentration reductions or benthic-macroinvertebrate IBI score improvement from 2009 through 2018.

The findings of this long-term, professional study raise serious concerns about stream restorations and their failure to significantly reduce Chesapeake Bay nutrient pollutants.

A citizen group has monitored water quality at the upstream and downstream ends of a proposed stream restoration project in Virginia and found that the stream itself contributes little pollution to the Bay. The upstream watershed – the lawns, the streets, the pet waste, and other sources – is primarily where the pollution originates. This begs the question: Wouldn't it be better to focus limited public resources on Best Management Practices (BMPs) implemented upstream of our surface waters? This is where stormwater can be slowed, filtered, and sequestered.

An eight-month study on Taylor Run in Alexandria, VA found that about 75 percent of the Total Nitrogen (TN) arrived in the stream from the upstream stormwater sewer system. Almost all the Total Phosphorous (TP) and Total Suspended Sediment (TSS) was found to originate in the stormwater sewer system and the upstream watershed, not in a proposed stream restoration project area. These types of water quality studies are surprisingly inexpensive and can provide measurements to "ground truth" proposed stream restoration projects.

Another serious problem associated with stream restoration projects is how nutrient reduction credits are estimated. For years, nitrogen and phosphorous reductions for stream restorations were based on work conducted on Pennsylvania streams. The so called "Expert Panel" recommendations, prepared by the Chesapeake Stormwater Network and the Center for Watershed Protection, allowed Pennsylvania factors for "pounds of nitrogen and phosphorous per ton of sediment" to be used to estimate nutrient reductions for projects far from Pennsylvania and in watersheds and soils different from those found in Pennsylvania. These factors were not representative of the streams where a project would take place. In July 2021, guidance was changed to require stream bank soil samples to estimate nitrogen and phosphorous loads. This estimation method also appears flawed. What is found in a stream bank may never find its way into the stream water or Chesapeake Bay. Water quality monitoring is the only way to truly know what nutrients are in the stream water and what can be transported to the Bay. The mantra should be: "If it doesn't get in the water, it doesn't get in the Bay!" There is an urgent need for much better science in measuring nutrient loads from streams. The Chesapeake Bay program should rely on well-respected scientists in developing guidance, policy and programs.

What Needs to Be Done

First, there should be a moratorium on stream restoration projects. These projects should not be approved until water quality monitoring measurements demonstrate the project will achieve real, quantifiable, and sustained reductions in Chesapeake Bay pollutants. Stream restoration projects

that have as their objective the protection of sanitary sewer lines, roads, bridges, and other public infrastructure are not stream restorations. They are infrastructure protection projects. These engineering projects should be allowed to move forward if they are performed in a thoughtful manner, minimizing damage to natural areas. Projects based on Chesapeake Bay nutrient reductions should be paused until water quality monitoring studies confirm nutrient reductions will be achieved.

Second, in 2025 and going forward, the Chesapeake Bay Program should optimize water quality monitoring, modeling, and analysis. This is critical if real water quality improvements are to be achieved. States must focus on water quality monitoring and stream flow modeling to provide insight into the origins of Chesapeake Bay pollution and guide the approval of nutrient reduction projects. In the case of stream restorations, before any project is approved, an applicant should be required to show that water quality and flow measurements or modeling clearly demonstrate that nutrient reductions will be achieved. Expensive, multi-year monitoring studies are not needed to estimate nutrients loads. Nutrient loads can be estimated with reasonable accuracy by measuring pollutant concentrations at low, medium and high stream flows. These concentrations can be associated with measured or modeled stream flows. Simple in-situ flow measurements can be made for low flows and models can be used to estimate mid and high flows. Like any quality assurance program, one does not need to measure concentrations and flow every day, every hour, or every minute. One only needs enough good measurements that give you confidence you have a product (or project) that is "in spec" (i.e. producing the desired outcome).

Most importantly, good measurement science should be used to approve or disapprove stream restoration projects. The states in the Chesapeake Bay watershed that are approving or disapproving steam engineering projects have the water quality monitoring personnel, programs, and other resources needed to critically review and quality assure projects conducted in their state. Currently, rigorous concentration and load measurements are not made to determine if a stream restoration is effective. States are relying on the estimates of entities that may have a vested interest in the project moving forward. There needs to be objective, science-based decision making when deciding which projects should move forward.

Comments on the Upstream Best Management Practices

The Steering Committee should make it a priority to identify the major sources that contribute nutrient pollution to the Chesapeake Bay. In 2025 and beyond, the focus should be on reducing pollution from these major sources. That is not to say that an effort should not be made to reduce pollution from smaller, geographically distributed sources, however. There is now a huge catalog of Best Management Practices that are available to cities, counties, companies, corporations, and private citizens to slow, filter and sequester stormwater, stormwater that can find its way to the Bay. Good, rigorous science, including water quality monitoring studies, should be performed to determine which BMPs are most effective and where they work best. Best performing practices should be promoted for wide-scale adoption.

BMPs that have questionable or no ecological uplift – BMPs that do not improve the natural environment – should be avoided. Many BMPs have the ability of "Bringing Nature Home" –

restoring a little piece of nature. Please support BMPs that bring nature back to our urban, suburban, and agricultural spaces. After years of human intervention, we have an opportunity to right many wrongs and bring beautiful, sustaining nature back into our landscape. Let's do that!

Part II: High-level Recommendations and Considerations for the Chesapeake Bay Program, Partnership

An important partnership that the Bay Partnership may overlook is the partnership it has with the general public. When the U.S. EPA and state partners approve and support projects, like stream restoration projects, and members of the public find that these projects are damaging the environment, the Chesapeake Bay program loses credibility or worse. When members of the public see increasingly scarce natural areas dug up and destroyed by heavy equipment, they ask how in the world is this taxpayer funded work benefiting their neighborhood or the Chesapeake Bay. Please view the video at the following website to capture what the sentiment many members of the public have regarding stream restoration. https://www.youtube.com/watch?v=NvTvPnG6Qs8

Once the Chesapeake Bay Program loses its reputation as an organization trying to improve the environment, it is difficult to regain a position of respect and leadership with the public.

Thank you for the opportunity to comment.

Each of the signers below have participated in citizen efforts to monitor and/or assess one or more proposed stream "restoration" projects in Northern Virginia.

(Identifying Information Removed)

The Executive Council should be congratulated on taking steps to evaluate the progress of the Bay Program in achieving its 2025 goals. This reevaluation is much needed, and the Executive Council should heed and carry out the recommendations of its Principals Staff Committee and their consultants. In particular, the recommendations to affirm its commitment to meeting the goals of the *Chesapeake Bay Watershed Agreemen*t and direct the Principals' Staff Committee to propose the necessary amendments to effectively implement the *Watershed Agreement*. They should also direct the Bay Program to identify ways to simplify and streamline the partnership's structure and processes, including potential changes to the partnership's Governance and Management Framework to ensure that commitments to goals can be met.

From my personal perspective, while much progress has been made on this iteration of the Bay Program, accomplishments have fallen short of the meeting the overall goals of water quality improvement and ecological restoration in the Bay. The failures fall in several areas:

Science—All the research over the last 30 years has clearly shown that agricultural nonpoint runoff is the major unaddressed contributor to water quality issues in the Chesapeake Bay and its tributaries. Reliance on voluntary measures compensated by the public through cost-sharing programs largely funded by the federal government to address this pollution source has been the mainstay of the Bay Program, but after 30 years of trying, it should be obvious that voluntary measures alone are insufficient. The participating partners in the agreement should step up and consider regulating pollution from agriculture, especially large, confined animal (poultry and hog) operations. The Bay Program relies on the Chesapeake Bay Model to estimate both the contributions to the problem from agriculture and the contributions of conservation practices to its solution. Increasingly, it is obvious that the Model's parameters are not sufficiently accurate to do this job and better monitoring to attribute pollution to nonpoint sources needs to increasingly be deployed to target offending operations and put teeth into regulatory measures.

Climate change unanticipated at the outset of the Bay Program has the potential to both complicate existing water quality issues (for example, by creating more intense runoff events) and create new problems for the Bay (for example, inundation of urban and rural lands that could potentially become new nutrient sources). The goals and accountability measures of the Bay Program need to be rethought in terms of potential climate change impacts and recognize that these impacts are occurring within the time frame of the Bay Program's timeline, not at some distant point in the future. Climate change is likely changing the target of what is achievable in terms of restoring Bay and tributary ecological health. We may no longer be able to return the Bay to a condition it once had, since the climate in which water quality plays out is rapidly changing and has already been greatly altered since the latter part of the 20th century. Climate change is largely already here, although it will likely worsen in succeeding years.

Restoration and Conservation—The original impetus for undertaking the Chesapeake Bay Program was a generalized concern over water quality in the Bay as a whole, particularly the occurrence of "dead zones" depleted of dissolved oxygen in the deeper parts of the Bay. Over time, it has become apparent that this problem is really only a glaring symptom of rampant degradation of most tributaries to the Bay from sediment, nutrients and pesticide pollution. This was partially addressed in more recent years with the tributaries strategy, but the time has come for a wholesale reevaluation of the purpose of the Bay Program, focusing on restoring the ecological health of each

and every tributary leading to the greater Bay. Even if the "dead zones" were largely eliminated, if the majority of tributaries are not recognized as ecologically healthy and meeting water quality standards, the Bay cannot be judged to be healthy. Public recognition and support of the Bay Program also depends on the public's ability to SEE results in their backyard waters and does not materially rely on scientific measurements of water quality in the abstract. If you want the public to support cleaner water, they have to see it getting cleaner where they live. I have been an avid sea kayaker for the last 25 years and am presented with the successes and failures of the Bay Program every time I launch onto the Bay or its tributaries. I have seen the changes in water quality, both improvements and degradation, and I am happy to support the former and fight against the latter because it is so much a part of my life.

Partnership—Particularly with regard to agricultural pollution, participating states have been played off against each other by the agricultural industry to prevent meaningful action, other than voluntary measures largely paid for by the general public through the federal government. If the participating states cannot present a united front when it comes to meaningful regulation of agricultural pollution, further investment in voluntary measures will be largely futile. It is past time to recognize that agriculture is a a large part of the remaining problem, their existing ways of doing business are responsible for much of the pollution that is still occurring, and that they cannot continue to pose as a victim of needed changes, but need to shoulder the burden of those changes if they want to continue doing business in the watershed.

My perspective is informed by more than 40 years of experience in studying the economics of environmental problems associated with agriculture in the U.S. Department of Agriculture. Farming is both an economic enterprise and a way of life, but it should be no less accountable for the problems is creates than other sectors of the economy and society. Some individual farmers may need public assistance to meet required water quality goals, but the industry as a whole should be no less accountable than any other sector.

To the Beyond 2025 Steering Committee,

Thanks for the opportunity to review and provide comments on the draft report. I support the report's recommendations and have a few suggestions on opportunities to further strengthen the report and make the recommendations more actionable and meaningful:

Introduction:

- Executive Council Recommendation #2 calls for identifying ways to simplify and streamline the partnership's structure and processes. Although the end of this recommendation recognizes a need to work equitably and inclusively, this should be brought to the front and further clarified. Improving inclusivity, transparency and collaboration should be a core objective of the effort to improve the partnership's structure and processes to address these foundational issues identified in the ERG report. Acknowledging the need to improve the partnership's structure and processes to be more inclusive, transparent, and collaborative would help improve the framing of the recommendation. These efforts should be guided by the best available social science regarding effective collaborative governance structures.
- An overarching comment on this section is that it seems too long for an executive summary. This section could be edited to cut down on overly long sentences and repetition. A few specific opportunities are identified below.
- Some of the text in the Additional Background section could be shortened or clarified for conciseness:
    - Last sentence of the second paragraph is very long- could there be some bulleting or prioritization to better highlight the important changes being proposed?
    - First sentence of the third paragraph is even longer- could this sentence be ended after local governments and individuals?
    - Consider cutting the fourth paragraph to limit repetition.
    - First sentence of the fifth paragraph- cut "in the view of the Steering Committee". This is a Steering Committee report so we shouldn't need to specify that.
- In the Recognizing our Progress section there are also opportunities to improve conciseness:
    - First paragraph, last sentence, considering ending the sentence after "build technical expertise".
    - Second paragraph- recommend cutting first sentence and moving the second sentence to the end of the first paragraph.

Science

- Some of the recommendations in the Science section would benefit from some reframing to be more specific or to more clearly identify what needs to be done in Phase 2. Here are a couple of examples:
    - Science Recommendation 2a: "The SC recommends adaptation to the latest scientific findings as well as improved communication on how these findings are integrated into decision making, resource allocation, and management strategies". This seems too broad to be actionable as currently framed.
    - Science Recommendation 3a suggests "enhancing the partnership's understanding of anticipated changes". It would be helpful to clarify what anticipated changes should be the focus here- is this referring to anticipated landscape changes?

Restoration

- Restoration/Conservation recommendation 1a: Strongly support this recommendation to "elevate Conservation as a key guiding pillar alongside Science, Restoration and Partnership". This recommendation, if fully operationalized, could be transformative and greatly improve the sustainability and efficacy of our ecosystem restoration efforts. The rapid rate of land use change and habitat loss in the watershed makes conservation an imperative complement to restoration.
    - This recommendation could be further strengthened to acknowledge the need for conservation to be integrated with local planning efforts to address local government concerns expressed at the recent LGAC meeting. The first sentence in that paragraph could be reworded: "Taking a more holistic, systems approach requires broadening our vision of restoration to better integrate management, stewardship and conservation of land and aquatic environments into local and regional land use planning efforts".

Partnership

- Partnership Recommendation 1a. could be strengthened by adding some specificity (within the recommendation itself) regarding what the proposed review and revision should seek to accomplish. For example, "… the partnership contract an independent party to help review and revise the CBP governance and structure *to improve efficacy, transparency and collaboration*".
- Partnership Recommendation 1b recognizes a need to "strategically apply relevant expertise at the Management Board". This may be implied, but it could be clarified that this may require bringing additional expertise to the Management Board, beyond the current representatives.
- Partnership Recommendation 3a: Suggest including groups like fishing and other natural-resource-dependent communities as part of the effort to increase inclusion. These communities are particularly dependent on the Bay and watershed ecosystems for their work and financial well-being and are therefore important stakeholders to better engage with.
- Partnership Recommendation 4a: Suggest removing "with the partnership's outreach and engagement activities" from the primary recommendation text. Prioritizing and improving communications and transparency should happen throughout the Program's work, not just through outreach and engagement. There are opportunities to improve communications and transparency internally as well.

Chesapeake Bay Program,

I’m writing as a resident of the Bay watershed who is sick and tired of waiting for the 'fishable/swimmable goals of the Clean Water Act to be achieved.

The Chesapeake Bay Agreement and to implement real change. that will lead to the achievement of the Chesapeake Bay Total Maximum Daily Load (TMDL) targets need to be met. Agriculture, the largest remaining source of nutrient loads, and urban and suburban nonpoint sources, which are rapidly expanding, both require more aggressive steps to curb them. And focusing our attention on communities impacted the most by pollution due to historical environmental injustices should be our priority.

State leaders and the Bay Program must recommit to the Chesapeake Bay Agreement and establish meaningful mechanisms to ensure accountability. A strategy that is accountable, takes into account the anticipated impacts of climate change, and has real solutions for communities facing often catastrophic environmental threats is long overdue.

Chesapeake Bay Program,

I am a (Identifying Information Removed) resident who is extremely concerned about the climate crisis and vacations in Ocean City every year with my family. I have experienced first-hand how regional forces such as unchecked development, poor enforcement, climate-driven storms, and agricultural pollution have overwhelmed local gains in reducing water pollution. Now is the time for bold leadership and innovation to chart a new course for the Chesapeake Bay Agreement and to implement real change that will lead to the achievement of the Chesapeake Bay Total Maximum Daily Load (TMDL) targets, while emphasizing progress in shallow water habitats. There needs to be a shift from a practice-focused approach to one that measures actual load reductions. Most importantly, we need to recognize the recommendation of the leading Bay scientists to take a more holistic focus on the threats to living resources and the toxic and emerging contaminants threatening our communities, especially those communities impacted the most by pollution due to historical environmental injustices.

After four decades of tireless effort, our waterways and communities are still far from the Bay Agreement restoration goals. Recent findings detailed in the Comprehensive Evaluation of System Response (CESR) report, show that while some areas have seen improved water quality since 1985, overall progress has been slow and uneven. There are significant challenges in achieving restoration goals due to inadequate enforcement of violations from point sources and implementation of actions to reduce nonpoint sources of nutrients. Today, 71.9% of Chesapeake's tidal waters remain impaired under the Clean Water Act—an improvement of only 1.6% since 1985 when 73.5% of Bay waters were impaired. Agriculture, the largest remaining source of nutrient loads, and urban and suburban nonpoint sources, which are rapidly expanding, pose substantial obstacles.

Now is the time for state leaders and the Bay Program to recommit to the Chesapeake Bay Agreement, and revise goals and strategies to prioritize top-down accountability, climate change data and resiliency projects, and solutions for communities who face the same environmental threats as the Bay. For the future health of the Bay, local waterways, and our communities, there is no other option than to take bold and immediate action to recalibrate the Bay Program’s work. The Bay Program, and state and federal leaders must ensure a Beyond 2025 strategy that is accountable, addresses the impacts of climate change, and has real solutions for communities facing often catastrophic environmental threats.

The climate crisis is already killing innocent Americans, and millions more will die if you refuse to do everything in your power to stop it immediately. The whole world is watching. Our lives are in your hands.

Dear Chesapeake Bay Foundation,

Hi! How are you? Thank you for soliciting public comments and community input for the draft 2025 Chesapeake Bay Watershed Agreement report document.

(Identifying information removed)

In light of the historical, current and emerging role of the Chesapeake Bay watershed for local communities, states, industry, the American nation and the world - here are my comments and suggestions.

I. Overview: Main Threats to Local Watersheds, Cooperation and Challenges in Regional Chesapeake Bay Agreement

- **Clean Drinking Water/Water Quality**: There is considerable improvement in water quality at the local watershed/river/Chesapeake region levels. However, more targeted focus on chemical and nutrient contamination of **streams, rivers and cross-jurisdiction watersheds** is needed. ***To achieve these goals, a science in the public-interest, civic responsibility, and Common Good for the Greater Community foundation is needed for the 2025 Chesapeake Bay Watershed Agreement.***

Sustainable Environment and Chemical Use Issues: In this regard, the 2025 version of the Chesapeake Bay Watershed Agreement must build on **Green Chemistry Initiatives** underway by the U.S. government, business and industry and university collaboration.

One Health Framework (Interconnection of Human/Animal/Environmental Health Systems) for Chesapeake Bay Watersheds: Nutrient contamination from farms can be addressed through the reduction of the use of harmful fertilizers, pesticides, herbicides and agricultural practices that reduce soil health. Overtime, environmental health of the watershed is damaged by over use of chemicals that contaminate land, food systems and water. This must be addressed by inserting and strengthening the **One Health framework** in the 2025 Chesapeake Watershed Agreement to reduce water contamination, infectious disease and bioterror threats to animal livestock health/public health/environmental health.

Immediate Multi-Level Government Cooperation for Remediation and Replacement of Conowingo Dam: The age and fragility of local/state/regional water infrastructure - combines with the imminent threat of collapse by the Conowingo Dam. The increasing levels of climate linked stormwater and flooding are immediate and systemic water quality, environmental and national security threats.

II. Nature Biodiversity, Conservation of Native Ecological Systems and Habitats: Native Trees, Forests, Plants, Flowers, Animals and Marine Life

The **Restoration and Conservation** section of the draft document is very well done. ***The 2025 Agreement must strengthen and target focus on integrated water, native tree, plant, flower, animal and marine life habitats and ecosystems that link headwater states with down water states.*** The integrated multi-level system must combine natural/applied sciences with indigenous

native knowledge to understand the how/what/why this freshwater watershed came into existence - withstood transformation - and can be restored through clean water and nature based climate resilience. ***Stronger engagement with Natural Resources/Forestry agencies and scientific bodies such as the U.S. and U.K. Botanical Gardens, National Zoo, etc is needed for conservation expertise.***

III. Climate Change Resilience: Clean Renewable Energy Infrastructure Cooperation Across Chesapeake Bay Watershed States and Washington DC

This section of the draft 2025 document needs more work. The water quality and air quality issues converge and contribute to pollution of the Chesapeake waters, and threaten human/animal health and native habitats. For this reason, t***he revised 2025 Agreement document must include the automotive industry and transportation sectors.*** The automotive and transportation sectors are major sources of CO2 emissions and air emissions. Since fossil fuel use in cars, trucks, airlines- as well as basic maritime sources of water contamination are missing from the document - this area needs more work and inclusion in inter-agency cooperation.

The immediate refocus on multilevel cooperation for renewable energy transition, electricity grids, infrastructure and blue/green economy resources for governments, communities and industry must be addressed in the revised 2025 Chesapeake Agreement. The state leaders are making considerable headway through the **U.S. Climate Alliance** to meet the goals of the UN Climate Agreement. This framework should be a reference for re-engaging the state and federal leaders in active governance of the Chesapeake Bay Watershed Agreement.

Finally, the role of melting Arctic regions, rising Atlantic Ocean waters, extreme heat on human and nature ecosystems must be included as a context for accelerated collective action based science - but in the interest of the Common Good and the Chesapeake Bay watershed as a regulated public good. More focus and knowledge of international treaties and agreements, science based regulatory and global industry standards that impact the Chesapeake Bay Watershed is needed for governance of the climate resilience.

IV. Local Watershed and Regional Chesapeake Community Access: Knowledge and Informed Advocacy for the Greater Good

In the 21st century, community access is important. However, restoration of civic values and culture based on the collective good are needed across the Chesapeake Bay watershed and region. This is reflected on page 10 where the need for more focus and integration of social sciences with natural and applied sciences. In reality, this is a 21st century Enlightenment for the Chesapeake Bay Watershed and Community!!!

This is necessary for the multi-level community that connects to the Chesapeake Bay - at the local, county, state, regional, national - and global levels. For this reason, the Whole Watershed Act in Maryland must now be extended and integrated into the 2025 Chesapeake Bay Watershed Agreement.

In general, the restoration of the Chesapeake Bay watershed requires restoration of the Chesapeake culture and socio-economic transformation of this historic region. Many of the challenges and emerging solutions for restoration of the Chesapeake require refocus on the central

role of this freshwater shed; as the foundation for Indigenous Native communities, colonial settlements of the British Empire, creation of the United States, transatlantic regional integration and global resource trade and commerce. For these reasons, the 2025 Chesapeake Bay Watershed Agreement must include a clear understanding and linkage with the original of Mount Vernon Compact and Annapolis Compact agreements - and their role as the foundation for the creation and formalization of a unified regional framework.

In closing, I thank you for the tremendous work that you are doing. Let me know if I can help!

Chesapeake Bay Program,

I’m writing as a community member who has experienced first-hand how regional forces such as unchecked development, poor enforcement, climate-driven storms, and agricultural pollution have overwhelmed local gains in reducing water pollution. Now is the time for bold leadership and innovation to chart a new course for the Chesapeake Bay Agreement and to implement real change that will lead to the achievement of the Chesapeake Bay Total Maximum Daily Load (TMDL) targets, while emphasizing progress in shallow water habitats. There needs to be a shift from a practice-focused approach to one that measures actual load reductions. Most importantly, we need to recognize the recommendation of the leading Bay scientists to take a more holistic focus on the threats to living resources and the toxic and emerging contaminants threatening our communities, especially those communities impacted the most by pollution due to historical environmental injustices.

After four decades of tireless effort, our waterways and communities are still far from the Bay Agreement restoration goals. Recent findings detailed in the Comprehensive Evaluation of System Response (CESR) report, show that while some areas have seen improved water quality since 1985, overall progress has been slow and uneven. There are significant challenges in achieving restoration goals due to inadequate enforcement of violations from point sources and implementation of actions to reduce nonpoint sources of nutrients. Today, 71.9% of Chesapeake's tidal waters remain impaired under the Clean Water Act—an improvement of only 1.6% since 1985 when 73.5% of Bay waters were impaired. Agriculture, the largest remaining source of nutrient loads, and urban and suburban nonpoint sources, which are rapidly expanding, pose substantial obstacles.

Now is the time for state leaders and the Bay Program to recommit to the Chesapeake Bay Agreement, and revise goals and strategies to prioritize top-down accountability, climate change data and resiliency projects, and solutions for communities who face the same environmental threats as the Bay. For the future health of the Bay, local waterways, and our communities, there is no other option than to take bold and immediate action to recalibrate the Bay Program’s work. The Bay Program, and state and federal leaders must ensure a Beyond 2025 strategy that is accountable, addresses the impacts of climate change, and has real solutions for communities facing often catastrophic environmental threats.

It is a disgrace to our community and country the lack of improvement within the last 39 years. The quality of the water makes it unsafe for wildlife, recreation, and consumption. Our bay is a TREASURE, not a trash pit, and we must do better in protecting and it’s uniquely valuable assets.

Overall, I support the two broad recommendations presented: (1) affirm a continued commitment to meet the goals of the Chesapeake Bay Watershed Agreement, and (2) identify ways to simplify and streamline the partnership's structure and processes.

I also appreciate the effort to acknowledge progress made toward meeting the Agreement. However, this section would benefit from more consistency. On pp. 5-6, some of the accomplishments reference the original goals (e.g. 2025 goal of planting forest buffers at 900 acres per year), while others do not (protecting 1.64 million additional acres lacks a reference goal). Likewise some of the accomplishments listed are only part of the larger effort. In the case of submerged aquatic vegetation for instance, neither the original 2025 goal is stated (185,000 acres) nor the overall level of achievement towards meeting the goal – the "accomplishment" only mentions 10,000 acres in the Susquehanna Flats. This may be a notable accomplishment, but it is not clear why the reader should understand this to be so (beyond the report stating it as such, which is hardly convincing).

It would be helpful in general to reference the original goal so that the reader can evaluate progress (without having to chase down the original Watershed Agreement). At the very least the report should explain WHY the accomplishment is notable, even if it falls short of the goal.

An example of a clearly stated accomplishment relative to its original goal (though unmet) is the adding of 248 new public access sites, attaining 83% of the target.

In Part II, High-level Recommendations and Considerations for the Chesapeake Bay Program, p. 8 refers to the "five Findings from each small group (25 total Findings), **provided in Part III of this report**." [emphasis added]. However, those findings are NOT provided in Part III of this report. What is provided in "Part III: Source Materials" is a reference and hyperlink to a separate document, and it should be described as such (plus also provide a clearly identifiable reference, e.g. "Beyond 2025 Small Group Findings and Considerations" document).

The same holds true of the reference to the "observations and conclusions outlined by the ERG Report, though in this case, it isn't even clear which document is being referred to, since no document bears within its title ERG or Eastern Research Group. After carefully going through the list of source materials in Part III and opening several documents, I was able to determine that this is the report labeled: "Chesapeake Bay Program Beyond 2025 Evaluation". The reader should not have to go through such an exercise to figure out which report is being referenced.

Under the "Science" heading (p. 9) there are numerous references to external reports, but these references are generally opaque. Even if you know that ERG refers to the report labeled "Chesapeake Bay Program Beyond 2025 Evaluation" (which I was only able to determine with effort, as described above) you also need to recognize that F11, for instance, refers to Finding F11 in that report.

But it gets worse. Later under the Science subheading, item 1. Optimize monitoring, modeling, and analysis, there are references to such items at HW1, CW3, SW2, C1, etc. but it is not at all clear

what these are referring to (Which report(s)? What items in those reports?). The reader should not have to try and figure out what these are. References such as these are sprinkled liberally through the remainder of the report, and only help to orient those who already know what they might refer to.

Concerning the subject area of Restoration and Conservation, I am especially heartened to see the elevation of Conservation as a key guiding pillar. As noted, it is much easier and far less expensive to protect land and water than it is to restore it after it has been degraded. This will be especially important given ever increasing development pressures in the watershed. I also believe that an additional focus on nearshore habitats will be helpful in building support of the Agreement goals and efforts to reach them as we face continued challenges in the years ahead.

With regard to the possibility of revising existing goals, where necessary, how is the necessity going to be established? Should you only revise goals that are impossible to achieve? What if they are just very difficult to reach? How difficult does it have to be? Who will decide? Modifying goals and outcomes to "better account for emerging challenges" already suggests giving up on an original goal because it has become too challenging to reach, especially as the report references anticipated future climate, population growth and projected land use change. Flexibility can be beneficial, but too much leeway allows partners to shirk responsibility. It is easy to see that this is going to be a thorny process.

The biggest problem with the document, though, is the excessive use of obfuscating language rather than plain English. I had to read through it three times(!!) to get a reasonable understanding, and there are still parts that are unclear (background reference: I have a BS degree in Electrical Engineering and an MA degree in Philosophy, so I don't believe the difficulty is in my lack of understanding either scientific concepts or expository or persuasive writing).

I will borrow a passage from George Orwell ["Politics and the English Language", 1946] as an illustration, and then cite a few examples from the report to highlight the problem.

"Here is a well-known verse from Ecclesiastes:
I returned and saw under the sun, that the race is not to the swift, nor the battle to the strong, neither yet bread to the wise, nor yet riches to men of understanding, nor yet favour to men of skill; but time and chance happeneth to them all.

Here it is in modern English:
Objective considerations of contemporary phenomena compel the conclusion that success or failure in competitive activities exhibits no tendency to be commensurate with innate capacity, but that a considerable element of the unpredictable must invariably be taken into account."

Although Orwell admits this is a parody, there a many passages in the "Beyond 2025" document that could hardly be distinguished from the "modern English" rendering. For example,

P. 13 “Developing a more holistic, locally engaged approach to restoration and conservation will require additional capacity across the partnership. Coordinated capacity building and technical assistance through local networks can help leverage resources and expertise to address emerging challenges and to more comprehensively and efficiently drive implementation of practices that support the Programs’ goal and outcomes (CW 3, CW4, CW5; HW1, HW3, HW 4; SW 3, SW5).”

Style aside, what kind of “capacity” is being referred to??? Knowledge? People? Materials? Culture? Organization?

Words like holistic and leverage are bandied about throughout the document, without any explanatory effect. Nothing is made clear by the use of those terms, but they seem to be deployed regularly as if they confer almost magical properties in overcoming difficulties and providing solutions.

A similar example follows on the next page:
P. 14 Partnership with these networks can also be leveraged to create feedback loops for sharing bottom-up insights that support learning from the local level (P2, P4). Long-term, the partnership should identify opportunities to resource strategic networks for sustained partnerships that create durable impact (P4; HW4).

Not even addressing the ill advised use of “resource” as a verb, what does it mean to “resource strategic networks”? Provide them money? Materials? Information? Etc. Are the only networks strategic? Or are there non-strategic networks (that won’t be “resourced”)?

Durable impact? A nuclear explosion has a durable impact, but I suspect that is not the kind of “durable impact” you are aiming for. Rather than making your priorities clear, too often the text obscures them with technical sounding jargon that provides little meaning or clarity. Try to be more clear and precise in the meaning you are attempting to convey.

I would urge your organization to “translate” the document into something more closely resembling plain English. For example, the last sentence in the example above (if I have the meaning right, which is not at all certain) might possibly be written as, “The Program should emphasize supporting local organizations with the resources needed to develop effective partnerships capable of creating lasting improvements in the Bay watershed.”

The current Chesapeake Watershed Agreement is a model of clarity by comparison, and could be used as a reference for more effective communication in the Beyond 2025 document prepared by the steering committee.

Thank you for taking the time to read my comments. I hope you will find something of value in them that will help improve your final report.

Thank you for your hard work on this proposal. I greatly appreciate your dedication to ensuring the health of our bay for future generations.

However, I urge you to consider incorporating stronger measures within the proposal. We need regulations with real consequences—more stringent fines and clear avenues for communities to take action against pollution in their areas. Currently, we are exceeding Total Daily Loads in some regions due to the impact of a single construction site, yet there seems to be little in place to effectively stop this.

I'm relieved to see acknowledgment of climate change and its impact on our environment. With the increasing variability in rainfall, I strongly recommend adopting a more assertive approach in updating and enforcing regulations. Our changing climate demands that we be firm and proactive in our environmental protections.

To the members of the Beyond 2025 Steering Committee,

On behalf of the Maryland Association of Soil Conservation Districts and the Delaware Association of Conservation Districts, we'd like to thank the members of the Committee for your extensive work in developing a set of recommendations to continue moving the Chesapeake Bay Restoration effort forward. It's a testament to the Chesapeake Bay Restoration Partnership that so much progress has been made amongst all the changes that have taken place in the watershed since the first agreement in 1983, and the conservation districts in Maryland and Delaware are encouraged to see the Chesapeake Agreement continue. Certainly there are emerging issues that merit a review of restoration strategies and the resources needed to accomplish our common goals, and our two organizations are pleased to offer the following comments on the Beyond 2025 Draft Report:

- We appreciate the recommendation to the Executive Council to simplify and streamline the partnership's structure and processes. Many organizations have limited capacity or familiarity with the current system to participate, and a streamlined governance process will enable participation in planning and strategy development from a wider array of voices.

- Regarding the Science section recommendation, "*Integrate existing and new science findings in decision making, resource allocation, and communication strategies*.", along with the Restoration and Conservation section recommendation, *"Review and, where necessary, revise existing goals, outcomes and management strategies to more effectively guide the partnership's restoration and conservation efforts beyond 2025*."- Recognizing the importance of integrating new information into our restoration goals and strategies in order to achieve success, those of us working with farmers and small communities are also sensitive to the perception of shifting goalposts when goals and strategies are revised. A continued and expanded focus on outreach, transparency, attainability and buy-in from affected communities is a necessary complement to these two recommendations.

- Regarding the Restoration and Conservation section recommendation "*Support System-Scale Conservation and Restoration Planning and Implementation for Habitats and Communities*."- Conservation districts, in partnership with NRCS and others, currently work with farmers to develop and implement a holistic systems approach to conservation at the farm scale, and many Farm Bill and state-level conservation cost-share programs are structured to support this farm-scale implementation approach. A system-scale approach would benefit from complementing the current approach that addresses conservation goals at the farm level while leveraging conservation programs to incentivize planning and implementation at the watershed scale. Gathering input and perspectives from communities connected to the relevant systems during the planning phase will be vital to the success of these approaches.

- Recommendations should include greater emphasis on economic sustainability. Representatives at MDA and EPA have done a very good job in recent years of advocating for farm profitability as an essential component of overall sustainability, which wasn't reflected in the draft report. While there were notes in some sections about quantifying and communicating the economic benefits of conservation projects in the draft, it's also important to commit to evaluating the potential impacts (both pro and con) of both current

and new restoration strategies on profitability and the quality of life of individuals who are affected by new goals, rules and/or programs.

MASCD and DACD also appreciate the section of the report that recognizes the progress and successes toward meeting the Chesapeake Bay Watershed Agreement. This is an important message to partners, residents and farmers in the Watershed who have been and are continuing to implement restoration efforts on the ground. Thank you for the opportunity to provide input on the Committee's draft report and recommendations. We look forward to the final report and, again, appreciate the efforts of the committee to update the Chesapeake Bay Agreement.

I'm writing as a community member who has experienced first-hand how regional forces such as unchecked development, poor enforcement, climate-driven storms, and agricultural pollution have overwhelmed local gains in reducing water pollution. Now is the time for bold leadership and innovation to chart a new course for the Chesapeake Bay Agreement and to implement real change that will lead to the achievement of the Chesapeake Bay Total Maximum Daily Load (TMDL) targets, while emphasizing progress in shallow water habitats. There needs to be a shift from a practice-focused approach to one that measures actual load reductions. Most importantly, we need to recognize the recommendation of the leading Bay scientists to take a more holistic focus on the threats to living resources and the toxic and emerging contaminants threatening our communities, especially those communities impacted the most by pollution due to historical environmental injustices.

After four decades of tireless effort, our waterways and communities are still far from the Bay Agreement restoration goals. Recent findings detailed in the Comprehensive Evaluation of System Response (CESR) report, show that while some areas have seen improved water quality since 1985, overall progress has been slow and uneven. There are significant challenges in achieving restoration goals due to inadequate enforcement of violations from point sources and implementation of actions to reduce nonpoint sources of nutrients. Today, 71.9% of Chesapeake's tidal waters remain impaired under the Clean Water Act—an improvement of only 1.6% since 1985 when 73.5% of Bay waters were impaired. Agriculture, the largest remaining source of nutrient loads, and urban and suburban nonpoint sources, which are rapidly expanding, pose substantial obstacles.

Now is the time for state leaders and the Bay Program to recommit to the Chesapeake Bay Agreement, and revise goals and strategies to prioritize top-down accountability, climate change data and resiliency projects, and solutions for communities who face the same environmental threats as the Bay. For the future health of the Bay, local waterways, and our communities, there is no other option than to take bold and immediate action to recalibrate the Bay Program's work. The Bay Program, and state and federal leaders must ensure a Beyond 2025 strategy that is accountable, addresses the impacts of climate change, and has real solutions for communities facing often catastrophic environmental threats.

For the future health of the Chesapeake Bay, local waterways, and our communities, taking bold and immediate action is essential. We need to recalibrate the Bay Program's approach to address nonpoint sources of pollution from agricultural and developed lands with new regulations, stringent enforcement, and clear accountability. Without these changes, much of the Bay's waters will remain impaired and may even deteriorate further.

August 30, 2024

To: The Chesapeake Bay Program Beyond 2025 Steering Committee

Subject: Public Comments on the Beyond 2025 draft report

Dear members of the Beyond 2025 Steering Committee,

Thank you for this opportunity to comment on the Beyond 2025 draft report.

For far too long, we have relied on some of the same old practices that have not proved to be effective, but we are hoping somehow for a different result from them, instead of practicing adaptive management and following what current science is telling us to do to restore the health of the Chesapeake Bay. One such practice we rely very heavily on is called stream "restoration" or stream "bank stabilization".
Stream "restoration" in the Chesapeake Bay region is a practice that is intrinsically destructive and has not proved to be effective at restoring the Chesapeake Bay despite decades of "for profit" contractors insisting this practice would, and despite our state having paid millions to billions of dollars to a handful of private contractors to financially benefit richly from all of ours state resources.

1)The first comment that I have on the draft letter is that there doesn't seem to be a very clear explanation of what the problems are and why we're failing at restoring the bay, this makes it more difficult for the committee to identify specific ways to make improvements to current practices with required, goals, and measurable before and after results on all restorative actions taken in the future. One thing is clear, we can't continue with the status quo. The committee must make it clear in the final report that we need a paradigm shift in what we are doing now if we expect to see improvements in the future. We must correct the problems in our waterways, before the problems reach them. We must mitigate pollution and ecological harm where it is occurring instead of letting the harm occur first and then try to fix it somewhere else. We must stop spending money on destructive practices with no proof they have achieved their stated goals. An ounce of prevention is worth a pound of cure.

The draft report does not address how much money we have spent on specific practices, and their individual successes and failures, and what would be required to correct certain practices or even if we should eliminate some practices in the future.

The main contributors to the problem are;
New development and paving with impervious substrates, point sources such as waste water treatment plants, industrial and agricultural runoff, air pollution, septic systems, polluted storm water runoff, mass deforestation. Also, the ever increasing need for obligatory TMDL and Mitigation credits.

How does a stream "restoration" that deforests a riparian zone fix any of the above mentioned contributing factors? Yet stream restorations are the preferred practice by the industry for producing credits that we're being told are going to restore the Chesapeake Bay and our waterways, by producing these credits to offset this environmental harm mentioned above, without ever fixing anything, and in some cases actually making things much worse.

This philosophy that even more environmental destruction is what is required to restore the bay is based on the economy, not the environment. Who actually believes the way to mitigate the harm caused by chopping down an old growth tree is to cut down another old growth tree?

Maryland's natural, native stream corridors and stream ecosystems are invaluable, irreplaceable…and finite. These ecosystems are complex, bio-diverse, and uniquely individual, they are threatened habitats and beginning to vanish with our permission and perhaps, unintentional blessing. Maryland's remaining fragments of forest and forested stream corridors provide tremendous benefits to the surrounding communities, the Chesapeake Bay, and the environment in multitudinous ways. Mature forests;

-Sequester carbon, produce oxygen, filter greenhouse gases, provide shade and counter heat island effects, they capture up to 50 percent of the precipitation that falls in a watershed, and they absorb nutrients and stormwater runoff. They capture and retain silt and sediment, and they replenish and purify the groundwater. Mature forests and trees provide critical food and habitat for insects, bats, birds, reptiles, and mammals. They provide opportunities for forest bathing, bird watching and other healthy recreational activities and a necessary human to nature connection. Mature trees reduce noise, air, water, and light pollution, and they provide a buffer from wind and the elements. These ecosystems improve our quality of life and provide an upland filtering system and habitat for many species that buffer the Chesapeake Bay.

A City of Toronto study titled "Every Tree Counts" compared the environmental performance of a 6" diameter tree to a 30" diameter tree. The larger, mature tree was able to intercept 10 times as much air pollution, store up to 90 times more carbon, and possess a leaf area as much as 100 times the size.

Please see the article in the link below for more ways in which mature trees offer advantages over newly planted trees. We are in a climate emergency. Mature trees are some of our best tools for combatting the impacts of climate change, species die off, and global warming and all we need to do is preserve and protect them.

https://www.deeproot.com/blog/blog-entries/why-investing-in-mature-tree-growth-is-beneficial-for-cities-a-financial-and-environmental-case/

Also, please watch this short video in the link below which shows the significance of one mature tree vs massive reforestation efforts.
https://www.youtube.com/watch?v=0D0zp7Q4YnE

Additionally, please review the image of the air pollution over Howard County and Central Maryland. See link below.

In recent years, Howard County and the State Highway Administration have used stream restorations to convert "impervious" surface acres to "pervious" surface

acres through stream restorations and in stream outfall stabilization projects at a much higher percentage to generate obligatory credits, than other MS4 permit holders, 72% for Howard County and a whopping 85% for the SHA. According to the background information provided by the SHA for their Large MS4 permit renewal application, the SHA converted approximately 5000 acres of riparian forest in the last permit period alone. Howard County has experienced excessive tree loss due to development and subsequent stream restoration and mitigation projects. We can't afford to lose any more trees in our state, and we can't plant our way out of the loss.

https://www.nasa.gov/press-release/nasa-shares-first-images-from-us-pollution-monitoring-instrument/

2)My second comment on the report is that is does not go far enough to address how some of our current practices are failing to address, or even in some cases are increasing the negative impacts of global warming, species die-off, climate change and the loss of bio-diversity in the Mid-Atlantic. What specific changes to practices can we expect to see that will be done to address the climate emergency we are facing without harming our forests, waterways, and the Chesapeake Bay?

Maryland's forested riparian zones, wildlife corridors, and natural streams are invaluable, and not all streams have floodplains.

Maryland streams are under stress and have been placed under enormous pressure as they receive more polluted stormwater runoff and silt and sediment from our actions.

Many Maryland streams begin as cold and cool springs and are the headwaters for crucial sources of our clean drinking water. Although many streams have been degraded from the negative impacts of deforestation, development, and the hardening and paving of surfaces which along with climate change has increased average levels of precipitation in a single event, and the amount of polluted stormwater runoff that is discharged into them, they still flourish, they thrive and they support a wide range of life from the macroinvertebrates, fish, mussels, and crayfish in the stream, to species such as snakes, turtles, amphibians, reptiles, salamanders and newts that all rely on these unique ecosystems for their species existence. Even raccoons, bats, foxes, and birds including some species of Owls hunt for aquatic species in our streams.

These biological communities are created over untold amounts of time existing as a community with climate resilient DNA created from the microbes in the soil and leaf litter to the sloped stream banks, and stream bed to the riparian and aquatic flora and fauna to the leaves in the treetops. These are the same species of leaves that have been feeding the stream and creating the soil for eons. These biological communities are a necessary component for a healthy Chesapeake Bay. It is entirely unacceptable for this committee to accept that all Maryland streams will reach the same level of mediocrity in the very near future without major changes to current practices. It doesn't have to be this way unless we continue to allow it.

The stream "restoration" project in my neighborhood in Columbia, replaced invaluable food sources and habitat from mature oaks, hickories, maple, beech, tulip poplar and many other middle and lower canopy and ground species with just a few primary species in their place. Willows along the streambanks and sycamores surrounded by various sedges, rushes, grasses and invasive species

that will be chin high by the end of the summer, in the engineered “floodplain”. When these grasses dry out during drought years, they create ripe conditions for suburban and urban wildfires.

Oak trees are host species for over 2000 other species. What if the willows or sycamores experience a fatal disease in the future? What if that happens in 50 years? The reforestation will have to start all over again. The project was so inappropriate, expensive, unwanted, and unnecessary. Our state paid over 2 million dollars to degrade the heart of our neighborhood and our streams water quality, it’s been 4 years now and it hasn’t shown signs of improvement over what we had before. It wasn’t even required to.

If it weren’t for citizen action, I’m afraid the reforestation success rate in the SHA stream project in my neighborhood could have remained at 36% or less. I’m concerned it could happen again. I’m told the SHA allows contractors to “dispose” of the mature tree logs however they wish for any SHA project, this could include at a lumber yard. No one is keeping track of the logs or the profits from the sale of our natural resources.

Stumps are expensive and difficult to transport, some landfills won’t accept them, so in some projects, contractors receive permission so they can be left behind. I’ve seen these eye sores used in the construction design – typically upside down or just left in place, reminders of what was lost. They can also be buried. Something a contractor in the construction industry would usually never do. Nor would they be allowed to drive in a stream.

Maryland has thousands of miles of a few types of streams and not all streams have or had a floodplain or a dam in the past. It is disingenuous to suggest that they all do or even that they did at some point in time. Floodplains that existed on maps from 100 years ago may no longer be what we would consider to be a floodplain today, 100 years later. One only need look at the topography, the lay of the land and the age and the species of the trees in a stream valley to determine if the area is a true floodplain in today’s times or not.

The homeowner’s association in my community paid for a climate vulnerability study to determine the risk of our community flooding. The study determined the sloped stream banks in Columbia’s forested stream valleys were keeping the streams in the channel between the stream banks and safe from flooding people’s property and Columbia’s assets.

They determined our stream banks are keeping us safe from flooding. Unless you live in my neighborhood which experienced a stream “restoration” that encourages the stream to intentionally flood its banks, encroaching on residential property during average storm events. Many in our neighborhood wonder aloud “what if we get a hurricane?”…

I asked several representatives of various agencies if they could provide me with a model stream restoration project. I found it very interesting they all pointed to Stony Run in Baltimore. Please see the article in the link below regarding the flooding in the failed Stony Run stream restoration.

https://www.baltimorebrew.com/2023/12/23/restoration-of-baltimores-stony-run-is-failing-again-residents-and-scientists-say/

Maryland’s forested stream corridors are also threatened by heavily engineered stream restoration practices. Maryland’s forested stream corridors and native streams are in jeopardy of being restored for obligatory pollution and mitigation credits. So called “stream restoration” using natural channel design, connecting streams to engineered floodplains or stormwater reconveyance projects are common ways to generate MS4 credits. A second driver of stream restorations in Maryland is the need for mitigation credits which are sold to developers and

others to offset permanent environmental harm elsewhere. In both cases, credit generation is now big business for stream restoration contractors and associated professions including some non-profits who receive funding for consultation and other associated activities.

Has the committee been tracking how all of the funding has been spent over the past several decades, and compared it to what practices have actual proof they have specifically produced desirable results to improve the bay?

3) A third comment I have on the draft report is that it does not address the impact that some of our restorative practices have on human beings and native wildlife and aquatic species health.
I have always been under the impression that it is the duty of the EPA to protect our health and the environment.

As the EPA knows, typical stream restorations involve heavy construction machinery in our most sensitive habitats further contributing to the overall carbon footprint of a stream restoration, negative impacts on resident's health, and tree mortality rates.

This heavy machinery uses diesel fuel subjecting neighborhoods, parks, citizens and wildlife's lungs and the stream water and aquatic species, to the noise and diesel fuel fine particulate matter for months on end, while removing the natural filters of the toxins – the mature trees. This heavy machinery brings endless dump truck loads of imported rock to line and armor the created stream channel and new stream banks. The dump trucks haul out loads of rich topsoil. The excavators further degrade and compact the remaining soil conditions and stream beds and impact the watershed hydrology as they drive in the streams to fill them in with imported substrates – prone to washing away downstream during large rainfall events, and to excavate away the stream banks and relocate stream channels altering the streams natural and desired meander. Step pools create a series of dams and impoundments to slow the flow of water and collect sediment in the pools in the stream, but without maintenance they fill back in, over time, and they limit or even prohibit fish passage permanently eliminating certain aquatic species ability to exist in those reaches and tributaries.

It's stunning and confusing to residents as they watch their healthy, mature forests leave stacked on the backs of heavy log trucks on tiny neighborhood roads with weight limits and with infrastructure and soil conditions underneath that may not be able to handle this weight.
The carbon footprints of these projects are incalculable and in today's climate, this cumulative impact must be taken into consideration, before projects are approved. Is the EPA aware of the stress and anxiety these projects can cause some citizens who lay awake at night wondering if they should move or even if they can afford to, before a project they were helpless to stop takes place in their neighborhood? Citizens must be included as stake holders and be given the opportunity to alter plans that degrade their neighborhoods and jeopardize their health, before they are approved.

Studies are finding that designed stream "restoration" projects lack effectiveness in biological improvement (uplift) for aquatic organisms, even over time. Also, the engineered changes are unlikely to deliver even the hoped-for stream flow management over time because the problem of upland run-off volumes and rates remains unchanged or has worsened. That is why these engineered systems have a life expectancy and many require unanticipated repair so soon after completion which can cost more to repair than the original project such as the project at Lower Booze Creek. https://www.montgomerycountymd.gov/water/restoration/booze-creek.html

https://www.youtube.com/watch?v=NvTvPnG6Qs8 - Please watch this short video of a typical stream restoration

How does bulldozing trees and pervious soil, and excavating pervious stream banks and stream channels count as converting "impervious" surface to "pervious" surface?

This is nonsensical. And it begs the question, why not just have the SHA, corporate polluters, farmers, and developers, and holders of MS4 permits, pay the MDE for pollution and mitigation credits, then MDE could pay for the projects that have proved to be effective, and that preserve and protect our remaining stream areas in perpetuity – WITHOUT the accompanying environmental harm and destruction, and or have the polluters, farmers, septic system owners, municipalities, and developers mitigate their harm at the source.

As a citizen, I assure you the overwhelming majority of tax paying citizens, assume and want the EPA and MDE to protect our environment, our wildlife, our drinking water, and our health.

These heavily engineered approaches that can remove 100 year old forests in just a few months' time are not without serious and very oftentimes long lasting or even permanent, well known, negative consequences.

After over 700 to 900 stream "restorations" in Maryland alone, for billions of dollars, and after 30 years of performing them, the Chesapeake Bay and our streams and rivers should be sparkling clean, wildlife and aquatic species should be found in abundance and planted forests should be thriving, but that isn't the results we've seen from them. We have not seen a return on our investment but we are all beginning to see the long term harm.

From the "Master Stream Restoration Crediting Guide Final Draft 8-18-2021" Link below.

https://cast-content.chesapeakebay.net/documents/UnifiedStreamRestorationGuide.pdf

Please see Page 73 and Table 19. ** However, I strongly, disagree with calling them "Unintended" Environmental Impacts" because they are well known, expected, typical, and there is no credit revocation for their occurrence**

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3.5.2 Unintended Environmental Impacts
All stream restoration design approaches (i.e., NCD, RSC, LSR and their variants) have the potential to cause unintended impacts that degrade the quality of streams and/or floodplains. These impacts have been observed in restored stream channels, floodplains

and downstream ecosystems, and are documented in recent research studies in the mid-Atlantic region and elsewhere (Table 19).

Subsequent groups established new environmental conditions for stream restoration projects to minimize unintended environmental consequences and maintain their intended functions over time.

Table 19. Review of Potential Unintended Impacts Associated w/ Stream and Floodplain Restoration Projects

Impact 1 Project Stream Channel -

Depleted DO - Associated with stagnant surface waters and high dissolved organic carbon. Often observed as seasonal.

Iron Flocculation - Observed in both restored and unrestored streams. Associated with high dissolved organic carbon, anoxic conditions and the use/presence of ironstone.

Warmer Stream Temps - Associated with loss of tree canopy in the riparian corridor. Stream and floodplain connection to groundwater in the hyporheic aquifer can mitigate increased temperatures.

More Acidic Water - Associated with disturbance of channel and floodplain soils during construction.

More Stream Primary Production - Associated with loss of canopy cover in the riparian corridor.

Benthic IBI Decline - Associated with construction disturbance, with recovery to pre-project levels in some cases.

Construction Turbidity - Sediment erosion during construction, especially when storm flows overwhelm instream ESC practices

Floodplain/Valley Bottom/Downstream Ecosystems -Project Tree Removal-

Riparian/floodplain forest losses are common due to clearing for design and construction access.

Post-Project Tree Loss - Field and lab studies show that long-term soil inundation results in mortality and morphological changes in tree species.

Invasive Plant Species - Construction disturbance and frequent inundation of the floodplain can serve as vectors for invasive species along restored and unrestored streams.

Change in Wetland Type or Function - Changes in vascular plant communities as a result of floodplain inundation are expected and may be desirable or undesirable depending on the habitat outcome.

Downstream Benthic Decline - Associated with changes in habitat conditions, and construction

disturbance. Changes may be temporary.

Blockage of Fish Passage -Incision, large drops or structure failures can impede passage. More study needed.

“ Impacts are defined in relation to the stressors measured in a comparable unrestored urban stream/floodplain system”

That is a list of 13 KNOWN negative environmental impacts, some streams will experience all of them.

This is entirely unacceptable for an agency that is supposed to be protecting our health and the environment to recognize this and not take immediate action to stop this practice.

It is time to ask ourselves if the TMDL system has failed us? I believe it has failed all of us. It has failed our creeks and streams, our ponds and rivers, the bay, our health, our native flora and fauna species, and our wallets.

Also, I have read about the impacts of Saltwater Intrusion interacting with certain nutrients. I have major concerns that no one is paying attention to rising sea levels, and projects that intentionally change ground and surface water hydrology, and Salt Water Intrusion (SWI) on the Eastern Shore and in Southern Maryland. Saltwater intrusion is here, it’s real, it’s happening and the EPA/ MDE in my opinion should not be permitting these projects any longer. (SWI) is contaminating freshwater aquifers, and it is rising up in farm fields and forests. Many stream restoration projects include construction in fragile wetlands which are especially susceptible to saltwater intrusion.

(SWI) causes harm to existing, and newly planted trees and vegetation, and also wetland areas.

A quick Google search provided numerous articles, here are just a few-

https://soils.ifas.ufl.edu/media/soilsifasufledu/sws-main-site/pdf/technical-papers/Savoy_Melissa_6_Month_Embargo.pdf

Featured snippet from the web

Saltwater intrusion can disrupt many wetland functions. The increase in salinity levels can hinder natural processes in wetlands such as denitrification and water quality management. Ecosystem and habitat destruction from saltwater intrusion is also a major concern.

The intruding seawater decreases the freshwater storage in the aquifers. Without treatment, this groundwater does not conform to drinking-water or agricultural water-quality standards.

https://esajournals.onlinelibrary.wiley.com/doi/full/10.1002/ecs2.3041

https://pubs.usgs.gov/fs/FS-020-96/ USGS/ Chesapeake Bay Program

To summarize, we are fooling ourselves if we think we can tear streambeds up, remove large numbers of mature trees in the process, and then recreate a new drainage system that functions like a natural stream. We must stop converting our natural resources into stormwater management facilities but calling them "restored" streams and expect them to be healthy.
We are fooling ourselves if we think that primarily relying on this practice to restore the Chesapeake Bay is achieving that goal and is still the "right" thing to do.

Extensive tree loss has a domino effect and leads to loss of wildlife and biodiversity.
Entire populations of species of flora and fauna are removed and never repopulated. These projects don't just remove the number of large trees that they count on project plans, these projects strip the area clean of all vegetation. Some species of trees will never approach "specimen tree" size because their species simply don't grow to be that size, this doesn't mean they are not trees. Hundreds of these small species of trees, plants and shrubs are removed and never counted as a loss. Invasive species quickly move into the new conditions.

There are numerous studies that conclude stream "restoration" projects like these lack effectiveness in biological improvement (uplift) for aquatic organisms, even over time.(M. Palmer, R. Hilderbrand, R.Lave, to name a few). Restorations and iron flocculate blow outs in Piedmont streams can deoxygenate the stream water suffocating the aquatic species and interrupting the decomposition process of the leaves in the stream which are critical for sustaining macroinvertebrates. Iron flocculate blow outs are a geo-bio-chemical process that can repeat in a stream over and over again. Restoration projects typically remove large woody debris and logs that has fallen in the stream naturally and over time, but in recognizing the ecological and hydrological benefits of wood in the stream, contractors are paid to remove the old wood, only to turn around in some projects and be paid to add wood back in! Contractors are paid to remove trees while being paid to plant trees. Stream construction projects increase turbidity, alter the Ph levels and warm the water temperature, all factors critical to sustaining life. Restorations rely on the remaining flora and fauna in the unrestored areas near the project to re-populate the area with the species that were lost during the construction process, but with no food sources such as seeds, nuts or acorns, and leaves in the stream for the macroinvertebrates, and chopped down habitat, there can be little to come back to. Many ecosystems and streams will remain biologically impaired for an undetermined amount of time and possibly forever.

In summary,

- **Replanting trees is not just as good as preserving trees.** Rising stream water temperature—destructive of all kinds of native stream life—is exacerbated by the razing of trees as a step in the heavy engineering approach to stream restorations. The resulting impacts on stream life and physical/chemical processes are long-lasting if not permanent.

Stream restorations such as this, were designed decades ago before we were concerned about climate change, they aren't designed to handle increased amounts of precipitation in piedmont streams and in neighborhoods and confined developed spaces, this was not their intended purpose. Projects have been known to increase the chances of downstream and sideways flooding which is why it is so important to properly notify property owners who own property or residents who live near a proposed project and downstream and allow them the opportunity for meaningful

engagement and comments and participation in the approval process as true stake holders on all stream projects.

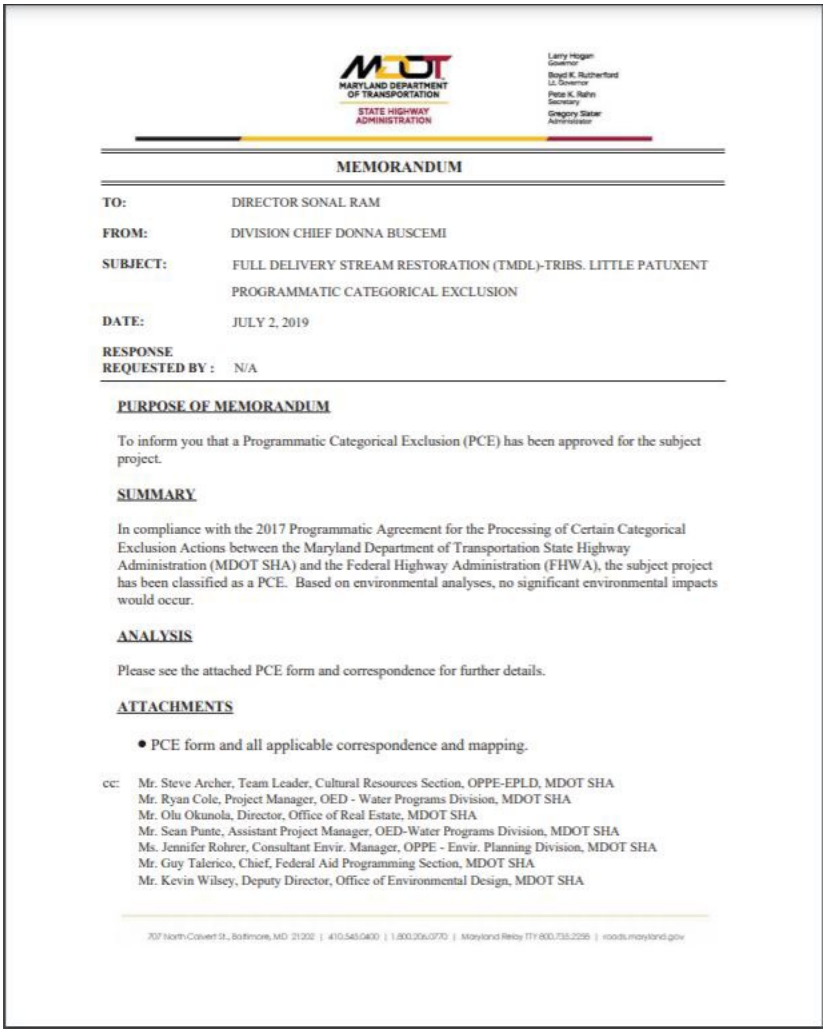
I am adamantly opposed to allowing solicitation of stream restoration projects. Selection for these projects should never be determined by just who will allow it for credits and profit. Or allow a large desirable wooded stream corridor with multiple property owners adjacent to the project site, to only require one sign off if the project location has one owner such as the county or a homeowners association. How is this selecting a stream that will help restore the Chesapeake Bay?

Maryland streams should never be for sale, and to the lowest bidder for credits, at that.

The SHA stream restoration in my community did not have an Army Corps of Engineers or MDE public comment period or public hearing. Our community stood the most to lose but was not given the opportunity to comment. We had no say in the decision- making process on the destruction of the heart of our neighborhood. Our community open space forest and stream provided habitat for four species of turtles, breeding pairs of forest interior dwelling species of birds, migratory birds, a ringing chorus of insects, a parliament of owls, and endangered species of bats.
The project wiped out untold millions, of 17 year cicadas as they were preparing to emerge.
This area was like a wildlife sanctuary and very special to all who lived there. Our woodland wetland forest was shady and cool and moist with ferns and skunk cabbage and vernal pools.

To see in print on a document there was an exclusion and the sentence " Based on environmental analyses, no significant environmental impacts would occur" only adds insult to injury.

We were told this was a "free" project but I learned that our HOA spent 50,000.00 dollars in the first year alone, mitigating the negative impacts from the project for additional tree removal from the trees that were dying on the edges of the easement in the new micro climate conditions, for water quality testing, and for mosquito trapping and analysis, and for new tree plantings, on our dime.



MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

Larry Hogan, Governor
Boyd K. Rutherford, Lt. Governor
Pete K. Rahn, Secretary
Gregory Slater, Administrator

MEMORANDUM

TO: DIRECTOR SONAL RAM

FROM: DIVISION CHIEF DONNA BUSCEMI

SUBJECT: FULL DELIVERY STREAM RESTORATION (TMDL)-TRIBS. LITTLE PATUXENT PROGRAMMATIC CATEGORICAL EXCLUSION

DATE: JULY 2, 2019

RESPONSE REQUESTED BY : N/A

PURPOSE OF MEMORANDUM

To inform you that a Programmatic Categorical Exclusion (PCE) has been approved for the subject project.

SUMMARY

In compliance with the 2017 Programmatic Agreement for the Processing of Certain Categorical Exclusion Actions between the Maryland Department of Transportation State Highway Administration (MDOT SHA) and the Federal Highway Administration (FHWA), the subject project has been classified as a PCE. Based on environmental analyses, no significant environmental impacts would occur.

ANALYSIS

Please see the attached PCE form and correspondence for further details.

ATTACHMENTS

- PCE form and all applicable correspondence and mapping.

cc: Mr. Steve Archer, Team Leader, Cultural Resources Section, OPPE-EPLD, MDOT SHA
Mr. Ryan Cole, Project Manager, OED - Water Programs Division, MDOT SHA
Mr. Olu Okunola, Director, Office of Real Estate, MDOT SHA
Mr. Sean Punte, Assistant Project Manager, OED-Water Programs Division, MDOT SHA
Ms. Jennifer Rohrer, Consultant Envir. Manager, OPPE - Envir. Planning Division, MDOT SHA
Mr. Guy Talerico, Chief, Federal Aid Programming Section, MDOT SHA
Mr. Kevin Wilsey, Deputy Director, Office of Environmental Design, MDOT SHA

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This is inexcusable, and there is no plausible reason for this to ever be allowed by the EPA/ MDE again. Stream restorations should have always been required from the very beginning of the approval of their use in the Chesapeake Bay Program as a method to restore the bay, to clearly identify the source of the pollution they state they will stop with their projects, with measurable physical before and after testing and proof of success, before payments are made and credits are awarded, otherwise, where is the accountability? Where is the oversight? Who is overseeing how our money is being spent? What single agency is responsible for ensuring each and every project has achieved its stated goals and who is responsible for our state's wildlife?
Does anyone keep an inventory of our native species?

4) The 4th comment I have on the report is that it mentions modeling but doesn't go into, more importantly, great detail on monitoring. Stream restorations state they improve the water quality of our streams and the Chesapeake Bay but without empirical evidence to support their argument through baseline testing of water quality and bio-indicators, and true stream bank erosion rates measured with bank pins and not just visual checks, for any length of time before a restoration occurs, on every single project, who can say if any of this is really true? No 2 streams are the same but we allow a cookie cutter approach to a stream projects design and no proof of success required before payments are made and credits are produced.

Why can't the SHA and the for profit contractors provide the EPA/ MDE and the public with all of the before and after testing and monitoring data and analyses on all of the projects that have been funded for hundreds of millions of dollars, for each project that has been performed and especially for credits? Where can we review those documents?

We want proof that Maryland residents are getting a return on their investments. We want proof that the trade offs have been worth the losses.

The health of the bay has shown little improvement, a C+, and that grade isn't even based entirely on environmental factors as it should be.

We haven't seen the promised results, the committee must ask yourselves are all or any of these projects achieving their stated goals?
We hear of needed "lag" time. But if a stream hasn't recovered in 5 years, and a stream restoration has a 10 year life expectancy at best, shouldn't this be considered a failure? What if it hasn't recovered in 10 years? Shouldn't the stream be fully recovered by the end of the project's life expectancy if anyone is going to claim these projects are successful or provide benefits? Or before any credits are generated?

Generally speaking, if a stream hasn't recovered and been repopulated in the first couple of years, it's not coming back, and we need to stop being fooled about this and listen to science.

In fact, stream restorations only attempt to mitigate a side effect of polluted unmitigated stormwater runoff. Pollutants, silt and sediment are carried to the stream by the polluted stormwater runoff. Stream restorations perform destructive work in the middle of a natural process hoping if they continue to perform the same techniques that they will somehow produce a better result in the end, but without ever trying to fix what's causing them concern. Stream restorations don't prevent, and do not cure, reduce, or stop pollution. The stream "restoration" will begin to be filled back in with silt and sediment each and every time it rains. These projects allow contractors to make tremendous profit from pollution without stopping it, all for MS4 pollution credits.

Stream restorations do not mitigate tropical storms, new silt, sediment, phosphorous, nitrogen, grease, road oil, fecal matter and pet waste, sediment from watermain breaks, chloride (road salt) and other de-icing chemicals, rubber bits from tires, PFAS, pesticides, herbicides, PCBS, or antifreeze, trash, fine particulate matter, hot rain water coming off a street, or anything else that goes down the storm drains. They allow profit and credits for continued pollution for millions of dollars.

To summarize, we allow stream restorations for credit generation at the expense of our state, our natural resources, our environment and quality of life but some of these conversions of natural and native fragile ecosystems to stormwater management facilities is causing expensive, negative consequences and long term harm.

Our state needs a paradigm shift, that's what the CESR report indicates.

The pollution in the bay comes from up north, and agriculture runoff, industry and poultry farms, and wastewater treatment plants. It comes from our dirty, polluted air, and polluted stormwater runoff. We're not cracking down on the corporate polluters, and the citizens and wildlife are suffering the consequences from the results of ineffective practices that harm the environment and our wallets.

There are alternative approaches. Preserving mature trees and installing BMP's in the upland watershed have demonstrated storm water control effectiveness and often cost less.
Fortunately, there are over 30 other alternatives to construction-heavy and stream channel-centric restoration methods available to help reduce stream flows and that generate credits within MDE's Accounting Guidance to meet MS4 permit credit obligations. These alternative practices are far less destructive but are underutilized.
These "green" approaches address the run-off problem at its source, reducing drainage to subject streams from upland areas. Approaches include various bioretention techniques, tree plantings (as opposed to counterproductive vegetation removal), conversion to permeable pavement, street sweeping, also, wet and dry ponds. Additional techniques for reducing stormwater runoff include converting lawns to bay scaping and native lawn vegetation, strategic use of rain gardens and rain barrels, green roofs and county run Green Streets programs.
By reducing gritty, polluted stormwater runoff before it reaches the streams, we are restoring the streams. These upland practices reduce stormwater run-off before it can enter streams and can ultimately eliminate the need for disruptive streambed alterations altogether. Scientific evidence is showing alternative approaches such as these are more effective than engineered approaches at restoring biological assets of streams.
One local project proved stream banks can begin to "self recover" in as little as 14 months if we capture the stormwater runoff before it reaches the stream. See study in the link below.

https://www.cwp.org/the-self-recovery-of-stream-channel-stability-in-urban-watersheds/

The EPA and MDE should incentivize tree and ecosystem preservation by eliminating stream restorations and allowing for more upland, and out of stream channel practices that incorporate capturing and reducing runoff before it reaches the stream and maintenance of upland BMP's.

The new recommendations in the final report must focus on what has worked well with proven results that work to restore the bay with an emphasis of putting the environment first- over development, such as restoring oyster beds, planting underwater grasses, green streets programs, upgrading wastewater treatment plants, funding raingarden programs, fencing livestock out of streams, and preserving our remaining fragments of forest.

The MDOT and SHA, the EPA/MDE, DNR, USFWS and the US Army Corps of Engineers should all have to update their policies and procedures to meet the results of current studies and science, much has changed since the Chesapeake Bay Program began. The MDOT/SHA should be required to install and maintain, for TMDL credits, green streets techniques in all new road construction projects using examples noted in the handout in the link below. More consideration needs to be given on the design of new bridge projects as well.
https://www.montgomerycountymd.gov/DEP/Resources/Files/clean-water/watershed/GreenStreetsHandout.pdf

There are numerous studies and articles on the long term benefits of upland techniques. Here are just two, for your consideration that include techniques for retrofitting and new designs. I have many more to share with you, available upon request.
https://www.bcsla.org/sites/default/files/resources/files/climate-change/downloads/Suburban%20Street%20Stormwater%20Retrofitting%

https://www.nyc.gov/assets/dep/downloads/pdf/climate-resiliency/nyc-cloudburst-study.pdf

The EPA needs to start thinking outside of the box, and out of our forested stream corridors, and irreplaceable habitats, and in to the future. We must stop stealing trees and natural stream eco-systems from the next generation. They are watching us and counting on us to do the right thing. The SHA should be required to do some research and development on durable pervious pavement alternatives, and businesses be provided with funding to replace sections of parking lots with bio-retentions and aisles for compact cars with pavers instead of asphalt. The SHA needs an alternative to chloride which is bad for most everything. They could consider installing remotely operated solar powered heating strips in all new road projects. Each strip could produce TMDL credits on an annual basis.
There is so much to be done that could be of benefit instead of harmful.

The steering committee must also be made aware of the connections and relationships between non profits, government agencies, and stream restoration contractors.

As the steering committee of The Chesapeake Bay Program is working on the final report " Beyond 2025". The Cheapeake Bay Program must re-evaluate EIA credit values to incentivize upland practices over destructive in stream channel projects that fail to address pollution.

As was mentioned by legislators in the stream bills language and in sub-committee meetings at the last Maryland legislative session, MDE must review and revise the outdated TMDL accounting guidance document, unless the Chesapeake Bay Program isn't going to keep this questionable credit and debit system any longer.
The accounting guidance document should be updated with input from a scientific advisory panel comprised of experts with no financial reliance on the stream restoration industry.
The document should be revised to reflect adjusted credit values and to create additional TMDL's for, but not limited to, PFAS, PCBS, Water temperature, street vacuums instead of street sweepers, maintenance of upland BMP's, and chloride.

By eliminating stream restorations as an acceptable practice to produce credits, out of the "Beyond 2025 Final report, my hope would be that MS4 practices in Maryland will become more aligned and consistent with what the current science suggests we must do to improve the health of our streams and the Chesapeake Bay and to reduce the unintended consequences as a result of currently used processes.

The final report should incentivize stream restoration approaches that preserve trees, and capture stormwater runoff where its occurring and discourage approaches that result in ever more tree loss and without requiring proof or evidence of improvements to water quality or biological uplift. Maryland also should incorporate an accounting process for public review on the extent to which Maryland stream resources, including upland forests, have been conserved, or

lost. There are not enough stream resources in the state of Maryland for the current "trial and error" approach to stream restorations driven by the MS4 program. Once we've lost them, they are gone forever. Maryland should take a precautionary approach by incentivizing less destructive methods.

Week after week there are articles in the news about our forests, sources of clean drinking water, the loss of bio-diversity and pollinators, air pollution, and the impacts of climate change and global warming. I have dozens of studies that refute the efficacy of these projects I can share upon request.

There is no single agency that is responsible for ensuring the overall success of these projects because success isn't required. There is very little to no accountability. MDE and the USACE remain grossly underfunded and understaffed, especially in the compliance and enforcement divisions and it seems it is reckless and irresponsible to continue to issue permits for projects that there aren't enough staff on hand to ensure success and compliance on each and every project.

After decades of trying, billions of tax paying dollars spent, an inifinite amount – untold billions of living organisms killed with the EPA's approval, thousands of acres denuded and hundreds to thousands of miles of stream converted into stormwater conveyance facilities, when is enough going to be enough to stop this destructive practice?

There seems to be no proof that these projects are an effective or a wise use of public funding and I am asking you to please stop allowing them as an acceptable practice. Please stop wasting our money.

According to Oxford languages, the definition of 'fraud" is a person or thing intended to deceive others, typically by unjustifiably claiming or being credited with accomplishments or qualities.

During this time of global warming and record heat, and more stream projects construction scheduled to begin this fall, I worry what the end game is? Is the goal to convert every stream in the Chesapeake Bay region into a stormwater management facility for credits? Then what? Why wait any longer to make a change?

I'm aware that some members of the committee might have gone on a stream walk with an industry representative in the past. I am inviting the entire steering committee to join me on a stream walk this fall to better see and learn about our concerns and to discuss the alternatives that could have been performed instead of the stream "restoration".

If stream restorations and in stream projects are eliminated from the MS4 Accounting Guidance Document as an acceptable practice for credits in the final Beyond 2025 report, our forested stream corridors and their inhabitants could stand a chance of surviving, they do not have to remain threatened by the current process.

Thank you for your immediate consideration and this opportunity to comment on the draft report.

Sharon Boies

Columbia, MD

Protect Our Streams

This is our “restored”stream in year 4. Our state spent over 2 million dollars on this project.

We were told this project would improve the water quality? Our creek was full of life and crystal clear before the “restoration” took place. Who is being held accountable for this?

The invasive species will be 5’ tall by the end of the summer. Note the sediment island in the “restored” stream. We were told the point of this project was to reduce the sediment and pollutants in the stream.

This is our “restoration” in year 4. Maryland paid millions of dollars for a contractor to do this to our creek. Who is going to fix this? How did this help to restore the bay or improve water quality?

Thank you for your consideration of our concerns.

Dear Bay Leaders,

Thank you for the opportunity to provide feedback on the future of Bay restoration beyond the 2025 deadline. It is critical that the partnership maintains momentum towards swimmable and fishable rivers and streams in the Bay watershed. This is only possible with strong leadership and a bold new vision for the goals and outcomes in the Chesapeake Bay Watershed Agreement. I support the recommendations that the Executive Council should recommit to and refresh the Watershed Agreement, however, revisions should be made by the end of 2025 to ensure the partnership has proper guidance.

The partnership has worked hard to achieve the goals and outcomes in the 2014 Agreement and we've seen success, even against the growing challenges from climate change and development. From acres of oysters planted to a shrinking dead zone, it is proven that partnership and supportive state and federal leadership are effective. But our work is far from complete. Continued progress is only possible through collective efforts. To ensure that this critical collaboration extends beyond the 2025 deadline, Bay leadership on the Executive Council must formally and publicly recommit to the Bay restoration partnership. While past successes should be celebrated, it is critical that goals and outcomes be refreshed to set a path to a healthy Bay for everyone. The revised Bay Agreement must be ready by the end of 2025 and should include a firm deadline for meeting updated goals. Guided by the latest science and with outcomes that benefit all Bay residents, an updated Bay Agreement by the end of 2025 is critical to build continuing momentum for clean rivers and streams.

Polite, but firm, pressure must be continued on the State of Pennsylvania to "clean up its act" because of the large impact of PA's farms have on the Bay.

Thanks to strong collaboration and science-based approaches, we have made progress towards healthy rivers and streams, but we still have a long way to go. I urge Bay leadership to recommit to this partnership and to refresh the goals and outcomes guiding the future of Bay restoration.

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Do the right thing! We have the largest Bay in the country!! Let's keep working together to save the Bay! Plus global freaking warming! Ugh

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Thank you for the opportunity to provide feedback on the future of Bay restoration beyond the 2025 deadline. It is critical that the partnership maintains momentum towards swimmable and fishable rivers and streams in the Bay watershed. This is only possible with strong leadership and a bold new vision for the goals and outcomes in the Chesapeake Bay Watershed Agreement. I support the recommendations that the Executive Council should recommit to and refresh the Watershed Agreement, however, revisions should be made by the end of 2025 to ensure the partnership has proper guidance.

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On a personal note, I'd like to say that I've been a member of the Chesapeake Foundation for at least 40 yeras. I can't even image how anyone quantifies the value of the Chesapeake to localities in the entire watershed. My kids can eat Chesapeake crabs and oysters in Fort Collins, CO. Some small business at the foot of the Rockies makes an income from the Chesapeake. Great strides have been made cleaning up the Bay since the days when towns, including Baltimore, used it for sewerage disposal. But there is bad news. Greedy towns, dare I mention Trappe, MD, are still willing to sell out the Bay for pieces of silver. The Bay cannot thrive without a sustained effort by politically powerful governments.

Thanks to strong collaboration and science-based approaches, we have made progress towards healthy rivers and streams, but we still have a long way to go. I urge Bay leadership to recommit to this partnership and to refresh the goals and outcomes guiding the future of Bay restoration.

Dear Bay Leaders,

It has been clear for some time that the Bay's 2025 goals will not be timely met, despite significant progress on a number of fronts. At it's Fall 2024 meeting, the Chesapeake Bay Executive Committee should formally reaffirm the commitment of the states, state legislatures, and the federal government to continue to work together cooperatively toward new Bay restoration goals guided by the latest science, and a timeline for achieving them.

I committed some 36 working years to Bay-saving work, first for the State of Maryland, and then for the Chesapeake Bay Foundation. I believe strongly in this crucial work, and I strongly believe the Committee should continue to undertake it based on a new, written, signed agreement.

Coalition To Stop Stream Destruction

August 8, 2024

To: CBP Beyond 2025 Steering Committee
comments@chesapeakebay.net

Subject: Beyond 2025 Draft Report

> https://www.chesapeakebay.net/who/projects-archive/beyond-2025-steering-committee
>
> Beyond 2025 Draft Steering Committee Report [PDF, 2.6 MB]
> https://d18lev1ok5leia.cloudfront.net/chesapeakebay/documents/Beyond-2025-Draft-Steering-Committee-Report.pdf

Dear Beyond 2025 Steering Committee Members:

Please consider the Coalition to Stop Stream Destruction's comments below on the document titled "A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025" *("Beyond 2025 Draft Report"*) which suggests modifications and amendments to the 2014 Chesapeake Bay Watershed Agreement *("Bay Agreement" or "Watershed Agreement"*) (amended 2022).

Contents

General comments

Remove use of the term "restoration

The Chesapeake Bay Watershed Agreement should be amended to remove all references to the term "restoration" including restoration of the Bay, restoration of streams, and restoration of wetlands.

Throughout our comments, scare quotes are being used for the term "restoration" to remind the reader that "restoration" is a misnomer of epic proportions used to mislead and greenwash. Per Merriam-Webster, scare quotes are "quotation marks used to express especially skepticism or derision concerning the use of the enclosed word or phrase."[1]

Because of its misleading nature, the fraudulent use of the term "restoration" leads a reasonable person to believe that the process and result creates a Bay, stream or wetland that is identical in structure and function to an idealized precolonial condition.

Based on the science and empirical observations, more accurate terms for stream "restorations" would include stream Disney-fication, stream gentrification, stream sterilization, stream castration, or

[1] https://www.merriam-webster.com/dictionary/scare%20quotes

stormwater conveyance stream engineering. This is not simply hyperbole as can be seen in the photograph of a stream "restoration" below and examples of other stream "restorations" in Appendix 1.

To see a short video of the destruction caused by a typical stream "restoration" at the Solitaire Court site in Gaithersburg, use this link: https://www.youtube.com/watch?v=NvTvPnG6Qs8.

The recent CESR report from the Chesapeake Bay Program (CBP) states that "The Bay of the future will be different from the Bay of the past because of permanent and ongoing changes in land use, climate change, population growth, and economic development."[2] Fraley-McNeil et. al. (2022) say that "It is important to note that the term "restoration" can be misleading because it has the connotation that the stream will be returned to a historical condition, which is often not possible due to changes in hydrology,

[2] Scientific and Technical Advisory Committee (STAC). (2023). "Achieving water quality goals in the Chesapeake Bay: A comprehensive evaluation of system response," (K. Stephenson & D. Wardrop, Eds.). STAC Publication Number 23-006, Chesapeake Bay Program Scientific and Technical Advisory Committee (STAC), Edgewater, MD. https://www.chesapeake.org/stac/cesr/

soils, flow and general pattern and profile."[3] To say that the term "restoration" can be misleading is the understatement of the century. This is akin to saying that hurricanes can be windy.

It is both misleading and fraudulent for the CBP, government at all levels, and the industry to speak of "restoring" the Bay. A more accurate term might be "Bay stabilization" or "Bay improvement." Likewise, since it impossible to "restore" streams and wetlands to pre-colonial conditions, it is fraudulent for the CBP, governments, and the industry to use the term stream "restoration." The test is, "What would a normal person hear in the term "restoration"? The name falsely conjures up an analogy with a restored piece of furniture that is brought back to its original condition. The term "restored" implies attainment of a higher level of functionality, as defined by the Stream Function Pyramid[4] that the industry uses, than the project actually delivers. It is clear that the CBP, governments, and the industry use the term "restoration" to mislead government officials and the public in order to promote the practice of stream and wetland "restoration."

Require use of projects that address root causes

The lack of progress toward the Chesapeake Bay cleanup is due in part, to the focus on (and funding for) stream and wetland "restorations" which the published science (Appendices 3 and 4) has determined do not work as advertised. Funds previously directed at failed stream and wetland "restoration" should be re-directed to out-of-stream (upland) practices.

In fact, the amended Chesapeake Bay Watershed Agreement should require that any TMDL-related projects must address the root cause of any given problem. For example, if a section of stream is eroding due to uncontrolled stormwater, then the stormwater must be controlled *before* it firehoses into streams to eliminate the root cause of stream erosion. To give an analogy, if there is a leaking roof that is damaging furniture, no one in their right mind would restore the furniture before the source of the problem is fixed, which is the leaking roof. But this is exactly the flawed logic being used with stream "restorations."

Stream "restoration" proponents purposely conflate the true purpose of a stream "restoration," which is to garner TMDL credits, with their mock concern about the loss of stream system functionality based upon stream disconnection from its floodplain. However, flood plain reconnection simply substitutes one problem with a whole set of other problems (Appendix 5) while feeding corporate profits.

The research of Fraley-McNeal et. al. (2021)[5] showed that when upland stormwater is controlled, the stream stops eroding and begins to self-heal. They say, "…there is strong evidence that the channels below the [out-of-stream] treatment sites will stabilize and adjust as the frequency of erosive flows diminishes. This will likely translate to corresponding decreases in sediment erosion." Their evidence is based on four years of observation, hardly the geologic time frame that some say would be required for

[3] Fraley-McNeal, L. et al. (2022), "Maintaining Forests in Stream Corridor Restoration and Sharing Lessons Learned," Center for Watershed Protection; https://owl.cwp.org/mdocs-posts/maintaining-forests-in-stream-corridor-restoration-and-sharing-lessons-learned-final-report/

[4] Stream Functions Pyramid https://stream-mechanics.com/stream-functions-pyramid-framework/

[5] Fraley-McNeal, L., Stack, B., et. al. (2021), "The Self-Recovery of Stream Channel Stability in Urban Watersheds due to BMP Implementation," Center for Watershed Protection, Inc, supported by Chesapeake Bay Trust's Restoration Research Grant Program. https://cwp.org/the-self-recovery-of-stream-channel-stability-in-urban-watersheds/ and https://cbtrust.org/wp-content/uploads/Self_Recovery_of_Stream_Channel_Stability_Final_Draft_03-23-21.pdf

self-healing. And they say, “The enhanced sand filter and wet pond retrofits performed as designed and reduced the magnitude, duration, and frequency of erosive flow rates, substantially reducing the measured runoff curve numbers and simulating a hydrologic regime close to that of the ‘woods in good condition’ performance standard.” They conclude that “…it is likely the channels are on a trajectory leading towards stabilization….” Per a Center for Watershed Protection article, "…there is strong evidence when looking at all of the geomorphic data, that as the frequency of erosive flows diminish at the treatment sites the channels will begin to stabilize. …It is expected that, with the reduced hydraulics [from erosive flows] within the catchment, these banks will continue a trajectory toward stability as indicated by reduced bank angles and vegetation establishment.”[6]

Expert Panel reports have conflicts of interest and provide bogus science and guidance

For Municipal Separate Storm Sewer System (MS4) permits, the stream “restoration” crediting methodology is fatally flawed. Maryland Department of the Environment (MDE) and other states defer to, and use, the Chesapeake Bay Program Expert Panel Report for Protocol 1 Guidance”[7] on this matter.

The first problem is that these reports were not created by an independent panel of scientists with no financial conflicts of interest. The CBP Expert Panel included employees of for-profit engineering companies who are primarily engineers, not scientists, and who may have had a vested interest in ensuring that the crediting calculations maximized their profits. This has the appearance of a conflict of interest and has, at a minimum, the appearance of impropriety. As such, the use of these Expert Panel reports is arguably a corrupt process. It fails the “reasonable person” test.

The second problem is that the Expert Panel report allows the use of the BANCS method, a theoretical calculation, to *estimate* the rate of stream bank erosion. Per the report:

> “The most common technique to estimate bank erosion rate is the BANCS Method (Rosgen, 2001), where field surveys are used to calculate BEHI and NBS scores, which in turn, are entered into regional bank erosion curves to determine the annual rate of streambank retreat.”[8] (emphasis added).

Stream bank erosion rate is a critical variable in calculating the MS4 permit credits to be awarded. But the report states that these theoretical calculation tools are “…susceptible to high variability when performed by different practitioners in the field.”[9] (emphasis added). If a measurement cannot be reproduced by different people using the same methodology, it is scientifically worthless. **It is fraudulent if the theoretical BANCS method is used to prove that a stream is eroding to justify a stream “restoration” project and garner MS4 permit credits.**

[6] https://cwp.org/the-self-recovery-of-stream-channel-stability-in-urban-watersheds/
[7] 2019 Protocol 1 Guidance: “Consensus Recommendations for Improving the Application of the Prevented Sediment Protocol for Urban Stream Restoration Projects Built for Pollutant Removal Credit,” p. 23; Full Report: https://chesapeakestormwater.net/wp-content/uploads/2022/07/9928-1.pdf
[8] Ibid.
[9] Ibid.

The only accurate method to provide geomorphic evidence of active stream erosion is boots-on-the-ground, long-term measurements of bank erosion by traditional, fixed-station methods, such as bank pin monitoring.

Per the Expert Panel report, stream "restoration" companies may, in fact, use direct physical measurements to determine erosion rates:

> "Designers also have the option to directly measure the rate of bank retreat in the project reach using bank pins, cross section surveys or other alternative methods that were not explicitly defined in the original expert panel report."[10]

Unfortunately, however, direct measurement to determine erosion rates is not a requirement. In fact, virtually no stream "restoration" companies do boots-on-the-ground actual measurements over time because it takes too long. Being profit-driven, the scientifically fraudulent BANCS theoretical estimation method saves companies time and money.

On top of that, the Expert Panel itself is so mistrustful of the BANCS estimation methodology that they take its initial estimate of pollutant reduction and randomly cut that by 50%.[11] This should cause a huge amount of skepticism as to the veracity of stream erosion rate claims made using theoretical modeling. **The current Expert Panel erosion-rate calculations are basically a deeply flawed thought experiment that should not be a substitute for actual on-site physical measurements of erosion rate.**

If the actual erosion rate based on physical measurement is much less than the theoretical BANCS methodology indicates, that would make stream "restorations" less attractive for MS4 permit projects since they would be awarded less nitrogen, phosphorous, and suspended sediment credits.

Included in the Protocol 1 Guidance is this damning "Pennsylvania DEP Position on The Use of the BANCS Method":

> "These memo recommendations are advisory and the appropriate state and federal permitting agencies reserve the authority to decide how to handle stream restoration projects using Protocol 1. The Pennsylvania Department of Environmental Protection (PADEP) continues to have substantial concerns regarding the development and application of BANCS methods for stream restoration crediting purposes in all hydrogeomorphic regions. One of their primary concerns is the use of BANCS methods within the Chesapeake Bay Watershed where BANCS relationships have not been appropriately validated and data is limited. They are also concerned that BANCS relationships developed using short-term monitoring-intervals may not produce valid results for reduction crediting."[12]

Entire Bay watershed health is as important as the Bay health itself

The *Watershed Agreement* should be amended to explicitly state that the health of the entire Bay watershed is as important as the health of the Bay itself. In fact, the health of the Bay cannot improve without the improvement of the entire watershed. Therefore, practices such as stream "restorations" which degrade the ecology of the local watershed must not be allowed.

[10] Ibid.
[11] Ibid.
[12] Ibid.

Watershed Agreement greenwashing must be removed

The draft section "Recognizing our progress toward meeting the Chesapeake Bay Watershed Agreement," says that "…it is important to recognize the many successes…." This section must be revised to also acknowledge the many failures – the damage done by miles of stream "restoration" projects which have caused generational environmental damage and have structurally failed (See Appendices 1 and 2). These projects should be highly discouraged, if not actually prohibited.

Part I: Recommendations for Potential Consideration by the Chesapeake Executive Council

Recognizing our progress toward meeting the Chesapeake Bay Watershed Agreement

This section is entirely too self-congratulatory. The CBP web site's July 2024 article proclaims "Chesapeake Bay receives highest health grade in over 20 years: Bay receives a C+ in annual University of Maryland Center for Environmental Science report card."[13] This is shameful report card given the time and money that has been spent to date. It is a badge of mediocrity.

In addition, equal ink should be spent on communicating failures. For example, the public can see the environmental damage caused by stream "restorations" and their subsequent wash-outs (Appendices 1 and 2). The report should also provide the number of riparian forest acres that were clear-cut due to stream "restorations" and to clearly state the number of years it will take for any newly planted trees and shrubs to duplicate the ecosystem services of the trees, shrubs, forbs, etc. that were removed.

Local natural resources – stream valleys, their forests, and their animals – have been needlessly sacrificed on the altar of saving the Bay since the primary purpose of stream "restorations" is to generate EPA-mandated National Pollutant Discharge Elimination System (NPDES) MS4 permit credits.

Part II: High-level Recommendations and Considerations for the Chesapeake Bay Program

We agree that the "data collection and analysis, science and changing environmental conditions must be re-evaluated and included in a critical path for the partnership's work beyond 2025."

The draft expresses the need for "addressing the latest scientific data and emerging challenges." We agree. The latest published scientific literature (see Appendices 3 and 4) shows that stream and wetland "restorations" do not work. Empirical evidence (photographs in Appendix 2) shows that stream "restorations" are being washed out by storms since the root cause stressor (uncontrolled stormwater from impervious surfaces and farm fields fire-hosing into streams) is not managed.

It appears that stream "restoration" proponents, including the CBP, government, and the industry, are either ignorant of the science or simply choose to ignore the it.

The draft states that "…the Steering Committee has identified several additional recommendations for improving efforts in the areas of Science, Conservation and Restoration, and Partnership. These

[13] BY RACHEL FELVER | JULY 10, 2024, https://www.chesapeakebay.net/news/blog/chesapeake-bay-receives-highest-health-grade-in-over-20-years

additional recommendations, found in Part II of this report, require more detail and, in the Steering Committee's view, merit further exploration by the partnership."

> **COMMENT**: The published science on stream and wetland "restorations" is plentiful, available, and conclusive (see Appendices 3 and 4). There is no need for "further exploration by the partnership." Stream "restorations" must be disallowed for TMDL and other credits.

It is stated that "Changes should reflect recent scientific reports and highlight continued emphasis on achieving water quality goals, the importance of conservation in addition to restoration, shallow water habitats, the impacts of climate change and benefits to the people who live, work and visit the area."

> **COMMENT**: We agree. The recent scientific reports on the results of stream "restorations" (Appendix 3) show no reduction in nutrient or sediment pollution and no functional uplift in physical, chemical, or biological aquatic resource functions. Therefore, the use of stream "restorations" for TMDL credits cannot be allowed since these practices do not meet the Clean Water Act's goal to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[14]
>
> Furthermore, stream "restorations" provide none of the co-benefits that out-of-stream stormwater control practices provide to communities. Among the co-benefits from out-of-stream stormwater control practices are decreasing heat islands (which reduces utility bills and decreases heat-related health problems), reducing urban flooding, improving air quality, increasing property values, protecting natural areas, and providing urban green spaces.

Part II extracts the following from Chesapeake Bay Program, Executive Council Directive, October 2022:

> Science
>
> • "Identify new and emerging scientific data and studies which could modify our progress reporting and adaptive management approach, as well as the goals and outcomes under the Watershed Agreement."
>
> > **COMMENT**: The recent scientific reports on the results of stream "restorations" (Appendix 3) show no reduction in nutrient or sediment pollution and no functional uplift in physical, chemical, or biological aquatic resource functions. Therefore, a truly adaptive management approach would dictate that the use of stream "restorations" for TMDL credits cannot be allowed since these practices do not meet the Clean Water Act's goal to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters."[15]
>
> • "Enhance our monitoring and reporting capabilities to improve our understanding of existing conditions and trends."
>
> > **COMMENT**: For stream "restorations," the science is already established and the verdict is in: we do not need more monitoring data since the science already tells us that stream

[14] https://www.nab.usace.army.mil/Missions/Regulatory/Mitigation/

[15] Ibid

"restorations" do not work. We do not need paralysis by analysis. Stream "restorations" should be banned from receiving TMDL or other credits.

• "Define the existing and emerging challenges (e.g., climate change conditions, increasing growth, diversity, equity, inclusion and justice considerations) to accomplishing the partnership's work under the Watershed Agreement, and how addressing those challenges might alter our collective restoration priorities, including the possibility of extending the target date for completing restoration of water quality beyond 2025."

COMMENT: One of the biggest challenges is how to get the CBP and governments at the federal, state, and local level to accept the established science on stream and wetland "restorations" (Appendices 3 and 4) and to ignore the greenwashing done by the $25B stream "restoration" industry. **It appears that stream "restoration" proponents are either ignorant of the science or simply choose to ignore the it.**

Restoration

• "Develop and begin to implement a communication strategy that identifies key partnership successes, associated ecosystem improvements and areas where more effort is needed."

COMMENT: This is more greenwashing. This section must be revised to also identify and communicate the many failures and damage done by miles of stream "restoration" projects which have caused generational environmental damage and have structurally failed (See Appendices 1 and 2). Along with "areas where more effort is needed," areas that have failed, i.e., areas where *less* effort is needed such as stream "restorations," should be identified and prohibited.

Part II, SCIENCE (draft page 9)

1. Optimize monitoring, modeling, and analysis

The draft states, "The Steering Committee recommends better utilizing our monitoring and assessment capacity, with increased emphasis towards characterizing watershed health at the local level as well as for the entire basin (HW1)."

COMMENT: Monitoring, not modeling, must be used to determine the results of projects.

We encourage increased emphasis on local watershed health. Currently, local natural resources – stream valleys, their forests, and their animals – are being needlessly sacrificed on the altar of saving the Bay since the primary purpose of stream "restorations" is to generate TMDL credits.

2. Integrate existing and new science findings in decision making, resource allocation, and communication strategies. The Steering Committee recommends adaptation to the latest scientific findings as well as improved communication on how these findings are integrated into decision making, resource allocation, and management strategies.

COMMENT: We agree. Why the integration of existing and new science findings has not always been the standard modus operandi is extremely troubling. The published scientific literature (see Appendices 3 and 4) shows that stream and wetland "restorations" do not work and empirical evidence (photographs in Appendix 2) shows that projects are being washed out by storms since the root cause stressor (uncontrolled stormwater from impervious surfaces and farm fields fire-hosing into streams) is not managed. **It appears that stream "restoration" proponents, including the CBP, government, and the industry, are either ignorant of the science or simply choose to ignore the it.**

The decision-making process (e.g., for resource allocation) at all levels – within the CBP and at all levels of government - must be documented and transparent so that different people, presented with the same set of facts, will reach the same conclusion.

"The Program could more effectively link the partnership's work to the tangible benefits it provides for people around topics such as soil health, ecosystem services, and shallow water habitats to inspire broader engagement and action (C5, C4; SW4)."

COMMENT: There is too much greenwashing here. There should be an acknowledgement that some practices such as stream "restoration" have already done tangible *harm* in areas such as destruction of natural areas, soil health, ecosystem services, and shallow water habitats.

3. Prioritize research that addresses knowledge gaps in existing and emerging challenges.

The draft states, "The partnership should consider the impacts of rising temperatures on ecosystem health (STAC), the role and design of nature-based solutions and green infrastructure to mitigate the impacts of climate change (C3, C4; Climate Directive; HW2), the impacts of a changing climate on restoration practices (CW2; SW1), vulnerability assessments for living resources, habitats and communities (C2; SW3), and synthesizing resilience strategies that maximize the ecosystem services and benefits (C3)."

COMMENT: Likewise, the partnership should re-consider and acknowledge the misguided role of engineering-based solutions such as stream "restorations" including the science that says they do not work and the damage they cause at the local level. Any such objective, science-based reconsideration would conclude that stream "restorations" should not be eligible for TMDL credits.

"The Steering Committee also recommends a greater focus on conducting social science research and applying its findings to ensure restoration and conservation efforts align with the well-being of people (ERG F8, C7)**."**

COMMENT: This is "paralysis by analysis." It is already known that stream "restorations" do not align with the well-being of people.

Stream "restoration" projects remove trees and destroy natural areas that reduce quality of life and human health. Please see the photographs in Appendix 1 which show the damage caused by stream "restorations."

The Nature Conservancy says that "Research has linked the presence of urban trees to reduced obesity, better stormwater management, increased property values, reduced stress, fewer

particulate pollutants, cooler city streets, reduced disease rates, and increased biodiversity."[16] The more stream "restorations" that are done, the fewer tree planting projects such as forest planting, riparian forest planting, and urban tree canopy planting will be done for TMDL credit.

In a September 8, 2021, interview on WBUR's Radio Boston, Peter James, assistant professor in Harvard T.H. Chan School of Public Health's Department of Environmental Health, said that trees' effects on us "translate into long-term changes in the incidence of depression, anxiety, cognitive decline, and chronic diseases including cardiovascular disease and cancer."[17]

Stream "restorations" that clearcut sections of riparian forest raises ambient temperatures. According to the EPA, "Trees and other plants help cool the environment, making vegetation a simple and effective way to reduce urban heat islands."[18]

The floodplain reconnection method of stream "restoration" increases mosquito habitat when the receding water leaves behind pools of stagnant water. Maryland Department of Agriculture lists mosquito diseases as Dengue (Break-Bone Fever), Encephalitides, Malaria, Yellow Fever, and Zika.[19]

Another negative result of stream "restorations" rather than the use of out-of-stream stormwater control projects, is that pollutants from roads such as oil, salt, toxic tire dust, and trash are washed into our natural areas where they are harmful to humans as well as the plants and animals. This can be avoided by keeping stormwater runoff from roads out of streams in the first place.

A Washington post article that interviewed people from the Anacostia Riverkeeper group said that out-of-stream stormwater control practices such as "…rain gardens can intercept pollutants before they reach rivers. Sediment picked up by storm water can carry toxic compounds and cloud river water, harming aquatic plants and fish…. Dog waste and trash can also get washed into local waterways. Rain gardens also create green spaces in cities."[20]

Regarding the impact of tree removal on air quality, Scenic America says "Trees reduce air pollution and help to purify the air by absorbing carbon and other pollutants. A mature tree absorbs between 120-240 pounds per year of small particles and gases, like carbon dioxide, which are released into the air by automobiles and industrial facilities."[21]

According to Scenic America, "Excessive or unwanted sound has negative physical and psychological effects. Noise can come from many sources, especially roads and highways. Trees can plan an important role in deadening unwanted noise. Sound waves are absorbed by a tree's

[16] Green Heart Project in Louisville, KY; https://www.nature.org/en-us/about-us/where-we-work/united-states/kentucky/stories-in-kentucky/green-heart-project/
[17] https://www.hsph.harvard.edu/news/hsph-in-the-news/the-health-benefits-of-trees/
[18] https://www.epa.gov/heatislands/using-trees-and-vegetation-reduce-heat-islands
[19] https://mda.maryland.gov/plants-pests/Pages/mosquitoes_disease.aspx
[20] https://www.washingtonpost.com/climate-solutions/2023/12/10/rain-garden-cities/
[21] Scenic America, "Benefits of Trees," https://www.scenic.org/why-scenic-conservation/placemaking-and-community-planning/tree-conservation-and-native-planting/benefits-of-trees

leaves, branches, and twigs. Studies suggest that belts of trees 100 feet wide and 45 feet long can cut highway noise in half."[22]

An article in Scientific American says the "…idea that loud noise 'can't be good' is well supported by science. Noise can damage more than just your ears. Through daytime stress and nighttime sleep disturbances, loud sounds can hurt your heart and blood vessels, disrupt your endocrine system, and make it difficult to think and learn."[23]

Out-of-stream stormwater control practices avoid destruction of the countless numbers of trees, shrubs, grasses, and flowering forbs that happens during a stream "restoration" project. As stated in the press release for a Montgomery County, MD tree-related bill[24], "Trees are one of the most important natural resources and one of the few truly renewable resources. Tree canopies play a pivotal role in enhancing quality of life and contributing to the well-being of residents. A thriving tree canopy reduces air, water and noise pollution, alleviates heat stress and reduces heat islands, and positively impacts physical and mental health outcomes, among other benefits. Protecting the tree canopy will help mitigate climate effects and help Montgomery County reach its ambitious climate goals."

Restoration and Conservation

"Since its inception, the Chesapeake Bay Program has worked to restore the Bay and its living resources by addressing water quality concerns. However, a changing climate and a growing human population in the watershed have challenged the Program's progress."

COMMENT: It is disingenuous to blame the failure of the CBP's work on "a changing climate and a growing human population in the watershed" without also acknowledging the contribution of lack of proper monitoring and use of ill-advised practices such as stream and wetland "restorations."

This is greenwashing which ignores the local environmental damage done by stream "restorations" which the science (Appendix 3) says does nothing to improve water quality. The statement also ignores the fact that, even without climate change and population growth, stream "restorations" have been an impediment to the Program's progress. The selection of projects to meet TMDLs is a zero-sum game. When more stream "restorations" are selected, fewer out-of-stream projects are done.

Part II, Restoration and Conservation (draft page 11)

1. Support System-Scale Conservation and Restoration Planning and Implementation for Habitats and Communities.

[22] Ibid

[23] "Quiet! Our Loud World Is Making Us Sick," by Joanne Silberner, Scientific American, APRIL 16, 2024 https://www.scientificamerican.com/article/everyday-noises-can-hurt-hearts-not-just-ears-and-the-ability-to-learn/

[24] Bill 40-23, Tree Canopy and Roadside Tree Requirements - Fee Revisions, https://montgomerycountymd.granicus.com/MetaViewer.php?view_id=169&event_id=15959&meta_id=166986

"Taking a more holistic, systems approach requires broadening our vision of restoration to incorporate management, stewardship and conservation of land and aquatic environments."

> **COMMENT**: Our vision of "restoration" also needs to acknowledge the failures of stream and wetland "restorations" practices.

"Conservation and stewardship of land and aquatic environments can support watershed health, expand and enhance publicly accessible natural areas and ensure the resilience of ecosystems that provide clean water, store carbon, and provide numerous other ecosystem service and socio-economic benefits to local communities (C3, HW4)."

> **COMMENT**: We agree, and that is why stream "restorations" should be banned. It is hypocritical to call for conservation "of ecosystems that provide clean water, store carbon, and provide numerous other ecosystem service and socio-economic benefits to local communities" yet allow and promote environmentally destructive stream "restorations" that do the exact opposite.

"In addition to sustaining ecosystem-wide management, the Steering Committee recommends planning for the restoration and conservation of nearshore habitats, inclusive of tributary rivers and streams– some of the most important places for people and the most productive habitats for living resources (CESR, P2, SW1). Emphasizing the social, economic and ecological benefits of restored, resilient and connected shallow water habitats would strengthen the connection between people and habitats and promote proactive approaches to climate adaptation (C4; SW1, SW4). In urban areas, this may require intentional efforts to reestablish habitats and reconnect population centers with local waterways. However, it is essential to understand and plan for the changes these habitats will undergo due to climate change, including rising temperatures and water levels, to develop strategies to address vulnerabilities and sustain ecosystem function (C1, C4)."

> **COMMENT**: Planning for more stream and wetland "restorations" is the opposite of what the science dictates should be done (see Appendices 3 and 4). Conservation of existing wetlands and out-of-stream stormwater control is what is needed.

"Some foundational off-track outcomes, like forest buffers, tree canopy, and wetlands, will require new management strategies and continued prioritization to accelerate progress."

> **COMMENT:** This is bureaucratic obfuscation and Orwellian Newspeak. "Foundational off-track outcomes" are failures. Please use plain language instead of trying to hide reality from the public.

2. Review and, where necessary, revise existing goals, outcomes and management strategies to more effectively guide the partnership's restoration and conservation efforts beyond 2025.

"For outcomes that have been achieved, strategies should be developed to ensure continued success, new targets should be identified where appropriate, and any amendments should ensure restoration priorities reflect the needs of the public (P2)."

> **COMMENT**: Likewise, since stream "restoration" outcomes are the destruction of local stream and riparian habitat without increasing water quality or increasing ecological uplift, the strategy should be to eliminate TMDL credits for that practice.

Published scientific papers (see Appendix 4) show ample evidence that the goal of a wetland "restoration" successfully achieving self-maintaining ecological uplift is not possible to attain. Therefore, the use of wetland "restoration" should be disallowed for TMDL credit.

3. Improve the Program's holistic approach to planning, prioritization, progress-tracking and accountability.

"Improve the Program's holistic approach to planning, prioritization, progress-tracking and accountability. Adopting a more holistic approach to address emerging challenges requires a strategic approach both before and after restoration practices are implemented on the ground. More strategic planning and prioritization could optimize the impact of our restoration investments and enable leveraging new funding sources. The Steering Committee recommends developing and adopting approaches to better incentivize practices that maximize benefits to living resources and people. Many water quality BMPs can also deliver ecosystem service benefits for climate mitigation, ecosystem adaptation, community resilience, regenerative food systems, environmental justice and more, but only if their implementation is prioritized and targeted to effectively address local environmental and community concerns (C2, C3, C4, C5; CW5; SW 1, SW2, SW3, SW5). At the same time, a more holistic approach can facilitate evaluating tradeoffs between multiple objectives when needed (C3, SW2)."

COMMENT: Stream "restorations" provide none of the co-benefits that out-of-stream stormwater practices provide to communities, living resources and people. Among the co-benefits from out-of-stream stormwater control practices are decreasing heat islands (which reduces utility bills and decreases heat-related health problems), reducing urban flooding, improving air quality, increasing property values, protecting natural areas, and providing urban green spaces.

In contrast, stream "restorations" do nothing to actually improve streams (see scientific papers in Appendix 3) while resulting in cutting community trees, destroying their natural areas, increasing heat islands, decreasing air quality, and decreasing property values, while doing nothing to reduce pluvial (surface water) flooding in urban areas or to provide urban green spaces.

Not only should out-of-stream practices be incentivized, but stream "restorations" should be prohibited.

"The Steering Committee recommends enhancing the local benefits of Chesapeake restoration and conservation by improving alignment with regional, state and local plans and priorities (CW2, CW5)."

COMMENT: There are no local benefits of stream "restorations." Any "alignment" of plans and priorities will not result in any local benefits. Currently, local natural resources – stream valleys, their forests, and their animals – have been needlessly sacrificed on the altar of saving the Bay since the primary purpose of stream "restorations" is to generate TMDL credits.

"The Water Quality Accountability Framework could also be revised to increase emphasis on measured outcomes and to incentivize innovative approaches to address stressors and target nonpoint sources of

pollution (CW1)**.** Shifting to a more transparent, multi-objective accountability system based on measured outcomes could better track a wider range of efforts supporting partnership goals (CW4, HW5, SW2, SW5) and enable improved outcomes under conditions of uncertainty (C1)."

> **COMMENT:** This statement is too timid. Measured outcomes *must* be required. Current monitoring of some stream "restorations" only requires a visual inspection to assess physical stability of the project with no measurement of erosion rate, water quality, or biological uplift. Even worse, for their MS4 permits, jurisdictions can opt-out of *any* stream "restoration" monitoring by opting-in to the Pooled Monitoring scheme. Having said that, stream "restorations" should be banned for the reasons presented in the preceding sections.

Part II: Partnership (draft page 13)

2. Adopt a systems approach to streamline governance and structure.

"The Steering Committee recommends that the partnership contract an independent party to help review and revise the Chesapeake Bay Program's governance and structure."

> COMMENT: The independent partner should have no conflicts of interests and no appearance of a conflict of interest unlike some members of the Chesapeake Bay Program Expert Panel Report for Protocol 1 Guidance"[25] who were members of the stream restoration-industrial complex.

4. Enhance Communications and Transparency to Foster Long-term Success.

"The Steering Committee recommends prioritizing and improving communications and transparency with the partnership's outreach and engagement activities to spur stewardship, drive restoration and conservation momentum and ensure long-term Program efficacy. The partnership should continue to strengthen relationships between people and ecosystems by regularly communicating key partnership successes, associated ecosystem improvements and socio-economic benefits garnered from achieving Watershed Agreement goals (ERG C5, ERG C6; SW4)."

> **COMMENT**: This sounds like greenwashing. Along with "communicating key partnership successes, associated ecosystem improvements and socio-economic benefits," equal time and effort must be spent on communicating failures such as those experienced by stream "restorations" (see Appendix 2). Our experience is that the damage caused by stream "restorations" in Maryland is greenwashed not only by industry practitioners, but also by state and local governments as well as by some non-profit cheerleaders.

"The partnership should strengthen its commitment to transparency…."

> **COMMENT**: We agree, especially regarding elimination of greenwashing as discussed above.

[25] 2019 Protocol 1 Guidance: "Consensus Recommendations for Improving the Application of the Prevented Sediment Protocol for Urban Stream Restoration Projects Built for Pollutant Removal Credit," p. 23; Full Report: https://chesapeakestormwater.net/wp-content/uploads/2022/07/9928-1.pdf

In addition, the decision-making process (e.g., for resource allocation) at all levels – within the CBP and at all levels of government - must be documented and transparent so that different people, presented with the same set of facts, will reach the same conclusion.

Part III: Source Materials

- *"Recognizing Political Influences in Participatory Socio-Ecological Systems Modeling[26]: https://sesmo.org/article/view/18509/1803"*

  COMMENT: Another source which should be considered regarding the political influence on the granting of project permits at both the Federal and state level is the Lave and Doye book titled ""Streams of Revenue: The Restoration Economy and the Ecosystems it Creates."[27]

  Per Lave and Doyle, "While Congress likely assumed that the regulatory agencies implementing the CWA—the U.S. Army Corps of Engineers (Corps of Engineers) and the Environmental Protection Agency (EPA)—would deny many permits to prevent harm to these ecosystems, the vast majority of permits have been granted, as the agencies have yielded to the political costs of limiting development, be it new homes, factories, or roads. Rather than deny permits altogether to protect the nation's freshwater ecosystems, the agencies arrived at a workaround known as the mitigation sequence: avoid impacts, reduce impacts, and only then compensate for any unavoidable impacts. In practice, however, it turned out to be far more politically palatable to let developers offset their project's impacts …elsewhere than to ask them to rework the project to avoid or reduce its impacts altogether (emphasis added)." While this refers to mitigation projects, the same political influence permeates the culture of state-approved TMDL practices (such as Maryland Department of the Environment's Accounting Guidance[28]) and jurisdiction project selection, especially for MS4 permits.

[26] https://par.nsf.gov/servlets/purl/10503504

[27] Lave, Rebecca and Doyle, Martin, (2021), "Streams of Revenue: The Restoration Economy and the Ecosystems it Creates," The MIT Press, pp. 6-7

[28] "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits," November 2021, https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Documents/Final%20Determination%20Dox%20N5%202021/MS4%20Accounting%20Guidance%20FINAL%2011%2005%202021.pdf

Section III: Chesapeake Bay Program Beyond 2025 Evaluation by ERG Company [PDF, 828.2 KB][29]

"Stream Health Outcome - Continually improve stream health and function throughout the watershed. Improve health and function of ten percent of stream miles above the 2008 baseline for the Chesapeake Bay watershed."

> **COMMENT:** The scientific research (see Appendix 3) says that destructive stream "restorations" do not work. Therefore, improvement of stream health and function must come from non-destructive, out-of-stream stormwater control practices such as riparian forest planting, bioretentions, permeable pavement, under-pavement storage systems, conservation landscaping, etc. See other examples in Maryland Department of the Environment's Accounting Guidance for MS4 permits.[30]

"Wetlands Outcome - …Create or reestablish 85,000 acres of tidal and non-tidal wetlands…."

> **COMMENT**: Published scientific papers (see Appendix 4) show ample evidence that the goal of a wetland "restoration" successfully achieving self-maintaining ecological uplift is not possible to attain.
>
> For example, per R. J. McInnes and S. Alexander, "…experience shows that a "restored" wetland rarely provides the full range and magnitude of services delivered by a wetland that has not been degraded."
>
> The scientific literature for wetland "restorations" (Appendix 4) shows that they do not result in functional uplift of physical, chemical, and biological aquatic resource functions.
>
> A 5/28/2024 draft of "The State of the Science and Practice of Stream Restoration in the Chesapeake: Lessons Learned to Inform Better Implementation, Assessment and Outcomes,"[31] a Scientific and Technical Advisory Committee (STAC) report for the Chesapeake Bay Program (CBP), states that "biological improvement is a condition of CWA permits." Per the scientific literature (Appendices 3 and 4) neither wetland nor stream "restorations" meet the CWA's

[29] https://d18lev1ok5leia.cloudfront.net/chesapeakebay/documents/CBP-Beyond2025-Final-Report-for-SC-06-18-24.pdf

[30] "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated, Guidance for National Pollutant Discharge Elimination System Stormwater Permits," November 2021, https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Documents/Final%20Determination%20Dox%20N5%202021/MS4%20Accounting%20Guidance%20FINAL%2011%2005%202021.pdf

[31] Noe, G., N. Law, J. Berg, S. S. Filoso, Drescher, L. Fraley-McNeal, B. Hayes, P. Mayer, C. Ruck, B. Stack, R. Starr, S. Stranko, and T. Thompson. 2024. The State of the Science and Practice of Stream Restoration in the Chesapeake: Lessons Learned to Inform Better Implementation, Assessment and Outcomes. STAC Publication Number 24-005, Edgewater, MD. 90 pp.

requirement to result in biological improvement. Thus, both wetland and stream "restorations" violate the CWA.

Therefore, the Chesapeake Bay Watershed Agreement must be amended to disallow credit for wetland "restoration." Rather, the Agreement must state that Federal/US Army Corps of Engineers (USACE) and state permits to destroy or damage wetlands must not be granted. "Restored" wetlands may still be created, but these must not be awarded TMDL credits.

"Forest Buffer Outcome - Continually increase the capacity of forest buffers to provide water quality and habitat benefits throughout the watershed. Restore 900 miles per year of riparian forest buffer and conserve existing buffers until at least 70 percent of riparian areas throughout the watershed are forested.

COMMENT: This objective is completely at odds with the allowance of stream "restorations" which clearcut sections of riparian forest (See Appendix 1). The Chesapeake Bay Watershed Agreement must be amended to disallow credit for stream "restoration."

"Tree Canopy Outcome - Continually increase urban tree canopy capacity to provide air quality, water quality and habitat benefits the watershed. Expand urban tree canopy by 2,400 acres by 2025."

COMMENT: This objective is completely at odds with the allowance of stream "restorations" which clearcut sections of riparian forest (See Appendix 1). The Chesapeake Bay Watershed Agreement must be amended to disallow credit for stream "restoration." The selection of projects to meet TMDLs is a zero-sum game. When more stream "restorations" are selected, fewer out-of-stream projects such as urban tree canopy planting are done.

"Scientific and Technical Advisory Committee (STAC) Group Discussion, 2/27/2024, Partnership and Collaboration.

o "Effective Partnership and Collaboration: STAC is considered fortunate among advisory groups due to its impact and the science-based foundation of the Bay program. It has been effective in guiding technical questions and influencing restoration science."

COMMENT: This is a very disturbing comment from STAC saying that it has been effective in "influencing restoration science." The only thing that should influence science is science itself, not a group such as STAC.

"• Science; o Supporting Science-Based Decision-Making: STAC has pushed for the integration of science into decision and policy making, highlighting the need for understanding the science of decision making itself."

COMMENT: This is good to hear, but apparently this STAC recommendation has been ignored to date. For example, see the above section titled, "Expert Panel reports have conflicts of interest and provide bogus science and guidance."

Beyond 2025 Small Group Findings, Considerations, and Supplementary Material[32]

Section III: Beyond 2025 Small Group Findings and Recommendations [PDF, 473.9 KB][33]

HEALTHY WATERSHEDS

"Data, Tools and Monitoring…"

"While watershed physiographic conditions establish a baseline set of expectations for stream health, combinations of human activities, land use, and land use histories affect both stream conditions and potential across multiple dimensions (e.g., temperature, conductivity, pH, flow, nutrients, sediment, bacteria, and toxics). Integrating information on these dimensions is needed to strategically plan and implement actions to achieve biological uplift and quantify ecosystem services."

COMMENTS: With regard to the stated need to "implement actions to achieve biological uplift and quantify ecosystem services," the science already shows that stream "restorations" do not result in biological uplift. We know that out-of-stream stormwater practices provide a range of ecosystems services. In contrast, stream "restorations" destroy ecosystem services.

We are at a point of "paralysis by analysis" regarding the efficacy of stream "restorations." Stream "restorations" must not be allowed for TMDL credits.

SHALLOW WATERS

"Design and implement shallow water habitat restoration on an ecosystem scale in tidal and nontidal areas…."

COMMENT: Published scientific papers (see Appendix 4) show ample evidence that the goal of a wetland "restoration" successfully achieving self-maintaining ecological uplift is not possible to attain.

For example, per R. J. McInnes and S. Alexander, "…experience shows that a "restored" wetland rarely provides the full range and magnitude of services delivered by a wetland that has not been degraded."

The scientific literature for wetland "restorations" (Appendix 4) shows that they do not result in functional uplift of physical, chemical, and biological aquatic resource functions.

A 5/28/2024 draft of "The State of the Science and Practice of Stream Restoration in the Chesapeake: Lessons Learned to Inform Better Implementation, Assessment and Outcomes,"[34] a Scientific and Technical Advisory Committee (STAC) report for the

[32] https://www.chesapeakebay.net/who/projects-archive/beyond-2025-steering-committee
[33] https://d18lev1ok5leia.cloudfront.net/chesapeakebay/documents/Beyond-2025-Small-Group-Findings-and-Considerations_FINAL.pdf
[34] Noe, G., N. Law, J. Berg, S. S. Filoso, Drescher, L. Fraley-McNeal, B. Hayes, P. Mayer, C. Ruck, B. Stack, R. Starr, S. Stranko, and T. Thompson. 2024. The State of the Science and Practice of Stream Restoration in the Chesapeake:

Chesapeake Bay Program (CBP), states that "biological improvement is a condition of CWA permits." Per the scientific literature (Appendices 3 and 4) neither wetland nor stream "restorations" meet the CWA's requirement to result in biological improvement. Thus, both wetland and stream "restorations" violate the CWA.

Therefore, the Chesapeake Bay Watershed Agreement must be amended to disallow credit for wetland "restoration." Rather, the Agreement must state that Federal/US Army Corps of Engineers (USACE) and state permits to destroy or damage wetlands must not be granted. "Restored" wetlands may still be created, but these must not be awarded TMDL credits.

The same holds for stream "restorations." See above comments on stream "restorations."

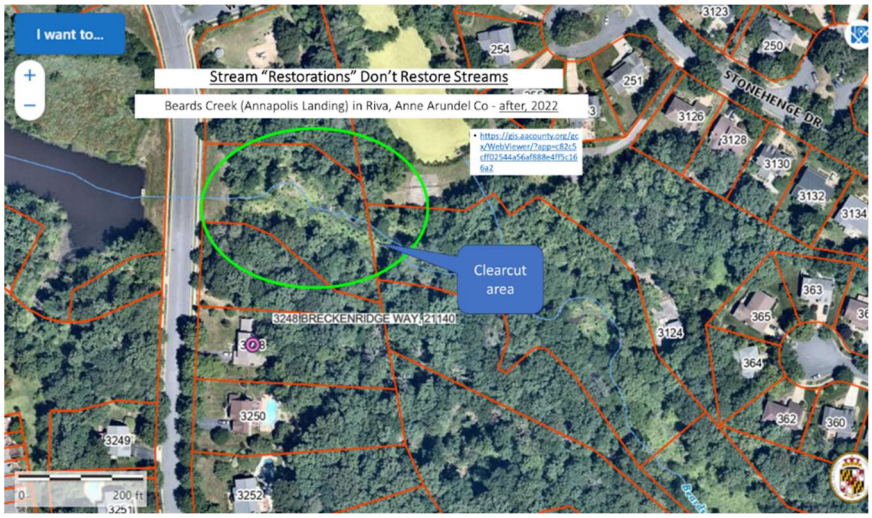
Thank-you for your consideration of our comments,

Coalition To Stop Stream Destruction

Lessons Learned to Inform Better Implementation, Assessment and Outcomes. STAC Publication Number 24-005, Edgewater, MD. 90 pp.

APPENDIX 1: Photographic documentation of stream “restoration” destruction in Maryland

- **Anne Arundel County:**
  - Beards Creek in Annapolis Landing (below)



  - Broad Creek Valley West (below)

- Broad Creek MVA (below)

Broad Creek MVA Stream "Restoration," Annapolis

- Broad Creek Park (below)

Broad Creek Park Stream "Restoration", Annapolis

- Camp Woodlands (below)

Camp Woodlands Stream Restoration (Broad Creek), Anne Arundel Co.

- Church Creek Headwaters (below)

Church Creek Headwaters, Anne Arundel Co.– Construction

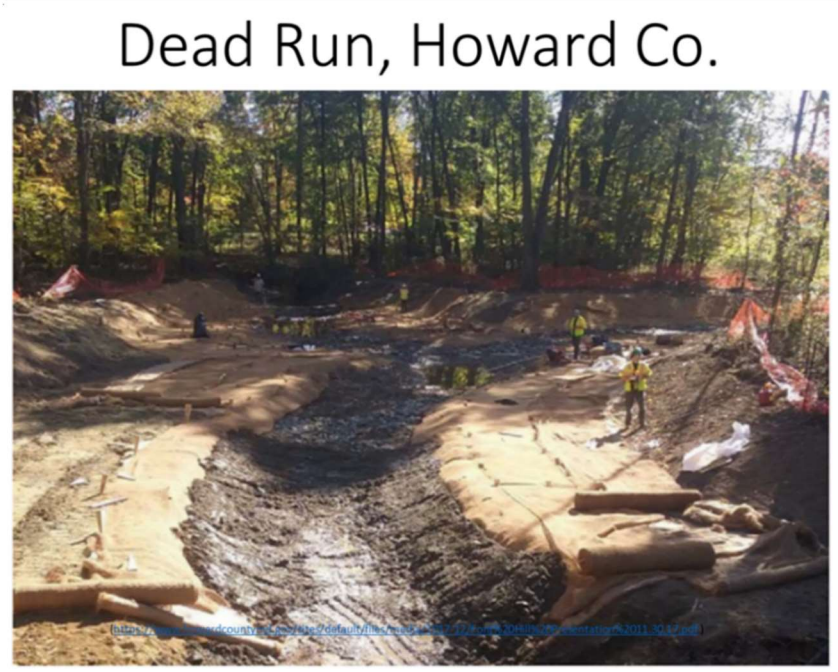
- **Howard County:**
  - Longfellow project - clearcut and then 700 replanted trees died (below)

- Font Hill (below)

- Nash Run (below)

- https://www.howardcountymd.gov/sites/default/files/media/2017-12/Font%20Hill%20Presentation%2011.30.17.pdf

- Dead Run (below)



- **Montgomery County:**
  - Nature Forward (formerly Audubon Naturalist Society) (below)

- Falls Reach (below)

Falls Reach, Potomac, MD

Before Montgomery County DEP "stream restoration" on Falls Reach. (Photo by DEP)

After "stream restoration" on Falls Reach completely destroyed the forest community in its footprint. (Photo by K. Bawer on 3/19/2019)

- Asbury Methodist Village (below)

Asbury Methodist Village, Montgomery County

- Upper Watts Branch (below)

- Whetstone Run (below)

(Stream "restoration" in Blohm Park, Gaithersburg at Watkins Mill Rd. over Whetstone Run at the same location.
Note the stream bank armor-plating on the right. (Left on 9/3/2020; right on 5/03/2021); by K.Bawer)

- Solitaire Court (below)

Solitaire Court, Gaithersburg

Prince George's County

- Tinkers Creek (below)

Tinkers Creek, Prince George's County

- https://www.youtube.com/watch?v=7WhlNFKywDM

- Bear Branch (below)

Bear Branch, Prince Georges County - AFTER

https://www.princegeorgescountymd.gov/DocumentCenter/View/37900/GS-2021-Day-4-Restoration-projects-12-PM

- Crain Stream (below)

Crain Stream Restoration, Prince George's County

- **Baltimore County**
  - Pearlstone Retreat Center in Reisterstown (below)

  - Scotts Level Branch (below)

- **Fredrick County**
  - Point of Rocks Stream Restoration (below)

Point of Rocks Stream Restoration Project, Fredrick County

- **Harford County**
  - Emmord Branch Unnamed Tributary (below)

Emmord Branch Unnamed Tributary Stream Restoration, Harford Co.

- Heavenly Waters Park (below)

- Annie's Playground Stream Restoration Project (below)

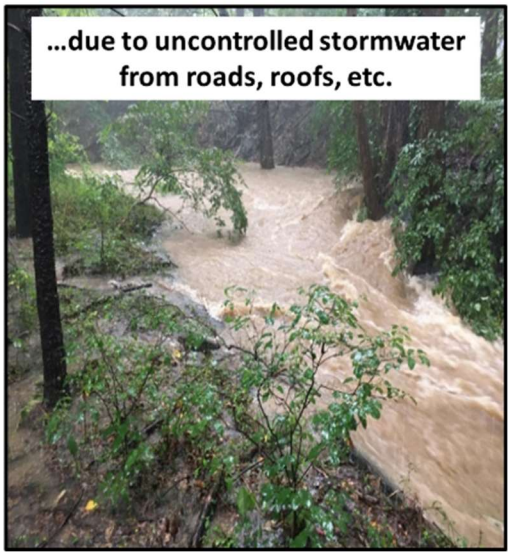
- Barrington Restoration Project (below)

- **Cecil County**
  - Bayview

- **Reston, VA**
    - Upper Snakeden Branch Reston, VA (note how water is chocolate brown after “restoration”)

APPENDIX 2: Photographs of failed stream "restorations"

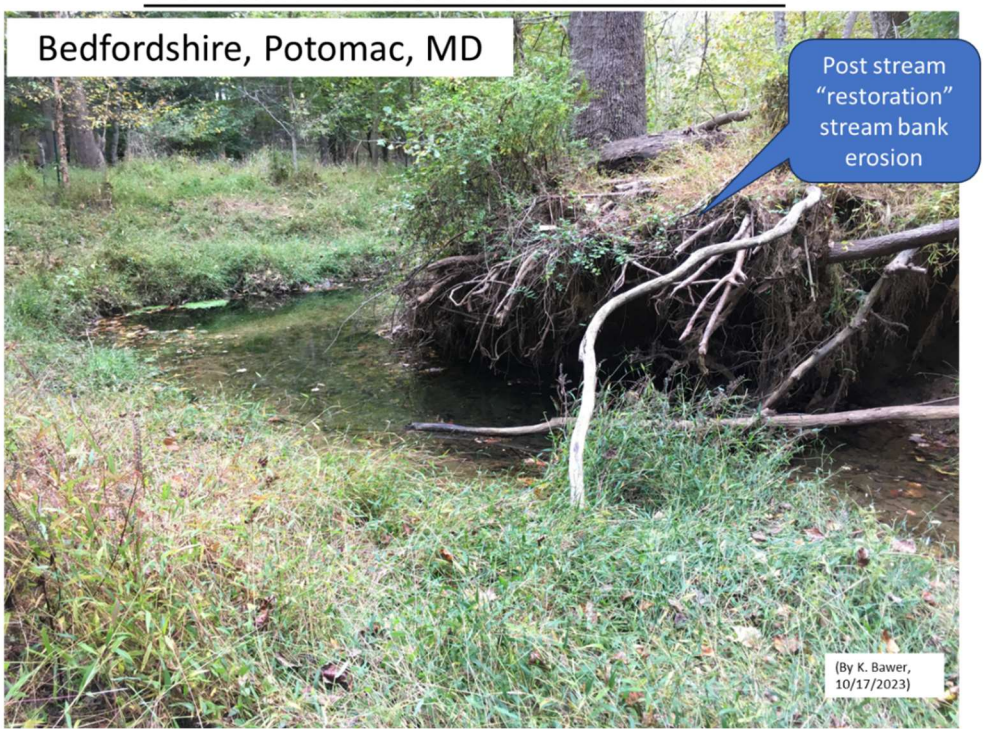
Josephs Branch, Kensington



Cabin Branch Stream in Cabin John Regional Park (by K. Bawer, 3/19/2021)

Long Branch, Takoma Park, 10/2/2021 (Photo by K. Bawer)

Stream “restoration” failures



Stream “restoration” failures.

Old Farm Creek Tributary, North Potomac

Stream "restoration" failures

Grosvenor Luxmanor Stream "Restoration,"Mo Co

Wildwood Manor, south of I-270

https://www.montgomerycountymd.gov/water/Resources/Files/restoration/streams/grosvenor-presentation-wildwood-manor.pdf

Northwest Branch Stream Valley Park, Silver Spring, Mo Co

Photo by K. Bawer, 5/26/2024)

Stream "restoration" failures

Lower Booze Creek, Potomac, MD
Two different locations.

Lower Booze Creek - Erosion downstream of imbricated wall structure from original stream restoration.

Stony Run, Baltimore City

(Photo by Fern Shen, Baltimore Brew)

Annapolis Landing in Riva, Anne Arundel Co.

(Arundel Rivers Federation, Testimony on HB 942 on March 3, 2023)

Upper Snakeden Branch Reston, VA - after

Figure 1: Visual Indicators Showing Failures in the Field for Protocol 1

Exposed Soil on Banks

Extreme Undercutting

Outflanking of Instream Structures

Bank Armoring Collapse

Photo sources: Tim Schueler and Josh Running

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("Recommended Methods to Verify Stream Restoration Practices Built for Pollutant Crediting in the Chesapeake Bay Watershed," Chesapeake Bay Program report," https://www.chesapeakebay.net/what/publications/recommended-methods-to-verify-stream-restoration-practices)

APPENDIX 3: Scientific references that stream "restorations" violate Clean Water Act, Army Permits, and Code of Maryland

Annotated references:

- Analysis of 30 projects by Carr et. al., Drexel University:

  "Our analysis of the differences between the ecological condition of restored sites and their paired reference reaches showed that the restored sites consistently scored lower in riparian habitat quality as well as the biotic integrity of both periphyton (i.e., attached algae) and benthic macroinvertebrate assemblages. These results clearly demonstrate that at the present time these stream reaches continue to exhibit the types of impaired conditions that originally made them candidates for restoration."

  Carr, J., Hart, D., McNair, J., 2006, "Compilation and Evaluation of Stream Restoration Projects: Learning from Past Projects to Improve Future Success," The Patrick Center for Environmental Research, The Academy of Natural Sciences of Drexel University, Report Submitted to the William Penn Foundation. https://ansp.org/research/environmental-research/projects/restoration/

- Analysis of 40 projects by Robert Hilderbrand, University of MD:

  "There simply were few ecological differences between restored and unrestored sites. In fact, the unrestored sections upstream [from the restoration sites] were often ecologically better than the restored sections or those downstream of restorations."

  Hilderbrand, Robert H., et. al.,2020, "Quantifying the ecological uplift and effectiveness of differing stream restoration approaches in Maryland," Final Report Submitted to the Chesapeake Bay Trust for Grant #13141, (https://cbtrust.org/wp-content/uploads/Hilderbrand-et-al_Quantifying-the-Ecological-Uplift.pdf

- Analysis of 644 projects by M. Palmer et al., University of MD:

  "Improvements in the five metrics within the water quality category were found for only 7% of the channel reconfiguration projects and for none of the in-stream channel projects (Table 2)."

  "Unfortunately, recovery of biodiversity was rare for the vast majority of stream restoration projects."

  "Less than half of these projects showed improvements in channel stability compared with prerestoration regardless of how stability was measured and even though many of the projects involved the use of large boulders or other materials to hold the banks in place."

  "We show that a major emphasis remains on the use of dramatic structural interventions, such as completely reshaping a channel, despite growing scientific evidence that such approaches do not enhance ecological recovery, and the data we assembled (Table 2) suggest they are often ineffective in stabilizing channels when stability is the primary goal."

Palmer, M. A., K. L. Hondula, and B. J. Koch, University of MD, 2014, "Ecological Restoration of Streams and Rivers: Shifting Strategies and Shifting Goals,", Annu. Rev. Ecol. Evol. Syst. 2014. 45:247-269. (https://akottkam.github.io/publications/Palmerpublications/Palmer2014a.pdf)

- Analysis of 11 streams by Southerland et. al. that were been converted to RSCs (regenerative stormwater conveyances), a type of stream "restoration"

  "…fish diversity in RSCs [a type of stream "restoration"] was lower than in high-quality sites…."

  "Fish indices of biotic integrity (IBIs) [an industry-standard for measuring in-stream biology] were also lower in RSCs than in high-quality sites…."

  Southerland, Mark, et. al., 2021, "Vertebrate Community Response to Regenerative Stream Conveyance (RSC) Restoration as a Resource Trade-Off," Award: 18002 CBT Restoration Research Grant to Tetra Tech and UMCES-Chesapeake Biological Laboratory; https://cbtrust.org/wp-content/uploads/FINAL-Report-for-18002-Tetra-Tech-CBL-CBT-RR-Vertebrates-in-RSCs-30SEP2021-Submitted-to-CBT.pdf

Additional references:

- Carr, J., Hart, D., McNair, J., 2006, "Compilation and Evaluation of Stream Restoration Projects: Learning from Past Projects to Improve Future Success," The Patrick Center for Environmental Research, The Academy of Natural Sciences of Drexel University, Report Submitted to the William Penn Foundation. https://ansp.org/research/environmental-research/projects/restoration/
- Hilderbrand, Robert H., et. al., 2020, "Quantifying the ecological uplift and effectiveness of differing stream restoration approaches in Maryland," Final Report Submitted to the Chesapeake Bay Trust for Grant #13141, (https://cbtrust.org/wp-content/uploads/Hilderbrand-et-al_Quantifying-the-Ecological-Uplift.pdf
- Jepsen, R., Caraco, D., Fraley-McNeal, L, Buchanan, C., and Nagel, A. 2022. "An Analysis of Pooled Monitoring Data in Maryland to Evaluate the Effects of Restoration on Stream Quality in Urbanized Watersheds: Final Report." ICPRB Report 22-2. Interstate Commission on the Potomac River Basin, Rockville, MD. https://www.potomacriver.org/wp-content/uploads/2022/06/ICP-22-1_Jepsen.pdf
- Kaushal, Sujay S. et. al., 2018, "Tree Trade-offs in Stream Restoration Projects: Impact on Riparian Groundwater Quality," University of Maryland, State University of New York ESF, Maryland Department of Transportation State Highway Administration, 2018 Presentation (https://cbtrust.org/wp-content/uploads/Kaushal-and-Wood_UMD_061219.pdf)
- Laub, B.G, McDonough, O.T, Needelman, B.A., Palmer, M.A., 2013, "Comparison of Designed Channel Restoration and Riparian Buffer Restoration Effects on Riparian Soils," Restoration Ecology, Vol. 21, Issue 6, November 2013 (https://onlinelibrary.wiley.com/doi/abs/10.1111/rec.12010)

- Palmer, M.A., H.L. Menninger, and E. Bernhardt. 2010. River restoration, habitat heterogeneity and biodiversity: a failure of theory or practice? Freshwater Biology 55: 205–222
    - Only 2 of 78 stream or river restoration showed statistically significant increases invertebrate taxa richness data, though most projects enhanced physical habitat heterogeneity
    - "Managers should critically diagnose the stressors impacting an impaired stream and invest resources first in repairing those problems most likely to limit restoration"

- Palmer, M. A. et. al., 2014, "Ecological Restoration of Streams and Rivers: Shifting Strategies and Shifting Goals," Annual Review of Ecology, Evolution, and Systematics. 2014. 45:247–69 (www.ecolsys.annualreviews.org or www.annualreviews.org)

- Pedersen ML, Kristensen KK, Friberg N, 2014, "Re-Meandering of Lowland Streams: Will Disobeying the Laws of Geomorphology Have Ecological Consequences?" (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4180926/)

- Roni, P, K. Hanson, and T. Beechie. 2008. Global Review of the Physical and Biological Effectiveness of Stream Habitat Rehabilitation Techniques. North American Journal of Fisheries Management 28:856-890
    - "345 studies rarely demonstrated uplift…."

- Southerland, Mark, et. al., 2021, "Vertebrate Community Response to Regenerative Stream Conveyance (RSC) Restoration as a Resource Trade-Off," Award: 18002 CBT Restoration Research Grant to Tetra Tech and UMCES-Chesapeake Biological Laboratory; https://cbtrust.org/wp-content/uploads/FINAL-Report-for-18002-Tetra-Tech-CBL-CBT-RR-Vertebrates-in-RSCs-30SEP2021-Submitted-to-CBT.pdf

APPENDIX 4: Scientific references that show wetland "restorations" violate the Clean Water Act

- Hunt, Randall J., "Do Created Wetlands Replace the Wetlands that are Destroyed?," 1996, U.S. Department of the Interior U.S. Geological Survey Fact Sheet FS-246-96 https://pubs.usgs.gov/fs/1996/0246/report.pdf

    - "…we do not have established methodology that can uniformly evaluate a wetland's function, or that is useful for providing guidelines that enhance wetland restoration/creation success. …What are some of the issues surrounding wetland mitigation? It is not widely accepted that mitigation projects are successful. Although the current wetland permit programs assume that wetland loss is being ameliorated, no long-term, interdisciplinary research shows unequivocally that a created wetland has fully replaced the lost function resulting from a wetland's destruction. Secondly, there is a concern that created wetlands do not provide in-kind compensation. That is, many hard-to-create wetland types (such as fens, bogs and sedge meadows) are being replaced with common, easy-to-create wetland types (cattail marsh), or the "quality" of the resulting mitigation wetland is not equal to the wetland that was destroyed. A third concern is that placing mitigation projects in areas distant from the destroyed wetland will result in the wetland functions being replaced in areas away from where they are needed and/or in areas that are not wetland deficient. Finally, there is great interest in mitigation "banks" large wetland restoration or creation projects that can serve as compensation credit for wetland losses elsewhere in a given region. While many people agree that large, intact wetland acreage is desirable, there is some concern that mitigation banking projects will not provide meaningful mitigation of the cumulative effects of widely distributed, small-acreage wetland loss."[35]

- Larson, D.M., et. al., "Sediment excavation as a wetland restoration technique had early effects on the developing vegetation community," Wetlands Ecology and Management volume 28, pages1–18 (2020) https://link.springer.com/article/10.1007/s11273-019-09690-3
    - Our results indicated that the excavated basins had marginally greater probabilities of increased total standing water, habitat interspersion, and relative plant diversity, as well as lower probabilities of having invasive plants and hybrid cattails (Typha × glauca), when compared to unexcavated basins.
    - "However, the benefits from excavation were typically negated by invasive species and cattail encroachment within 3–6 years of post-restoration."

- Mateos, David Moreno, "Wetland Restoration and Creation: An Overview," May 2018, In book: The Wetland Book (pp.1965-1975), Harvard University (https://www.researchgate.net/; or https://www.researchgate.net/publication/325173680_Wetland_Restoration_and_Creation_An_Overview)

- “Frequently, however, attempts at wetland restoration fail to restore ecosystem structure and functions to preimpact levels…”

- McInnes, R. J. and S. Alexander, “The Benefits of Wetland Restoration,” 2013, Technical Report, Report number: Ramsar STRP Briefing Note no. 4, Affiliation: Ramsar Scientific and Technical Review Panel (https://www.researchgate.net/publication/280526877_The_benefits_of_wetland_restoration)

    - “Restoration is not a substitute for protecting and ensuring the wise use of wetlands, i.e., the potential to restore a wetland is not a justification or suitable trade-off for the continued degradation of wetlands. Furthermore, …experience shows that a “restored” wetland rarely provides the full range and magnitude of services delivered by a wetland that has not been degraded.”

APPENDIX 5: Impact of stream "restorations" on project sites

Most stream "restorations" involve channel and stream bank modifications as well as "flood plain reconnection."

According to Fraley-McNeal et. al (2022)[36], the negative impacts of stream "restorations" from these construction projects include:

- Tree & ecosystem services loss
  - "…years of ecosystem maturation may be needed before a project fully meets its long-term restoration objectives and realizes its full environmental benefits (Kaushal et al., 2021[37]; Wood et al., 2021[38])."
  - "For projects that involve floodplain reconnection, mortality of trees in the riparian zone may occur as soils are inundated over time."
  - "When mature trees are removed, they cannot be replaced with similar-sized trees that perform the same ecological functions."

Plus,

- Temperature Impacts
  - "Loss of existing trees in the riparian zone from stream restoration implementation occurs either through direct removal during construction or mortality afterwards due to increased groundwater elevations and/or extended inundation of the floodplain, compaction, and root disturbance from construction activities. …There is a direct link between riparian forests and stream temperature, which is a critical metric of stream health."
  - "…impact to a stream's thermal regime…. Protecting thermal regimes in streams is important for a variety of reasons, including maintaining spawning habitat and healthy conditions for fish, reducing algal growth, reducing populations of parasites that favor warmer temperatures, and regulating nutrient/carbon/oxygen dynamics, since temperature affects the dynamics of many gaseous and aqueous compounds (Demars et al., 2011; Mayer et al., 2010; Wilkerson et al., 2006). …There is evidence that stream temperatures increase post-restoration (Fanelli et al., 2017; Sudduth et al., 2011)."
- Biologic, Habitat, & Water Quality Impacts

[36] Fraley-McNeal, L. et al. (2022), "Maintaining Forests in Stream Corridor Restoration and Sharing Lessons Learned," Center for Watershed Protection; https://owl.cwp.org/mdocs-posts/maintaining-forests-in-stream-corridor-restoration-and-sharing-lessons-learned-final-report/

[37] Kaushal, S. S., Wood, K. L., Vidon, P. G., & J. G. Galella. 2021. Tree Trade-Offs in Stream Restoration Projects: Impact on Riparian Groundwater Quality. A Report Submitted to the Chesapeake Bay Trust. Retrieved from: https://cbtrust.org/wp-content/uploads/Tree-Trade-off_University-of-Maryland-College-Park_Kaushal_final_report_032921.pdf

[38] Wood, D., Schueler, T., and B. Stack. 2021. A Unified Guide for Crediting Stream and Floodplain Restoration Projects in the Chesapeake Bay Watershed. https://chesapeakestormwater.net/wp-content/uploads/dlm_uploads/2021/10/Unified-Stream-Restoration-Guide_FINAL_9.17.21.pdf

  - "When trees are removed for stream restoration projects, the critical habitat provided by their canopy and root systems is also removed. Although removed trees are typically replanted in-kind, the maturation of the restored vegetation can take many years."
  - "Recent work by Wood et al. (2021) and Kaushal et al. (2021) demonstrated that tree removal during stream restoration construction can trigger sub-surface fluxes of nutrients out of the riparian zone and into the stream…." This defeats the purpose of the stream "restoration."
  - "It is important to note that the post-restoration recovery of the ecosystem as a whole typically takes many years."
  - "Some studies have found either no evidence or very limited evidence that stream restoration projects in urban watersheds have the potential to improve habitat quality in a meaningful or reliable way, partially due to the influence of the contributing drainage area to the stream (Hilderbrand, 2020; Hilderbrand et al., 2015; Violin et al., 2011)."
  - "However, it is clear that the removal of mature trees during restoration physically alters the available habitat in a stream-riparian system, and those physical alterations have coincidental effects on stream-water chemistry. Both of these restoration-related changes—physical and chemical—affect the biological uplift provided by a restored stream."
- Inundation Impacts from Floodplain Reconnection
  - "Stream restoration projects that enhance floodplain reconnection can impact existing riparian vegetation species due to increased groundwater elevations and/or extended inundation of the floodplain. Flooding may reduce upland tree species root growth which may lead to decline, death, and decay over time (Coder, 1994)."

Agricultural Sector Principles
for Chesapeake Bay Program Beyond 2025 Planning

As shown by the STAC CESR and EPA OIG Reports, success of the Chesapeake Bay program depends on sustainable agricultural practices to improve water quality, reduce greenhouse gas emissions, and improve environmental justice, while also expanding production to meet demands for reliable, safe, and affordable food commodities for growing populations and adapting for the effects of climate change. The Beyond 2025 SC report should emphasize the following principles.

1. **Policies and Accountability**: The role of the newly formed Bay Program Agricultural Advisory Committee should include leadership on policy decisions and accountability for agricultural industry and commodity supply chain actions to achieve target environmental outcomes. CBP management and workgroups should include commodity supply chain representatives as permanent, active members.
2. **Nutrient Management Strategies**: Bay Program strategies to reduce nutrients in surface waters should focus on reduction of agricultural cropping system inputs instead of attempts to manage fate and transport of nutrients within the environment. Regional input reductions should address changes in both agricultural production and climate. System input management methods should include monitored manure treatment technologies to reduce storage and land application, continuous improvement of nutrient use efficiency, and advanced technology controls to limit movement of pasture livestock.
3. **Agricultural Data**: Private sector industry organizations should be responsible for collection and promulgation of animal and crop production systems data with detail, accuracy, and timeliness required for effective environmental management. Bay Program models should account for organic and mineral fertilizer application based on actual producer data rather than arbitrary rule-based practice.
4. **Resource Prioritization**: The Bay Program should prioritize implementation of new agricultural nutrient management programs based on the scale of impact[1]: (a) top two to three animal types that constitute over 80% of watershed AEUs, (b) top two to three crop types that constitute over 80% of crop nutrient losses, (c) top producers that account for over 80% of production output in each of the preceding categories.

   [1] Current CBP annual data collection and modeling includes 101 crop types and 12 animal types. Undifferentiated allocation of resources to minimal impact categories diverts resources from major impact categories.
5. **Regional Planning**: Public planning and approval for new and expanded large-scale agricultural producer operations should include plans for transparent, long-term monitoring and reporting of environmental performance.
6. **Monitored Outcomes**: Regional scale nutrient management systems should employ advanced sensing technologies and AI-driven analytical tools for accurate and

comprehensive understanding of environmental, social, and economic performance outcomes.

7. **Organic Feed and Fertilizer Ingredients**: Revise National Organic Program (NOP) definitions to recognize non-synthetic thermal manure treatment byproducts as organic feed and fertilizer ingredients. This will increase the supply of inputs for organic animal and crop producers, increase the circularity of nutrient products, and improve the economic viability of manure treatment technologies.
8. **Sustainable Funding**: Local, state, and federal agencies should support and promote Climate-Smart, value-added premiums for sustainably produced agricultural commodities. End-to-end supply chain participants should share costs and accountability.
9. **Environmental Equity**: Quantitative metrics should provide unambiguous assessment of actions to reduce social impacts of large-scale agricultural production. Examples include local air quality (pathogens, dust, ammonia, particulate matter, VOCs), community health trends, nuisance pests (rodents, flies, and other insects). Impact monitoring should be a shared responsibility, performed cooperatively by CAFO/AFO producers, industry organizations, local and state public health organizations, and community science teams.
10. **Far Beyond 2025**: Bay Program plans and policies must provide adaptive capacity to address industry and governmental projections for increased intensification of agricultural production and climate change through 2050.

EnergyWorks Group

Patrick Thompson

443-831-2360

To the members of the Beyond 2025 Steering Committee,

Thanks for the opportunity to provide comments on the draft report "A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025". **The Forestry Workgroup supports the recommendations presented in the Beyond 2025 Steering Committee's report and encourages adoption by the Principal Staff Committee (PSC).** The recommendations reflect the importance of taking a holistic and integrated approach to watershed restoration, elevating the need to implement restoration practices that will have the greatest benefits for ecosystems and communities. We support the focus on integrating climate change considerations more comprehensively throughout the program, as this will be critical for ensuring the resilience of forests and forest restoration to future climate conditions. Forest buffers and tree canopy restoration are foundational nature-based solutions for mitigating and adapting to the impacts of climate change, including increased flooding and heat, while also providing substantial water quality improvement benefits.

The Forestry Workgroup would like to express particular support for the recommendation to "elevate Conservation as a key guiding pillar alongside Science, Restoration and Partnership". This recommendation is critical and a cost-effective approach for meeting our goals to restore ecosystems and living resources in the Bay and watershed. Although we have made impressive progress in recent years with forest buffers and tree canopy planting, the land use data has demonstrated that we are losing riparian forests and tree cover at a much faster rate. This underscores the importance of putting more focus and resources towards conservation and stewardship. Programs like Maryland's CREP Permanent Easement Program, which provides additional financial incentives to put restored forest buffers into conservation easements could provide a great model for coupling restoration and conservation efforts. Agricultural easement programs could also require farms to protect riparian forest buffers and forest cover in order to be eligible for cost-share funding.

We further suggest that this recommendation could be strengthened by identifying a need to prioritize the conservation and stewardship of particularly high-valued forests and wetlands. A renewed focus on stewardship should also include an integrated watershed approach to address invasive species and forest health issues that threaten the ability of forests to continue to provide the ecosystem services we rely on. Adequate funding and capacity to maintain tree plantings is essential for ensuring the long-term success of these efforts.

Here are a few other specific recommendations to consider:

- Executive Council Recommendation #1 calls for considering the impacts of changing environmental conditions as part of the review of Watershed Agreement outcomes. **We also recommend considering the impacts of changing social conditions, given the relevance of development pressures and urbanization on our restoration and conservation objectives.**
- Executive Council Recommendation #2 calls for "identifying ways to simplify and streamline the partnership's structure and process". However, the Synthesis report also identifies many potential areas of focus, including a more comprehensive approach to addressing climate change and land use change. In some cases, these issues may not benefit from simplified structures and processes. For example, to improve the resilience of forests to climate change, there may need to be additional focus areas to address forest health and stewardship. Adding these new areas of focus may add complexity to our existing outcomes and structures but could

nonetheless better meet our objectives of restoring healthy and resilient forests that will continue to provide water quality benefits over the long-term. **We would recommend that in addition to simplifying and streamlining the partnership, there should also be a focus on right-sizing and updating the partnership structure to improve efficacy.**

- **In multiple places, the report identifies the need to better account for the impacts of climate change in any updates to the Agreement. We agree this is a foundational issue to address but would also suggest that land use change be considered in tandem**. The high-resolution land use data has revealed large-scale habitat loss issues (with over 100,000 acres of tree cover lost to development alone between 2013/14- 2017/18) that must be directly addressed and prioritized. There are opportunities to utilize the high-res land use and land cover data to monitor and guide adaptive management, to better understand the implications of land use change for meeting watershed agreement goals, and to more strategically prioritize our conservation and restoration efforts.
- **Strengthen recommendations on climate change to more comprehensively address climate resilience, adaptation and mitigation throughout the watershed** as outlined in the Climate Small Group recommendations. This could include adding a more specific focus on promoting soil health and regenerative agriculture, including agroforestry practices. The Bay Program should pursue opportunities to better align with state/local efforts focused on climate adaptation and mitigation and leverage synergies with regional climate goals and funding streams. The Steering Committee should also consider opportunities for the Program to integrate land management, restoration and conservation into climate planning to support multiple benefits, including water quality improvement.
- In the section focused on "Recognizing our progress toward meeting the Chesapeake Bay Watershed Agreement" the report mentions that the PSC "committed to strengthening effort and investment in addressing nonpoint sources of pollution, forest buffers, urban tree canopy and both tidal and nontidal wetlands". **The Charting a Course to 2025 report includes a section focused on how we can best strengthen forest buffer and tree canopy restoration efforts, so we'd recommend directing readers to the strategies identified in that report for more detailed information.**
- **In the notable partnership accomplishments, consider adding in a reference to recent progress on the Tree Canopy outcome.** From Chesapeake Progress: "In both 2022 and 2023, there was an increase in annual tree planting (454.7 and 2,577.4 acres respectively, up from 354.2 in 2021), with a particularly large increase in 2023. The 2,577.4-acre total in 2023 is the highest reported since tracking via the National Environmental Information Exchange Network began in 2014."
- **Recommend adding a definition of watershed health** so it is clear that this should encompass both terrestrial and aquatic ecosystem structure, function, and services (including upland forested ecosystems).

August 30th, 2024
Re: Beyond 2025 Public Comment – Izaak Walton League of America
Attention: Martha Shimkin, Director of the Chesapeake Bay Program Office
1750 Forest Drive Suite 130
Annapolis, Maryland 21403

Dear Martha Shimkin,

The **Izaak Walton League of America (IWLA)**, founded in 1922, has long been dedicated to protecting and restoring our nation's waterways. Through our Save Our Streams program, the only nationwide initiative that trains volunteers to monitor and safeguard waterways from pollution, IWLA empowers communities to take action for clean water. Since Save Our Streams was launched in 1969, when pollution was glaringly visible in oil spills and burning rivers, IWLA has evolved its efforts from simple cleanups to scientifically rigorous water quality assessments. Today, IWLA volunteers across Virginia and Maryland, under the Virginia Save Our Streams program, monitor the health of over 200 stream sites, educating the public and providing critical data to decision-makers. Our commitment to ensuring that all communities know the safety of their local waters for swimming, fishing, and drinking drives our continued advocacy for water health across the Chesapeake Bay watershed.

Support for Watershed Agreement Amendments:
The IWLA endorses amendments to the Watershed Agreement that integrate new scientific insights, address challenges like climate change, and enhance community engagement. The Chesapeake Monitoring Cooperative (CMC) is a key tool in engaging volunteers and providing essential water quality data. We advocate for a shift towards a watershed health approach with clear quantitative targets, including the incorporation of bacteria-specific outcomes to address human health concerns. Additionally, we strongly recommend including metrics for chloride pollution (road salt), where the League has had tremendous success engaging communities in the Chesapeake Bay region in monitoring and addressing this issue through our Salt Watch program. It's crucial to leverage all available data, including participatory science data, in decision-making processes, ensuring that both Tier 1 and 2 data complement Tier 3 data for comprehensive assessments.

High-Level Recommendations for the Chesapeake Bay Program:

- **Long-Term Monitoring Strategy:**
  IWLA supports the development of a strategy to sustain core monitoring networks and explore enhancements. Participatory science, like CMC's efforts, bridges critical data gaps, especially in hard-

to-reach areas. The CMC Data Explorer provides a centralized platform for data management, benefiting state agencies, federal partners, and local communities alike.

- **Clear Targets and Monitoring Plans:**
  We advocate for well-defined targets and monitoring plans that integrate multiple data sources from the outset, improving science-based decision-making.
- **Local Watershed Health Focus:**
  Emphasizing the importance of characterizing watershed health at the local level is crucial for effective restoration efforts. Benthic macroinvertebrate monitoring, a cornerstone of IWLA's Save Our Streams program, provides vital insights into stream health by assessing the aquatic life that serves as indicators of water quality. This participatory science, supported by CMC's case studies and DEIJ framework, not only connects communities with relevant data but also empowers them to address their local water quality concerns effectively.
- **Utilization of Participatory Science Data:**
  Reaffirm the 2018 MOU commitment to use participatory science data in all decision-making levels. This data is invaluable for education, research, trend analysis, and regulatory decisions.
- **Feedback Loops and Transparency:**
  IWLA encourages the integration of the latest scientific findings into decision-making processes with clear communication. Participatory science data should be more promptly integrated into state and local screening efforts, ensuring that its full potential is realized.

In summary, the Izaak Walton League of America strongly supports the integration of participatory science, particularly through programs like Save Our Streams, into the Chesapeake Bay Program's decision-making processes. By leveraging the extensive data collected by volunteers and engaging communities in monitoring efforts, we can more effectively address local water quality concerns and enhance watershed health across the region. We urge the Chesapeake Bay Program to adopt these recommendations to ensure a comprehensive, inclusive, and science-based approach restoring and protecting the Chesapeake Bay and its surrounding watersheds.

Sincerely,

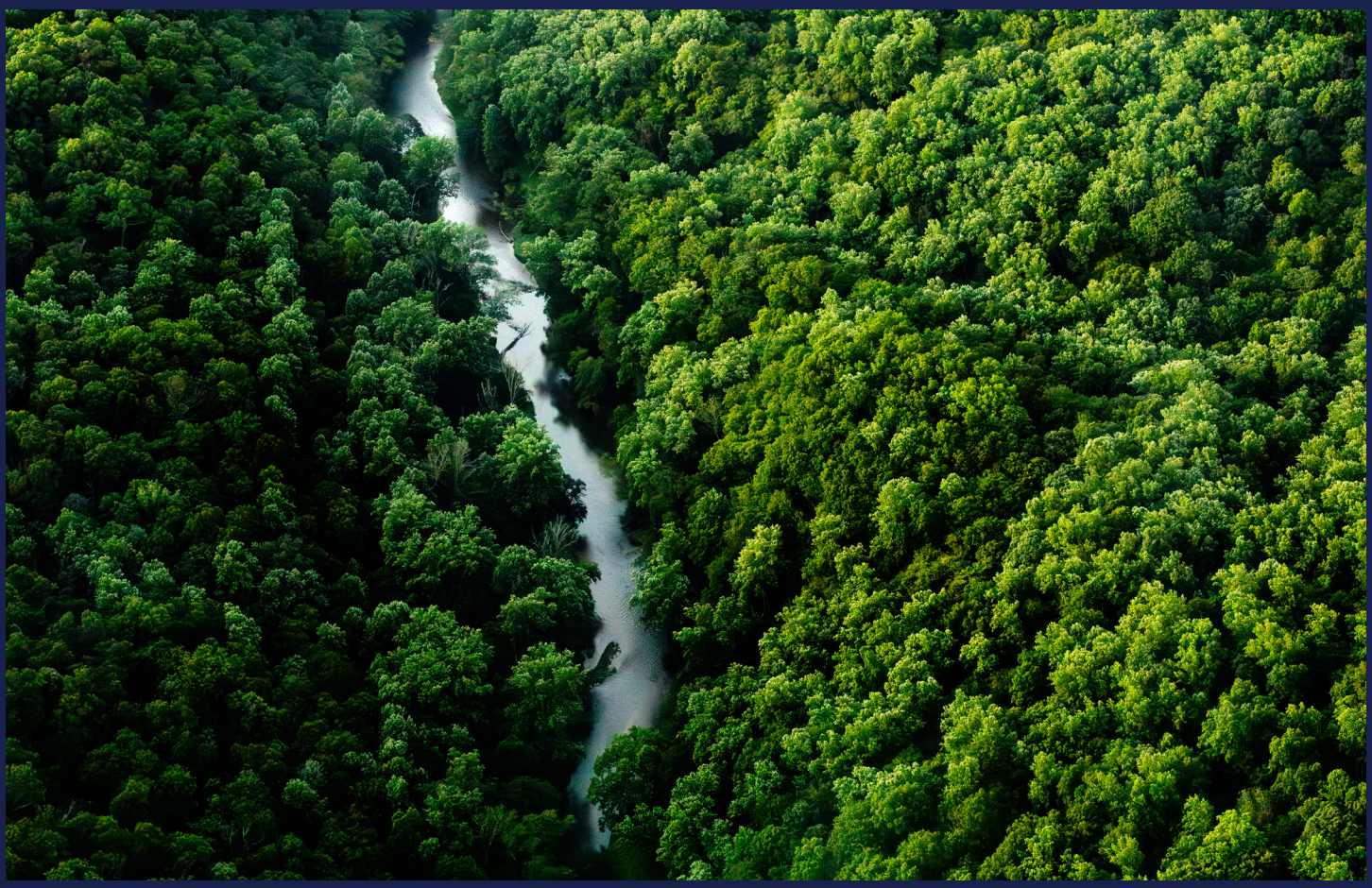
Samantha Puckett
Clean Water Program Director

Matthew Kierce
Chesapeake Monitoring Outreach Coordinator

The Izaak Walton League of America
707 Conservation Ln
Gaithersburg, MD 20878
www.iwla.org

A CRITICAL PATH FORWARD FOR THE CHESAPEAKE BAY PROGRAM PARTNERSHIP BEYOND 2025

July 2024



This draft has been prepared by the Beyond 2025 Steering Committee for public feedback. It may be revised before being provided to the Principals' Staff Committee for their consideration.

Chesapeake Bay Program
Science. Restoration. Partnership.

Table of Contents

A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025

Introduction

At its 2022 annual meeting, the Chesapeake Executive Council charged its Principals' Staff Committee to review progress toward achieving the 10 goals and 31 outcomes of the 2014 *Chesapeake Bay Watershed Agreement* and make recommendations for the future of the partnership, stating:

> *…this Executive Council charges 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…At our 2024 annual meeting, the PSC is to prepare recommendations that continue to address new advances in science and restoration, along with a focus on our partnership for going beyond 2025.*

The Chesapeake Bay Program partnership formed a Steering Committee with representatives from the signatories to the 2014 *Chesapeake Bay Watershed Agreement,* Goal Implementation Teams, Advisory Committees, participating federal agencies and non-governmental organizations. Beginning in June 2023, the Steering Committee convened its 29 members monthly to review, discuss and determine recommendations for Management Board and Principals' Staff Committee consideration. These recommendations are focused on providing a scope of work, or next steps, for the Chesapeake Bay Program as it prepares for the next chapter in its partnership beyond 2025.

As with any partnership, listening to a variety of perspectives, seeking middle ground and reaching consensus were crucial to forming the recommendations below. The Steering Committee came together as colleagues and partners, representing a diversity of organizations, perspectives and people, led by the common idea of a healthy, accessible and sustainable Chesapeake Bay and watershed with clean water, abundant life and conserved lands for the benefit, and through the engagement, of its people.

The public is invited to provide feedback on this draft report prepared by the Beyond 2025 Steering Committee, which reflects not only their thoughts and expertise, but also that of the many people who volunteered their time to help develop these recommendations. The report may be revised based on the received public feedback, prior to being presented to the Management Board and Principals' Staff Committee, as established in the Governance and Management Framework for the Chesapeake Bay Program. The revised report will aid the Principals' Staff Committee in providing recommendations to the Chesapeake Executive Council, fulfilling the charge established in October 2022.

In Part I of this report, the Steering Committee offers two overarching recommendations for consideration by the Management Board and the Principals' Staff Committee for elevation to the Chesapeake Executive Council. The Steering Committee concludes that the Chesapeake Bay Program partnership, under the guidance of the 2014 *Chesapeake Bay Watershed Agreement*, continues to deliver valuable progress, locally, throughout the watershed and for the Chesapeake Bay itself. To further progress while addressing the latest scientific data and emerging challenges, the Steering Committee has identified several additional recommendations for improving efforts in the areas of Science, Conservation and Restoration, and Partnership. These additional recommendations, found in Part II of this report, require more detail and, in the Steering Committee's view, merit further exploration by the partnership. Many of the recommendations proposed by the Steering Committee in

Part II can be pursued within the partnership's existing processes for prioritizing and strategizing efforts. The Steering Committee recommends consideration of all recommendations in this report.

Part I: Recommendations for Potential Consideration by the Chesapeake Executive Council

The Steering Committee offers the following potential Executive Council Actions for Management Board and Principals' Staff Committee review:

- **Executive Council Recommendation #1:** The Beyond 2025 Steering Committee recommends that the Chesapeake Executive Council affirm its continued commitment to meet the goals of the *Chesapeake Bay Watershed Agreement* and direct the Principals' Staff Committee to propose specific amendments necessary to effectively implement the *Watershed Agreement*.

    - At its 2024 meeting, the members of the Chesapeake Executive Council should each affirm their continued commitment to work together in partnership to meet the goals of the *Chesapeake Bay Watershed Agreement*.

    - The Chesapeake Executive Council should direct the Principals' Staff Committee, with support from the Management Board, Goal Implementation Teams, and Advisory Committees, to propose amendments to the *Watershed Agreement* necessary to incorporate new scientific understandings, to account for emerging challenges like climate change and more effectively engage the people living within the watershed. Any amendments to the *Watershed Agreement*'s vision, principles, preamble or goals should be prepared for consideration by the Chesapeake Executive Council at its 2025 meeting.

    - The Chesapeake Executive Council should direct the Chesapeake Bay Program to review all *Watershed Agreement* outcomes to ensure that each contributes to achieving partnership goals, provides clear direction and enables accountability or progress evaluation. The impacts of changing environmental conditions should also be considered as part of the outcome review. Any revisions to outcomes based on this review should be approved by the Principals' Staff Committee or elevated to the Chesapeake Executive Council. While not all outcomes will need revision, some reviews will likely result in consolidating, reducing, updating or replacing outcomes. Proposed revisions should be considered as they are being reviewed, with every effort to complete most reviews and revisions by the 2026 Executive Council Meeting.

- **Executive Council Recommendation #2:** The Beyond 2025 Steering Committee recommends strengthening the Chesapeake Bay Program by identifying ways to simplify and streamline the partnership's structure and processes, including potential changes to the Chesapeake Bay Program's Governance and Management Framework to ensure that partner commitments can be met.

    - The Steering Committee recommends that the Chesapeake Executive Council direct the Principals' Staff Committee to enhance partnership efficacy and transparency by streamlining its processes, modifying the partnership structure and improving adaptive

and science-based decision-making, all toward achieving a holistic vision of a healthy and resilient Bay and watershed.

- The aim of this recommendation is to ensure a program structure poised to implement the updated *Watershed Agreement* effectively and efficiently, acknowledging that existing structures, including the Management Board, Goal Implementation Teams, workgroups and action teams may likewise require streamlining to better meet partnership goals. The Chesapeake Bay Program should consider enlisting a third-party to facilitate, and should also ensure that cross-program coordination, communication and the need to work equitably and inclusively are interwoven throughout the organizational structure and activities of the partnership.

Additional Background

The *Watershed Agreement*'s vision, principles, goals, and outcomes should be reviewed to acknowledge and address emerging challenges impacting progress, apply new science and better connect the Chesapeake Bay Program's efforts with the benefits that this partnership aims to achieve for all people living, working in, or visiting the watershed. The *Watershed Agreement* identifies processes by which it can be amended, and some targeted amendments could improve the efficacy and efficiency of the partnership.

To ensure that the partnership remains relevant and is better positioned to realize its vision and goals, the partnership should carefully review the *Watershed Agreement* outcomes and determine if any outcomes need to be updated, combined, replaced or removed. Changes should reflect recent scientific reports and highlight continued emphasis on achieving water quality goals, the importance of conservation in addition to restoration, shallow water habitats, the impacts of climate change and benefits to the people who live, work and visit the area.

The multi-jurisdictional partnership to improve the health of the Chesapeake Bay and its watershed is valuable in its ability to harness the resources and expertise of all seven watershed jurisdictions, federal agencies, academic institutions, non-governmental organizations, private industry, local governments and individuals in the work of delivering a healthy resource as a natural endowment for current and future generations. To be effective in this mission, the Chesapeake Bay Program should ensure that its governance and structure is transparent, inclusive, equitable and organized to meet its goals, while reducing siloes and breaking down unnecessary complexity.

The partnership should continue to set targets, track progress and be mutually accountable for meeting meaningful science-based goals as specified in the *Chesapeake Bay Watershed Agreement*. As new and growing challenges like increased rainfall, higher temperatures, land use change and other known or unanticipated factors continue to complicate efforts to meet partnership goals, it is imperative that the partnership continuously improve its organizational capability to assess, respond, innovate and adapt.

Many of the recommendations detailed in Part II of this report and identified by the Steering Committee to improve progress towards meeting the partnership's goals do not require formal amendments to the *Watershed Agreement* or direct action by the Chesapeake Executive Council but they are, in the view of the Steering Committee, no less critical to charting a path forward for the Chesapeake Bay Program beyond 2025. The Steering Committee encourages the Chesapeake Executive Council to support the

partnership in further exploring and implementing these recommendations through existing structures and processes.

Recognizing our progress toward meeting the *Chesapeake Bay Watershed Agreement*

While this report focuses on actions to strengthen the partnership beyond 2025, it is important to recognize the many successes the partnership has achieved in meeting the outcomes of the 2014 *Chesapeake Bay Watershed Agreement* and to highlight the strength and value of continued partnership. The signatories of the 2014 *Chesapeake Bay Watershed Agreement* have worked diligently to reduce pollution to meet clean water goals, improve habitat for living resources, conserve land, expand stewardship and build technical expertise as the partnership strives to achieve the *Watershed Agreement's* 10 goals and 31 outcomes.

The partnership continues its concerted effort to do more and target actions to accomplish as much as possible leading up to and beyond 2025. These efforts have greatly benefitted from significant funding made available through federal and state budgets, as well as local and private investments.

At the 2023 Chesapeake Executive Council meeting, the Principals' Staff Committee provided an update on progress towards reaching the goals and outcomes in the *Chesapeake Bay Watershed Agreement*. Eighteen outcomes were reported to be on course or complete, with 11 outcomes off course and two uncertain pending future data updates. Of those off course, the Principals' Staff Committee committed to strengthening effort and investment in addressing nonpoint sources of pollution, forest buffers, urban tree canopy and both tidal and nontidal wetlands.

Notable partnership accomplishments include:

- **In 2023, partners planted the highest number of forest buffers since 2016.** While the goal of planting 900 acres of forest buffers per year is unlikely to be met by 2025, since 2019, the partnership has increased its plantings each year.

- **Chesapeake Bay Program partners have added 248 new public access sites throughout the watershed**, achieving 83% of the Public Access Outcome's target to open an additional 300 new public access sites before 2025. Efforts are being made to open these sites in areas that do not have access to green space or to ensure the sites are equitable and inclusive for all.

- **Since 1988, 30,562 miles of streams and rivers reopened to migrating fish**. The Fish Passage Outcome reached its 2025 goal of opening 1,000 miles of streams and rivers to support migratory fish populations nine years early in 2016. In 2020, the target for this goal was modified to open an additional 132 miles of streams and rivers by removing blockages like culverts and dams every two years leading to 2025.

- **As of 2022, Chesapeake Bay Program partners have protected nearly 1.64 million additional acres of land throughout the watershed.** Overall, there are now approximately 9.1 million acres of conserved land, representing 22% of lands throughout the entire watershed.

- **Partners have successfully worked to maintain the blue crab fishery.** While subject to annual natural variation, female blue crabs have stayed above the threshold of what is needed for a healthy blue crab population since 2014. Partners regularly come together to review pressures impacting blue crabs and make sound management decisions to ensure a healthy fishery.

- **Submerged Aquatic Vegetation is expected to show a strong rebound in 2024,** while still not expected to meet its 2025 target. This habitat was almost obliterated by Hurricane Agnes over 50 years ago. In 2022, the Susquehanna Flats had 10,000 acres of submerged aquatic vegetation.

- **Wastewater treatment plants have been updated throughout the watershed**, meeting the sector's goal to help reduce the amount of nitrogen, phosphorus and sediment pollution entering the Chesapeake Bay in 2016—nine years before its 2025 target.

- **Since 2014, the investment in the implementation of agriculture conservation practices is expected to prevent more than 11.7 million pounds of nitrogen from being delivered to the Chesapeake Bay, as estimated from the partnership's Phase 6 suite of modeling tools.**

- **Since 2014, 1,572 acres of oyster habitat have been restored in 11 Chesapeake Bay tributaries.** Partners have completed 1,572 acres of large-scale oyster restoration since 2014. Eight out of 10 restoration sites are now considered complete, and in 2019, Virginia completed an 11th bonus tributary.

- **Since 2022, the partnership has added five monitoring stations in rivers and six in tidal waters.** These are already providing better and more frequent water quality data in areas of interest.

Part II: High-level Recommendations and Considerations for the Chesapeake Bay Program

In October 2022 the Chesapeake Bay Program Executive Council (EC) issued a charge https://www.chesapeakebay.net/what/publications/executive-council-charge-to-the-principals-staff-committee-charting-a-course-to-2025-and-beyond to the Principal Staff Committee, recognizing that the 2025 deadlines established for some goals and outcomes under the 2014 *Watershed Agreemen*t would likely not be met, while also recognizing that data collection and analysis, science and changing environmental conditions must be re-evaluated and included in a critical path for the partnership's work beyond 2025. The EC Charge organized nine strategic subjects, listed below, for review and consideration within three overarching topics of Science, Restoration and Partnership, with the expectation that at the 2024 annual EC meeting, the PSC will present recommendations addressing how the partnership will continue to include new advances in science and restoration, along with a focus on partnership priorities moving beyond 2025.

Chesapeake Bay Program, Executive Council Directive, October 2022 (Abbreviated)

Science

- Identify new and emerging scientific data and studies which could modify our progress reporting and adaptive management approach, as well as the goals and outcomes under the *Watershed Agreement*.
- Enhance our monitoring and reporting capabilities to improve our understanding of existing conditions and trends.
- Define the existing and emerging challenges (e.g., climate change conditions, increasing growth, diversity, equity, inclusion and justice considerations) to accomplishing the partnership's work under the *Watershed Agreement*, and how addressing those challenges might alter our collective restoration priorities, including the possibility of extending the target date for completing restoration of water quality beyond 2025.
- Identify opportunities to leverage action across multiple goals and outcomes of the *Watershed Agreement.*

Restoration

- Develop and begin to implement a communication strategy that identifies key partnership successes, associated ecosystem improvements and areas where more effort is needed.
- Provide snapshots of outcome attainability under the *Watershed Agreement* (e.g., which outcomes are likely to be met by the date(s) set by the partnership, which won't, and why) and options for communicating these snapshots to demonstrate progress in achieving our outcomes and the remaining work to be done, including gaps to be addressed.

Partnership

- Focus on moving beyond 2025 by seeking ways in which restoration can be relevant to all communities within the watershed.
- Assess the overall partnership to determine whether we are effectively hearing from and listening to all stakeholders and have systems of evaluation and decision-making to enable meaningful action and allocation of partnership resources.
- Based on this assessment, develop recommendations for potential improvement.

In response to extensive dialogue and direction at the PSC level, the Management Board established a Beyond 2025 Steering Committee (Steering Committee), comprised of representatives from the signatories to the 2014 *Chesapeake Bay Watershed Agreement,* Goal Implementation Teams, Advisory Committees, participating federal agencies and non-governmental organizations. As the Steering Committee commenced its work in 2023, it was recognized that additional challenges and emerging issues continued to arise since the 2022 EC Charge was issued and should also be included and addressed in the response to the EC Charge. Together the Steering Committee members identified and

prioritized their initial work around five topic areas, in order to capture (a) the scope of the original EC Charge and (b) the breadth of new advancements in science, restoration and structure of the partnership. Thus, five Beyond 2025 Small Groups were established around Clean Water, Climate, Healthy Watersheds, People, and Shallow Water Habitats. Extensive feedback, public input, analysis and synthesis of ideas, data, trends, best practices, and lessons learned contributed to and resulted in five Findings from each small group (25 total Findings), provided in Part III of this report, and ultimately further synthesized by the Steering Committee to guide immediate next steps.

Concurrently, the EPA Chesapeake Bay Program Office funded an independent consultant, the Eastern Research Group (ERG), to perform a program evaluation for the Steering Committee's consideration. ERG was tasked with answering three evaluation questions centered on program structure and effectiveness, stakeholder understanding and support, and outcome attainment. ERG reviewed key documents identified by the Steering Committee, held a series of groups discussions across the Chesapeake Bay Program's organizational structure, and performed an assessment of the *Watershed Agreement*'s 31 outcomes. The observations and conclusions outlined by the ERG Report, provided in Part III of this report, further informed the Steering Committee's considerations and synthesis of the Small Groups' findings, as demonstrated throughout this document.

This document seeks to succinctly capture the common themes that emerged throughout the small group findings, the ERG evaluation, and Steering Committee discussions -- organized under the EC Charge's three subject areas of Science, Restoration, Partnership. In doing so, this report aims to identify the most relevant, pressing and impactful recommendations that will maximize benefits and results across the work of the Chesapeake Bay Program, while improving the way the partnership accomplishes its work.

Science

Rigorous science is the backbone of the Chesapeake Bay Program's restoration and conservation efforts. This scientific foundation informs policy decisions and strives to ensure resources are targeted in areas to accelerate progress. The partnership faces a number of existing and emerging challenges that require integration of new findings, fostering collaboration among researchers across the watershed and in different disciplines, and prioritizing areas where knowledge gaps exist. By remaining grounded in science, the Chesapeake Bay Program can ensure its future efforts are based on the most up-to-date knowledge.

1. Optimize monitoring, modeling, and analysis. Monitoring allows Chesapeake Bay Program partners to assess and evaluate progress from restoration and conservation efforts, while identifying gaps where more attention is needed in the future. **The Steering Committee recommends developing a long-term strategy to maintain the integrity of core monitoring networks and pursue opportunities for enhancements in monitoring** (Monitoring Review). Monitoring is critical for evaluating progress and identifying challenges towards meeting the goals and outcomes of the 2014 *Chesapeake Bay Watershed Agreement*. However, monitoring is insufficient for many partnership outcomes, and a majority of the outcomes do not follow the SMART (specific, measurable, achievable, relevant, and time-bound) criteria, lacking measurable qualities (ERG F11, Monitoring Review). **The Steering Committee recommends that any updated outcomes have a clear target for reporting and an existing monitoring plan or coincident development of a fundable monitoring and analysis plan to support assessment.** These factors are essential for ensuring a return on investment toward achieving a healthier Bay and watershed.

10-1

10-3

The Steering Committee recommends better utilizing our monitoring and assessment capacity, with increased emphasis towards characterizing watershed health at the local level as well as for the entire basin (HW1). Characterizing watershed health at a local scale can enhance cooperation and coordination of monitoring across organizations, emphasize local priorities, and inform implementation efforts done at the local level while providing a more holistic understanding of the watershed and Bay condition (HW1; CW3). Additionally, there is a wealth of state, local, and participatory monitoring data that may be used for learning, status and trends analyses, and model validation (CW3). **The Steering Committee recommends incorporating multiple lines of evidence in existing and new tools and models, or linking multiple models, to evaluate progress towards multiple goals** (CW1, SW2, HW5, STAC Climate).

10-2

Incorporating various types of data (water quality monitoring, living resources data, social science) into tools and models would address multiple Chesapeake Bay Program outcomes, strengthen the connectivity, and offer a more complete picture of Chesapeake Bay and watershed health. **The Steering Committee also recommends modeling efforts integrate climate change projections to better understand changes across multiple indicators and inform strategic planning at the local and state level** (C1, C2, C3, C4; HW1; SW2).

2. Integrate existing and new science findings in decision making, resource allocation, and communication strategies. **The Steering Committee recommends adaptation to the latest scientific findings as well as improved communication on how these findings are integrated into decision making, resource allocation, and management strategies.** Many ongoing efforts within the partnership, like the Science and Technical Advisory Committee's Comprehensive Evaluation of System Response (CESR) report, have identified emerging scientific data and insights. These insights offer opportunities to accelerate progress by, for example, incentivizing performance over counting practices (CW1; EC

11-1

Charge), and prioritizing water quality attainment and living resource response in shallow and open waters, shifting focus away from solely the deepest portion of the Bay. By actively integrating these scientific findings into the Program's decision-making, resource allocation, and management strategies, the partnership can optimize its approach.

The Chesapeake Bay Program not only conducts cutting-edge research but also translates those findings into reports. Research should inform communication strategies that connect the health of the Bay to the well-being of people (P2)**.** The Program could more effectively link the partnership's work to the tangible benefits it provides for people around topics such as soil health, ecosystem services, and shallow water habitats to inspire broader engagement and action (C5, C4; SW4).

11-2

The Program's data, scientific findings, and reports are vast, so the **Steering Committee recommends improved access to information and coordination among organizations to share data** (ERG F12, ERG C6; CW3; HW1). This includes creating an accessible data repository and fostering better coordination among monitoring programs at all levels. *ChesapeakeData* could support this need by serving as a central point of access to data resources and decision-support tools to promote collaboration and data sharing across multiple agencies and organizations.

3. Prioritize research that addresses knowledge gaps in existing and emerging challenges. The **Steering Committee recommends enhancing the partnership's understanding of anticipated changes, and how conservation practices respond to those changes, by prioritizing climate science and research on land use change** (EC Charge)**.** Climate change and development is rapidly and significantly altering the Chesapeake Bay and its watershed. This requires a holistic biophysical and social science approach to better understand the interaction of these issues together and with other factors. The partnership should consider the impacts of rising temperatures on ecosystem health (STAC), the role and design of nature-based solutions and green infrastructure to mitigate the impacts of climate change (C3, C4; Climate Directive; HW2), the impacts of a changing climate on restoration practices (CW2; SW1), vulnerability assessments for living resources, habitats and communities (C2; SW3), and synthesizing resilience strategies that maximize the ecosystem services and benefits (C3).

The Steering Committee also recommends a greater focus on conducting social science research and applying its findings to ensure restoration and conservation efforts align with the well-being of people (ERG F8, C7)**.** Social science should be applied where it can have the greatest overall impact and applied strategically rather than opportunistically (P5). Prioritizing the understanding of people's values and motivations can help drive sustainable natural resource use, management, and decision-making as well as ensure equitable inclusion of all communities in restoration and conservation efforts (CW1).

The Chesapeake Bay Program's capacity on climate and social science is constrained by limited personnel and funding. The partnership can enhance Chesapeake Bay Program knowledge and improve decision-making by expanding the Program's climate science support team and social science staff and dedicating resources for the strategic application of these topics (ERG C7; C1, C4; P5). By investing in these areas, the partnership can bridge the gap between knowledge and action.

Restoration and Conservation

Since its inception, the Chesapeake Bay Program has worked to restore the Bay and its living resources by addressing water quality concerns. However, a changing climate and a growing human population in the watershed have challenged the Program's progress. The Bay of the future will be different from the Bay of the past and these changing conditions will make it more difficult to reach our goals (CESR). A holistic restoration approach continues to be necessary and is increasingly important in the context of emerging challenges. Working strategically to improve the Program's holistic approach to restoration will help ensure our collective efforts are resilient and have the intended benefits for the Bay and the watershed's ecosystems and communities.

1. Support System-Scale Conservation and Restoration Planning and Implementation for Habitats and Communities. Given the land use pressures associated with a growing population, **the Steering Committee recommends that the Bay Program elevate Conservation as a key guiding pillar alongside Science, Restoration and Partnership** (HW 4). Taking a more holistic, systems approach requires broadening our vision of restoration to incorporate management, stewardship and conservation of land and aquatic environments. Conservation, defined here as protection from development and other land use transitions, is much cheaper than restoration and can help ensure the durability of investments in water quality and habitat restoration. Conservation and stewardship of land and aquatic environments can support watershed health, expand and enhance publicly accessible natural areas and ensure the resilience of ecosystems that provide clean water, store carbon, and provide numerous other ecosystem service and socio-economic benefits to local communities (C3, HW4). The partnership should identify mechanisms to further integrate conservation and stewardship throughout the Program.

In addition to sustaining ecosystem-wide management, **the Steering Committee recommends planning for the restoration and conservation of nearshore habitats, inclusive of tributary rivers and streams– some of the most important places for people and the most productive habitats for living resources** (CESR, P2, SW1). Emphasizing the social, economic and ecological benefits of restored, resilient and connected shallow water habitats would strengthen the connection between people and habitats and promote proactive approaches to climate adaptation (C4; SW1, SW4). In urban areas, this may require intentional efforts to reestablish habitats and reconnect population centers with local waterways. However, it is essential to understand and plan for the changes these habitats will undergo due to climate change, including rising temperatures and water levels, to develop strategies to address vulnerabilities and sustain ecosystem function (C1, C4).

2. Review and, where necessary, revise existing goals, outcomes and management strategies to more effectively guide the partnership's restoration and conservation efforts beyond 2025. The partnership should apply recent science and lessons learned through the Strategy Review System to identify the ongoing and emerging challenges impacting our success and consider if goals and outcomes need to be modified to better account for emerging challenges. **The Steering Committee recommends reviewing and adapting the partnership's portfolio of outcomes as needed to be more compatible with anticipated future landscape conditions, accounting for climate, population growth and projected land use change** (C1; SW1, SW2). In some cases, new or refined management strategies could be developed for existing goals and outcomes to address emerging challenges (C3, C4, C5).

The Steering Committee recommends streamlining goals and outcomes, as well as overall partnership structure, to improve the integration, efficacy and efficiency of restoration and conservation efforts.

This could be done by reducing the number of medium- or long-term outcomes to better focus efforts (ERG C2) or by modifying and consolidating interconnected goals and outcomes to achieve greater collaboration, integration and efficiency (ERG C4; HW1, HW2, HW5). For goals and outcomes maintained in an amended agreement, time horizons and targets should be modified for off-track outcomes, including exploring a phased implementation of the TMDL (CW2). Some foundational off-track outcomes, like forest buffers, tree canopy, and wetlands, will require new management strategies and continued prioritization to accelerate progress. For outcomes that have been achieved, strategies should be developed to ensure continued success, new targets should be identified where appropriate, and any amendments should ensure restoration priorities reflect the needs of the public (P2).

3. Improve the Program's holistic approach to planning, prioritization, progress-tracking and accountability. Adopting a more holistic approach to address emerging challenges requires a strategic approach both before and after restoration practices are implemented on the ground. More strategic planning and prioritization could optimize the impact of our restoration investments and enable leveraging new funding sources. **The Steering Committee recommends developing and adopting approaches to better incentivize practices that maximize benefits to living resources and people.** Many water quality BMPs can also deliver ecosystem service benefits for climate mitigation, ecosystem adaptation, community resilience, regenerative food systems, environmental justice and more, but only if their implementation is prioritized and targeted to effectively address local environmental and community concerns (C2, C3, C4, C5; CW5; SW 1, SW2, SW3, SW5). At the same time, a more holistic approach can facilitate evaluating tradeoffs between multiple objectives when needed (C3, SW2).

The Steering Committee recommends enhancing the local benefits of Chesapeake restoration and conservation by improving alignment with regional, state and local plans and priorities (CW2, CW5). Improving collaboration with networks of local partners and planners would facilitate both the development of restoration and conservation approaches that align with local priorities and where appropriate, the incorporation of watershed actions into local and river/tributary planning processes (HW2, SW3). Better local engagement would further increase outcome achievement by shaping restoration and conservation approaches that are co-designed with communities and reflect the local context, including current environmental and socioeconomic conditions and needs (P5, SW3).

The Steering Committee recommends improving progress-tracking and accountability to further support efforts to adaptively manage, to better target and prioritize resources and to provide technical assistance and communication of outcomes. The partnership should evaluate lessons learned through the Strategy Review System, identify effective approaches for improving progress-tracking and accountability, and provide additional federal funding as needed to support any additional monitoring or reporting requirements. This could include developing a tiered or phased implementation approach for meeting tidal water quality standards, assisting with data-driven decision-making, and targeting lagging outcomes and critical or vulnerable habitats (CW2 CW3, HW1; SW1, SW3). The Water Quality Accountability Framework could also be revised to increase emphasis on measured outcomes and to incentivize innovative approaches to address stressors and target nonpoint sources of pollution (CW1)**.** Shifting to a more transparent, multi-objective accountability system based on measured outcomes could better track a wider range of efforts supporting partnership goals (CW4, HW5, SW2, SW5) and enable improved outcomes under conditions of uncertainty (C1).

13-1

Partnership

The Chesapeake Bay Program is a long-standing regional partnership between states, federal agencies and other partners that guides the restoration and protection of the nation's largest estuary. The partnership is focused on moving beyond 2025 by adaptively managing how we work together and by seeking new ways in which restoration and conservation can be relevant to more communities within the watershed. To meet these ambitious goals and produce lasting results, the partnership needs to adopt a systems approach to governance, utilize a partnership of networks strategy for capacity building, broaden the scope of involved communities and improve communications and transparency.

1. Adopt a systems approach to streamline governance and structure. **The Steering Committee recommends that the partnership contract an independent party to help review and revise the Chesapeake Bay Program's governance and structure.** With the support of an independent systems expert, the partnership can create an updated logic model that works backward from the Goals and Outcomes to their corresponding actions, incorporating a theory of change to inform linkages between actions and Goals and Outcomes (P1; ERG C1). The partnership should also seek to simplify complexity by focusing the organizational structure (ERG C3, ERG C4), and should consider cross-program coordination, cooperation, and transparency to streamline logistics, increase knowledge sharing, and eliminate silos (ERG C1, ERG C2). Additionally, strong internal collaboration and communication within jurisdictions can increase cross program coordination and in turn create synergies and increased innovation. This reevaluation should also adequately balance product and process, ensuring that both are equitable.

The Steering Committee recommends the partnership revisit its adaptive management principles to better enable efficient and effective decision-making. To increase confidence and transparency in decision-making, the Program can improve engagement with Advisory Committees and with the relevant leaders and subject matter experts accountable to their jurisdiction or signatory for each Goal area, ensuring that all outcomes have decision-makers at the table (ERG C5).

The partnership should evaluate the successes of the Strategy Review System (SRS) and strengthen its areas of need. The SRS is the Bay Program's adaptive management framework used to track progress towards meeting each of the outcomes in the *Watershed Agreement* and to adjust course where needed (ERG C6, ERG C7; P1). The SRS needs to be more adaptive, embracing its role within the partnership's theory of change and logic model. The partnership should strategically apply relevant expertise at the Management Board and allow for flexibility within the framework. As part of the SRS, a clear process for assessing current and future vulnerabilities and changing conditions is necessary to provide the tools for adaptive planning (ERG C7; SW 3).

2. Enhance Capacity Building and Administrative/Technical Assistance through Local Networks. **The Steering Committee recommends enhancing the Program's structure so it can better serve as a partnership of networks that connect local implementors with data, tools, resources and technical assistance that build capacity at the local level.** Developing a more holistic, locally engaged approach to restoration and conservation will require additional capacity across the partnership. Coordinated capacity building and technical assistance through local networks can help leverage resources and expertise to address emerging challenges and to more comprehensively and efficiently drive implementation of practices that support the Programs' goal and outcomes (CW 3, CW4, CW5; HW1, HW3, HW 4; SW 3, SW5). The partnership could begin by supporting jurisdiction agencies and other

partners in establishing and deepening collaborative relationships with strategic networks of local liaisons that provide administrative and technical expertise to on-the-ground partners (CW5, HW3). Through these local liaison networks, federal and state partners can connect local implementors and decision-makers with interdisciplinary tools, data and other resources that drive conservation and restoration action (HW3, HW4; ERG C6). Partnership with these networks can also be leveraged to create feedback loops for sharing bottom-up insights that support learning from the local level (P2, P4). Long-term, the partnership should identify opportunities to resource strategic networks for sustained partnerships that create durable impact (P4; HW4).

3. Strengthen the Program's capacity to ensure watershed restoration is relevant to all communities. **The Program and partnership should commit to inclusive and meaningful engagement of people and communities that have been historically underrepresented, under resourced, and underserved**. The partnership should increase the number of historically excluded communities involved, collaborate with these communities to create varied and meaningful pathways for participation, and increase the quality and authenticity of community engagement. This includes collaborating with the watershed's indigenous communities on pathways for increased involvement in the Program (ERG C10). In creating these pathways, the partnership should ensure engagement is a benefit not just for the Program, but for the communities and groups engaged, and that information exchange is emphasized over information extraction.

15-1

The Steering Committee recommends, in response to the Executive Council statement in support of diversity, equity, inclusion, and justice, that the partnership institutionalize and actualize the Program's Diversity, Equity, Inclusion and Justice Implementation Plan. The diversity of the partnership should reflect the diversity of the watershed it is working to conserve and restore**.** The partnership should begin by assessing barriers to activating and implementing the existing DEIJ Implementation plan; with these considerations accounted for, the partnership should incorporate DEIJ into the program's foundation via the DEIJ Implementation Plan. This will require the necessary capacity and financial resources for effective and sustained implementation of the plan, including working alongside and through trusted sources and ensuring the necessary staffing resources are in place (C2; P2, P3). As new programs, structures or priorities are formed, ensure that the commitments of the DEIJ Implementation Plan are incorporated through all relevant areas of the partnership's efforts, not limited to the Diversity Workgroup.

4. Enhance Communications and Transparency to Foster Long-term Success. **The Steering Committee recommends prioritizing and improving communications and transparency with the partnership's outreach and engagement activities to spur stewardship, drive restoration and conservation momentum and ensure long-term Program efficacy.** The partnership should continue to strengthen relationships between people and ecosystems by regularly communicating key partnership successes, associated ecosystem improvements and socio-economic benefits garnered from achieving *Watershed Agreement* goals (ERG C5, ERG C6; SW4). This includes identifying key audiences and conducting thorough, social science research to fully understand local priorities, needs and challenges (P5) before identifying how and when the partnership wants to engage with these constituencies. Partners can also better facilitate information exchange by expanding state and federal agency communications staff, engaging more deeply with the Program's Advisory Committees, and, as appropriate, utilizing coordinated, tailorable communications to amplify impact throughout the entire watershed. At all levels of the partnership, the Program should enhance pathways for local networks, Advisory Committees and

others to provide feedback on science and policy development to ensure that the Chesapeake Bay Program is effectively hearing from and listening to stakeholders. The partnership should strengthen its commitment to transparency both externally, particularly for stakeholders that have historically been excluded from the Program because of overly complex systems and processes, and internally by relying on proven social science best practices and processes in decision-making and fostering a collaborative organizational culture that includes diverse voices (ERG C5, ERG C7; P5).

Part III: Source Materials

Materials are held on https://www.chesapeakebay.net/who/group/beyond-2025-steering-committee

- *Beyond 2025 Small Group Findings and Considerations: https://d18lev1ok5leia.cloudfront.net/chesapeakebay/documents/Beyond-2025-Small-Group-Findings-and-Considerations_FINAL.pdf*

- *Chesapeake Bay Program Beyond 2025 Evaluation:* https://d18lev1ok5leia.cloudfront.net/chesapeakebay/documents/CBP-Beyond2025-Final-Report-for-SC-06-18-24.pdf

- *Charting a Course to 2025: https://www.chesapeakebay.net/what/publications/charting-a-course-to-2025*

- *Rising Watershed and Bay Water Temperatures: Ecological Implications and Management Responses:* https://www.chesapeake.org/stac/document-library/rising-watershed-and-bay-water-temperatures-ecological-implications-and-management-responses/

- *Enhancing the Chesapeake Bay Program Monitoring Networks: https://d18lev1ok5leia.cloudfront.net/chesapeakebay/documents/Enhancing_the_Chesapeake_Bay_Program_Monitoring_Networks_A-Report_to_the_Principals_Staff_Committee.pdf*

- *Chesapeake Governance Study: Report of 2021 Decision-Maker Interview Results: https://digitalcommons.dartmouth.edu/facoa/4314/*

- *Recognizing Political Influences in Participatory Socio-Ecological Systems Modeling: https://sesmo.org/article/view/18509/18038*

- *Linking Soil and Watershed Health to In-Field and Edge-of-Field Water Management: https://www.chesapeake.org/stac/document-library/linking-soil-and-watershed-health-to-in-field-and-edge-of-field-water-management/*

- *Using Local Monitoring Results to Inform the Chesapeake Bay Program's Watershed Model: https://www.chesapeake.org/stac/document-library/22313/*

- *Cafe Summaries and Report Products from the Chesapeake Bay Program Strategy Review System's 3rd Cycle Biennial Meeting: https://www.chesapeakebay.net/what/event/chesapeake-bay-program-srs-biennial-meeting*

- *2014 Chesapeake Bay Watershed Agreement: https://www.chesapeakebay.net/what/what-guides-us/watershed-agreement*

- *Chesapeake 2000: https://d18lev1ok5leia.cloudfront.net/chesapeakebay/documents/cbp_12081.pdf*

- *Governance and Management Framework for the Chesapeake Bay Program: https://www.chesapeakebay.net/what/publications/chesapeake-bay-program-governance-document*

- *Achieving Water Quality Goals in the Chesapeake Bay: A Comprehensive Evaluation of System Response: https://www.chesapeake.org/stac/cesr/*

- *Enhancing Chesapeake Bay Partnership Activities by Integrating Social Science: https://cbtrust.org/wp-content/uploads/UMCES_Social_Science_Final_Report_w_Apps_2.7.23.pdf*

- *Retrospective on Lessons Learned from the Chesapeake Bay Program Strategy Review System's 3rd Cycle with Suggested Adaptations to Address Issues: https://d18lev1ok5leia.cloudfront.net/chesapeakebay/documents/2.-Read-Ahead-Retrospective-on-Lessons-Learned-from-the-CBP-SRS's-3rd-Cycle_5.5.23_2023-05-09-175030_ddta.pdf*

- *Advancing Monitoring Approaches to Enhance Tidal Chesapeake Bay Habitat Assessment: https://www.chesapeake.org/stac/document-library/enhancing-the-chesapeake-bay-program-monitoring-networks-a-report-to-the-principals-staff-committee/*

- *Using Ecosystem Services to Increase Progress Toward, and Quantify the Results of, Multiple Chesapeake Bay Program Outcomes: https://www.chesapeake.org/stac/document-library/using-ecosystem-services-to-increase-progress-toward-and-quantify-the-benefits-of-multiple-cbp-outcomes/*

10-1 Aug 9, 2024 at 1:22 PM, J kickenson
Why only updated outcomes? Monitoring programs and funding should be evaluated for all outcomes.

10-2 Aug 9, 2024 at 1:22 PM, J kickenson
Models must incorporate climate change projections! Is this not already the case?

10-3 Aug 9, 2024 at 1:22 PM, J kickenson
Yes, and also support environmental justice efforts.

11-1 Aug 9, 2024 at 1:22 PM, J kickenson
Absolutely support this!

11-2 Aug 9, 2024 at 1:22 PM, J kickenson
Indeed. This data repository should not just provide interactive tools, but also access to raw data including downloads to enable detailed analysis and integration with other data sets not necessarily envisioned by the Bay Program.

13-1 Aug 9, 2024 at 1:22 PM, J kickenson
Should, not could. This is essential to both measure actual, not theoretical, improvements, and also to improve the credibility of the program with stakeholders.

15-1 Aug 9, 2024 at 1:22 PM, J kickenson
Incorporate local communities' knowledge, observations and priorities in research and monitoring. Efforts underway in Arctic research and monitoring may be models. See for examples:

Local and Indigenous Community Engagement and the Co-Production of Knowledge in NSF-Funded Arctic Science and Research (https://www.nsf.gov/geo/opp/arctic/ace/)

Oceans North (https://www.oceansnorth.org/en/what-we-do/arctic-science-indigenous-knowledge/)

IARPC Collaborations (https://www.iarpccollaborations.org/teams/Participatory-Research-and-Indigenous-Leadership-in-Research)

Arctic Observing: Indigenous Peoples' History, Perspectives, and Approaches for Partnership (https://www.uaf.edu/caps/our-work/Carlo_Arctic-Observing_Indigenous-Peoples-History_CAPS_5MAR2020.pdf)

Local Government Advisory Committee
to the Chesapeake Executive Council

August 30, 2024

Chesapeake Bay Program
1750 Forest Drive, Suite 130
Annapolis, MD 21401

Dear Beyond 2025 Steering Committee,

On behalf of the Local Government Advisory Committee (LGAC) to the Chesapeake Bay Executive Council, thank you for your tireless commitment to protecting and restoring our shared water resources. We are particularly grateful for the time and attention that you have devoted to meeting the 2022 Executive Council charge '*to prepare recommendations that continue to address new advances in science and restoration, along with a focus on our partnership for going beyond 2025*'.

LGAC's mission is to share the views and insights of local elected officials with state and federal decision makers and enhance the flow of information among local governments. Our 24 gubernatorial appointed members represent counties, towns, cities, boroughs, and townships from across the watershed. At this pivotal moment in the Chesapeake Bay watershed restoration effort, LGAC convened a *Local Government Forum: Looking Beyond 2025* on July 11, 2024 that included more than 73 local officials and invited guests (see full details in the Forum Report and Appendices). LGAC members also hosted four roundtable discussions during the public feedback period that engaged more than 70 additional local government officials and staff from around the watershed. These robust discussions with a broad range of local government stakeholders informed LGAC's comments on the draft report.

We respectfully offer the following feedback on the draft Beyond 2025 Steering Committee report, titled *A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025* (the Report):

1. **LGAC supports Executive Council Recommendation #1** (pg. 3)**.** Local governments need steady guidance from federal and state partners. By affirming their continued commitment to the Chesapeake Bay Watershed Agreement (the Agreement), Executive Council members can ensure local officials have clear and consistent direction around water resources management and offer peace of mind that the time and money they have already invested will not be wasted. Additionally, strategic amendments to the Agreement that have been thoroughly vetted with stakeholders, including local governments, have the potential to improve the local benefits that matter most to our constituents.

Laura Cattell Noll, Director, Local Government Initiative / LGAC Coordinator
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Chesapeake Bay Program
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ALLIANCE for the Chesapeake Bay

2. LGAC supports a more robust role for the Advisory Committees that includes deeper engagement with state and federal decision makers (pgs. 13-14). Local governments are essential partners in watershed restoration and protection. Without the buy-in and support of local elected officials, the Chesapeake Bay Program Partnership (the Partnership) will not achieve its vision, as outlined in the Agreement. LGAC remains committed to its role as a strong voice for the more than 1800 local governments within the watershed and stands ready to forge deeper collaborative relationships with state and federal leaders, including, but not limited to, the Principals' Staff Committee. As the Partnership moves Beyond 2025, LGAC and our local government partners continue to need a dedicated seat at the table.

3. LGAC recommends using plain language in the Report. LGAC members understand and appreciate the scale and complexity of the Beyond 2025 draft Report. A vast amount of information was presented in the compilation of this draft. If the intention of the Report is to achieve a broader circulation than the Executive Council and the Principals' Staff Committee, LGAC would caution that the complicated language presented in the Report must be simplified and refined to effectively reach the appropriate audience. This could be accomplished through a full rewrite, a plain language executive summary, and/or short recaps under each section. As the Partnership moves into the implementation phase and embarks on broader stakeholder engagement, succinct and approachable language will be more important than ever.

4. LGAC recommends revising the definition of conservation (pg. 12). The current definition of conservation in the report, '*protection from development and other land use transitions,*' does not adequately balance other local government priorities and is out of line with industry standards. Local governments understand the value of conserving forests and farmland to maximize benefits for current and future generations. However, local officials must also consider other community priorities, like affordable housing, transportation systems and redevelopment. The Partnership should consider convening a group of informed conservation-minded professionals and relevant stakeholders to craft a targeted, easy to understand definition that prioritizes residents' needs. This revised definition for conservation should include 'smart growth' principles that balance development and land preservation.

5. LGAC asserts the importance of local land use authority. Local control of land use decisions is a central responsibility of county and municipal governments throughout the watershed, as codified in state code and constitutions. Local self-determination in land use decisions ensures that constituents have a meaningful voice in the future of their community. The draft report suggests '*improving alignment with regional, state and local plans and priorities*' (pg. 12). The report is silent on whether such alignment would be 'top-down' or 'bottom-up'. Given local governments' land use authority, it would be most appropriate for regional, state, and federal plans to support local priorities.

6. LGAC strongly supports the need for more local government technical assistance (pg. 13 - 14). We have long highlighted the challenge of technical capacity gaps within local governments, including in a 2018 Local Government Forum Report: Filling Gaps to Advance WIP Implementation (2018 Forum Report) and in our 2023 Annual Recommendations to the Executive Council. Small, under-resourced local governments continue to have the greatest technical and administrative capacity needs, especially

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around identifying, applying for and managing new federal funding. Any expansion of technical assistance to local governments should utilize an approach that prioritizes relationships with local governments through existing trusted networks (like municipal leagues, county associations, council of governments, planning commissions, etc). Whatever term is used for this approach, LGAC wants to emphasize that the key element is *'a connected individual who possesses a wide range of knowledge and skills related to water resources planning and management, including some capacity related to technical assistance, finance, planning, project management, grant writing, etc. They facilitate implementation through the engagement of local governments and stakeholders and provide credible, consistent, convenient, and cost-effective technical assistance'* (see 2018 Forum Report). As the Partnership moves into the implementation phase, LGAC is eager to consult on the development of local government technical assistance programs and stands ready to support a rollout of these programs, with the goal of utilizing new social science best practices to scale-up our collective impact.

7. **LGAC strongly supports additional federal and state funding for implementation.** A core challenge is that the scale of federal and state investments is not sufficient to meet the goals and outcomes of the Agreement. LGAC is concerned that this gap could lead to new regulations or mandates for local governments without additional state or federal funding to cover those increased costs. Local governments are ready and willing to support watershed protection and restoration; we simply need the resources to be true partners in these efforts. Increased funding is absolutely fundamental to open the door to partnership with local governments and to scale-up implementation actions.

If adequately addressed, the above comments and recommendations will make the draft Report stronger and more impactful. As your Advisory Committee, we strongly recommend that the Partnership, including the Management Board, the Principals' Staff Committee, and the Executive Council build on the progress of the Beyond 2025 Steering Committee and accept the revised Report.

Local government's involvement, perseverance and initiative are paramount ingredients in restoring and maintaining a healthy Chesapeake Bay watershed. Understanding and respecting the unique jurisdictional resources and responsibilities in each state is one of the most challenging endeavors of the Bay Program. Because clean water is a core quality of life issue for our constituents, the actual steps to be taken in the future are contingent on efficient and understandable communication with and between local governments and their respective residents. LGAC looks forward to continuing to collaborate with state and federal leaders on strategies that support local governments and their work to protect and restore local waterways.

If you have any questions or require further clarification, please reach out to LGAC staff at lgac@allianceforthebay.org.

Sincerely,

Daniel Chao, LGAC Chairperson on behalf of the Local Government Advisory Committee

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August 26, 2024

Re: Draft A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025

Dear Beyond 2025 Steering Committee,

We commend the efforts of the Chesapeake Bay Program's Principal Staff Committee (CBPPSC) to make recommendations to the Executive Council for partnership beyond 2025. Maryland Sea Grant greatly supports this work but urges continued and strong emphasis on climate and equity. We are grateful to provide some overall comments as well as some specifics to the draft.

Overall, the CBPPSC should more fully integrate and strengthen the imperative of climate change. This could be achieved by elevating the role of the climate change working group to either a Goal Implementation Team or an even more powerful overarching role. Though EPA has a mandate for meeting TMDLs as their primary enforcement role, those are going to be influenced by climate. Dually, though there is recognition of a need to support diversity, equity and inclusion of communities traditionally left out of the environmental conversation, these should be elevated considerably more by incorporating them throughout the Beyond 2025 draft and recommendations. It currently reads as an afterthought when it should dominate.

Specific comments to the text:

Part I
Executive Council Recommendation #1 –Propose amendments that include efforts towards equity and engagement/benefits/resilience for underserved communities

Executive Council Recommendation #2 –Include this is an opportunity to increase accessibility to community members (especially underserved) and other stakeholders in the CBP organizational structure

Additional Background --While we agree with the continued emphasis on water quality, conservation, climate impacts etc., it is also important to incorporate how historical systemic racism in environmental, conservationism, and western science approaches have skewed our landscape and scientific processes and efforts should be made to amend these resulting inequities
--Add salinity changes to the list of new and growing challenges

Part II
Summary, Restoration –Specify the audience for the communication strategy (pg 7)
Science –We agree with the high importance placed on better monitoring various environmental and social systems in the CB and would like to acknowledge that current monitoring in place is often constrained by funding mechanisms that do not allow for prolonged monitoring. These funding mechanisms should be revised, or new funding secured to improve monitoring capacity.
--We agree that using existing and new tools and models to incorporate multiple lines of evidence is both efficient and more holistic, however, it should be acknowledged the challenge of making available tools compatible with each other so as to provide another way to compare or integrate multiple tools.
--We wholeheartedly support open, accessible data, and encourage continued emphasis to address barriers around some entities' limited data-collecting capacity for quality control. We encourage challenging the practice of long-holding publicly funded data before making data available. This practice could be moderated through funding requirements and enforcement of existing federal regulations surrounding data management.

--Finally, we greatly appreciate the need for more social science staff

Restoration and Conservation
No comments

Partnership
--This section could benefit from a greater description of what a "systems approach to governance" means as well as how models such as "theory of change" are important.
--While we appreciate the necessity to better connect with local networks, for this to be successful it is worth acknowledging that often localities are limited in capacity –so to better assist them we should support mechanisms to increase capacity from within the local networks, not just by supporting outside interventions.

Sincerely,

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United States Department of the Interior

NATIONAL PARK SERVICE
Northeast Region
1234 Market Street
20th Floor
Philadelphia, PA 19107

IN REPLY REFER TO:

A.1.2 (IR1-RSS)

Beyond 2025 Steering Committee
Chesapeake Bay Program Office
Annapolis, MD 21401

Subject: Feedback on the "Beyond 2025" Steering Committee Report

On behalf of the National Park Service (NPS), Northeast Region and the National Capital Region, we are writing to provide feedback on the report prepared by the Beyond 2025 Steering Committee, entitled "A Critical Path Forward for the Chesapeake Bay Program (CBP) Partnership Beyond 2025."

The NPS applauds the committee for their diligent efforts in creating a comprehensive and forward-looking document that addresses the future challenges and opportunities for the restoration, conservation, and stewardship of the Chesapeake Bay and its watershed. We are grateful for the NPS Chesapeake Gateways team that volunteered to participate on the Beyond 2025 Steering Committee and small group action teams to ensure conservation, stewardship, and diverse community interests had a seat at the table and a voice in the drafting of the report.

As non-voting members of the CBP Management Board and Principals Staff Committee, the NPS appreciates the opportunity to review and provide our agency’s feedback on this important report.

Endorsement of Key Concepts and Recommendations:

Comprehensive Scope and Depth: The report effectively captures the wide array of challenges and opportunities facing the future of the Chesapeake watershed restoration and conservation. The inclusion of both high-level strategic recommendations and detailed action items is commendable. The entire final report, including all components and attachments, should be advanced to the Executive Council of the Chesapeake Bay Program partnership.

Elevating Conservation: Elevating conservation as a key pillar alongside restoration, science, and partnerships will enhance the resilience of the Bay's ecosystems and communities. This holistic approach will ensure that our collective efforts and investments are sustainable and far-reaching. This shift would strengthen the alignment with Federal agencies with missions and programs which directly and or indirectly support conservation.

Commitment to Centering People: We also strongly support the emphasis on centering people in conservation efforts. Engaging communities, particularly those historically

underrepresented and underserved, is crucial for the long-term success of the restoration, conservation and stewardship of the Chesapeake Bay and its watershed. By fostering inclusive participation and ensuring that restoration and conservation efforts benefit all communities, we can create a more resilient and equitable partnership.

Science-Based Approach: We appreciate the emphasis on optimizing monitoring, modeling, and analysis. The integration of new scientific findings, including social science into decision-making and resource allocation is essential for informed and effective management.

Urgency of Addressing Emerging Threats: NPS commends the spotlight on the current and growing impacts of climate change and land use changes that are causing the loss of wetlands, forests, farms, and open spaces, as well as causing impacts on habitat, ecological functioning, communities, economies, and human health.

Enhanced Partnerships and Governance: The recommendation to streamline governance and involve an independent systems expert is a crucial step towards a more effective and transparent partnership. Simplifying structures while maintaining robust coordination will improve efficiency and foster better collaboration.

Observation, Feedback and Edits:

While we support the detailed recommendations within the report, we have the following observations, feedback, and specific edits to share with the drafting team.

Our main observation is that the two upfront recommendations for the Executive Council dilute and diminish the important detailed recommendations. The two upfront recommendations should be shifted to declarative statements of existing understandings across the partnership.

Another observation is that protected lands and public access are only referenced in the "notable partnership accomplishments" section. Please work to incorporate more language related to the value and importance of protected lands and public access to engage and meaningfully connect people to the outdoors. We suggest incorporating language about the desire and need to strategically conserve lands in underrepresented areas/communities so that protected lands better serving the public. And the need for jurisdictions to focus on improved data collection methods for accurate reporting and strategic targeting of unprotected areas as a future need for the public and watershed. The NPS also supports placing more emphasis on the ongoing need to expand public access goals to include access to parks, green space and protected lands in addition to access to waterways.

Our final feedback is that after reviewing and incorporating the public feedback into a final report from the Beyond 2025 Steering Committee, the report should not be altered nor amended further. It should remain a final document that is transmitted up through the Management Board and the Principal's Staff Committee to the Executive Council. It should be transmitted in its entirety. The Principal's Staff Committee can decide whether to craft a cover letter and message to outline and highlight the portions of the final Steering Committee report to feature for the Executive Council. But the Principal's Staff Committee should not alter the final report.

The NPS also suggest the following edits be considered prior to finalizing the report:

1. Part I (the two upfront recommendations) – Recommended edit:

- The last sentence in the last paragraph before Part I Recommendations, says “The Steering Committee recommends consideration of all recommendations in this report.” Suggest emphasizing that more, making it more prominent. The Steering Committee has worked for over a year to consider its recommendations carefully and they are comprehensive. Cherry-picking defeats that purpose, and it is important to express that.

2. Part II (high level recommendations and considerations) – Comments and recommended edits:

Restoration and Conservation –

- We applaud and appreciate the inclusion of Conservation with Restoration. Since the leading paragraph opens with a reference to the CESR report, the language here should align with the CESR message that the Bay of tomorrow can’t be the Bay of the past - and therefore should incorporate conservation with restoration. Suggest including conservation in the intro before the first recommendation as follows:
    - “A holistic restoration approach continues to be necessary and is increasingly important in the context of emerging challenges, in addition to elevating emphasis on conservation. Working strategically to improve the Program’s holistic approach to restoration and conservation will help ensure our collective efforts are resilient and have the intended benefits for the Bay and the watershed’s ecosystems and communities.”

  Any redundancy this creates helps to emphasize the point.

- In addition, **Protected Lands** is only mentioned once within the document under the "notable partnership accomplishments" section, where it states the most recent acres conserved. Conservation and its benefits are much more than simply the acres protected. We suggest incorporating language within this Restoration and Conservation section where appropriate about the desire and need to strategically conserve lands in underrepresented areas/ communities so that protected lands are better serving the public. This effort would include requesting that jurisdictions focus on improved data collection methods for accurate tracking and reporting, and to support strategic targeting of unprotected areas as a future need for the public and watershed.

- Similarly, **Public Access** is mentioned minimally in the document, featured in the "notable partnership accomplishments" section. Recognizing the importance of public access for building support and participation in conservation, restoration and stewardship, we recommend incorporating language related to public access. Specifically, we recommend the need to expand public access outcomes in the future to better represent what is in the Public Access Goal itself, i.e., to include access to green space and protected lands, not only focusing on waterway access.

Partnership –

- **Recommendation #3: *Strengthen the Program’s capacity to ensure watershed restoration is relevant to all communities*** - The language in the recommendation uses “should” a number of times. It includes a reference to this being a signed statement and commitment by the highest leadership levels of the CBP. This is the right and smart thing to do, but it is more than that, and more than something we “should” do – i.e., it’s a commitment, therefore it’s not optional. This language should be strengthened. Suggest moving the second paragraph to become the first, so the recommendation begins with **“**The Steering Committee recommends, in response to the Executive Council

statement…. that the partnership institutionalizes and actualize the Program's Diversity, Equity, Inclusion and Justice Implementation Plan."

General Feedback Related to Phase Two:

Next year, as the Chesapeake Bay Program partnership begins the work associated with Phase Two of the Beyond 2025 effort, the NPS offers the following considerations:

- **Increase Emphasis on Public Engagement:** We recommend a more detailed strategy for the partnership to implement public engagement efforts. This should include a strategy for continuous public engagement and education that is based on sound social science and strong relationships. This should also include an assessment of the appropriate means for the CBP to implement engagement efforts working through partners who have those strong relationships and can serve as trusted messengers and connectors. Strengthening community support and participation is vital for the success of conservation efforts.

- **Update 2010 Federal Strategy for Protecting and Restoring the Chesapeake:** An important step will be for the Federal partners to collaborate and update the *Strategy for Protecting and Restoring the Chesapeake* which was issued in 2010 in response to Executive Order 13508. This will set the priorities and goals for the Federal commitments to the Chesapeake and be the basis for the shared collaborative approach to updating or amending the Chesapeake Bay Program watershed agreement with the jurisdictions.

- **Clearer Timelines and Prioritization:** It is critical for the next phase to be actionable with clear timelines and prioritization of the recommended steps. Identifying short-term versus long-term initiatives and setting specific milestones will facilitate more structured implementation.

- **Specific Funding Strategies:** More specific strategies are needed for securing necessary funding to support elevating conservation, centering people and local capacity-building efforts. Outlining potential funding sources and mechanisms will provide a clearer path to achieving these goals. Without dedicated support, the effort will remain an unfunded mandate, with diminished capacity for implementation. Secure funding provides a foundation for prioritization and attention.

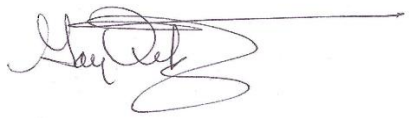
- **Clarify Conflicting Intentions:** We noted potential conflicts between the goals of simplifying operations and expanding networks and capacity. We recommend developing an integrated strategy that aligns the goals of simplifying operations with the need for expanded capacity. Clearly defining roles and responsibilities, ensuring new capacities are built with streamlined processes in mind, and leveraging technology to maintain simplicity while expanding reach are essential steps.

- **Focus on Collaboration:** As we move forward with the "Beyond 2025" recommendations, it is crucial that our approach emphasizes multi-disciplinary and inter-agency collaboration rather than regulation. By fostering strong partnerships and leveraging the collective expertise of all stakeholders, we can achieve more sustainable and impactful outcomes. Collaborative efforts and a strategic, systems approach encourage innovation, enhance resource sharing, and build trust among all parties

involved. Let's prioritize working together to create a resilient and thriving Chesapeake Bay, ensuring that our strategies are inclusive, adaptive, holistic, and community focused.

The NPS remains committed to supporting the collective partnership efforts towards a healthy, equitable, sustainable, and accessible Chesapeake Bay region. We look forward to participating in the next steps and contributing to the continued success of the Chesapeake Bay Program partnership.

Sincerely,



Gay Vietzke
Regional Director
Interior Region 1

Lisa Mendelson-Ielmini, AICP
Regional Director (Acting)
National Capital Region

Cc:
Matt Strickler, Assistant Secretary for Fish Wildlife and Parks
Jonathan Meade, Associate Regional Director, NPS Northeast Region
Wendy O'Sullivan, Superintendent, NPS Chesapeake Gateways
Beyond 2025 Steering Committee
Secretary Josh Kurtz, CBP Principal Staff Committee Chair
Chesapeake Bay Program Principals' Staff Committee members

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Oyster Recovery Partnership
1805 A Virginia St
Annapolis, MD 21401

Beyond 2025 Steering Committee
EPA Chesapeake Bay Program

August 30, 2024

Dear Beyond 2025 Steering Committee,

Thank you for the opportunity to submit comments on the draft report, A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025. The Oyster Recovery Partnership (ORP) is a 501(c)(3) non-profit at the forefront of oyster recovery efforts in Chesapeake Bay. ORP's mission is to restore the native oyster, and we have been fortunate to work with the Chesapeake Bay Program Partnership and other state and federal partners committed to restoring oyster populations in five tributaries by 2025. We affectionately call this the "5 by 2025" project. Many of the methods employed in the 5 by 2025 project were developed through a partnership between ORP and the University of Maryland Center for Environmental Science (UMCES). This partnership has benefited and excelled from investments by state and federal partners. This year ORP celebrates 30 years of advancing oyster restoration. A third of our time conducting oyster restoration has been dedicated to completing the 5 by 2025 project. ORP is looking forward to continuing our support of the Bay Program's mission and helping to define the next phase beyond 2025.

We have reviewed the draft report, A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025, and we have two overarching concerns relating to the actions and next steps outlined in the report. First, the report focuses primarily on ways to adapt the current Chesapeake Bay Watershed Agreement, highlighting the need to identify challenges that hindered the completion of several Agreement outcomes. We agree it's necessary to understand why certain outcomes or goals will not be achieved, but it is equally important to evaluate and identify strategies, partnerships, and processes that contributed to the success of outcomes that will be achieved or are on track to be completed by 2025.

For example, oyster restoration goals in both Maryland and Virginia will be completed by December 2025. The success of these efforts can be attributed in part to a well-organized partnership between state agencies, federal agencies, NGOs, the scientific community, and other stakeholders. Goals and metrics were defined upfront allowing the partners to focus on planning, monitoring, and adaptively managing resources to achieve this goal. These strategies also facilitated clear and effective communication of results, which were instrumental in securing funding for the work.

ORP recommends that the Chesapeake Bay Program Partnership spend time to determine what common elements may exist for successful outcomes to determine whether those elements could be applied to outcomes that may not be on track. At a minimum, this effort could lead to the development of a set of guidelines for the next Watershed Agreement, which can be implemented to enhance success.

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Oyster Recovery Partnership
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Our second concern relates to the schedule and timeline of actions to develop and complete amendments to the Watershed Agreement's vision, principles, preamble or goals. The draft report suggests these action would extend through 2025 with a goal to complete most reviews and revisions by the 2026 Executive Council Meeting. Thirty years of implementing and evaluating oyster restoration projects has shown that large-scale operations with goals of hundreds of acres per year is the most effective approach to restore oyster populations. This was the approach for Maryland's 5 by 2025 project. Incorporating oyster restoration into the 2014 Watershed Agreement provided needed focus along with federal and state funding to scale-up the infrastructure required by the oyster restoration partnership to complete restoration efficiently and achieve success. This was likely the case for several other successful outcomes as well. With oyster restoration goals scheduled to be met by the end of 2025 there is a significant risk of undermining the current partnership and operational structure if oyster restoration goals and operations are paused or slowed while waiting on a new Watershed Agreement to be developed sometime in 2026.

ORP urges the Bay Program Partnership to quickly and collaboratively finalize plans for the next set of goals beyond 2025. We urge the Bay Program to prioritize setting new goals for successful outcomes, as well as adapting goals that were unsuccessful prior to 2025. These goals should be clear, concise, agreed upon by Bay Program stakeholders, and should be ready for implementation by January 1, 2026 to ensure that there is a cohesive transition from one Watershed Agreement to the next without interrupting current infrastructure and momentum.

Thank you again for the opportunity to submit comments on the draft report, A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025. ORP has been a strong partner in Chesapeake Bay oyster restoration for 30 years and we gladly offer our expertise and relevant resources to help expedite and complete the Beyond 2025 goals and objectives.

Sincerely,

H. Ward Slacum
Executive Director
Oyster Recovery Partnership
1805 A Virginia St
Annapolis, MD 21401

CC: Oyster Recovery Partnership Board of Directors

PUBLIC EMPLOYEES FOR ENVIRONMENTAL RESPONSIBILITY
962 Wayne Ave • Suite 610 • Silver Spring, MD 20910

To: Chesapeake Bay Program (CBP) Beyond 2025 Steering Committee
Subject: Comments on Steering Committee Report Beyond 2025 Draft Report
From: Tim Whitehouse, Executive Director of Public Employees for Environmental Responsibility (PEER)
Date: August 28, 2024

Submitted electronically via comments@chesapeakebay.net

Public Employees for Environmental Responsibility (PEER) is pleased to submit these comments on the Chesapeake Bay Program Beyond 2025 Draft Steering Committee Report[1] ("Draft Report") on behalf of a group of retired public water quality specialists and community advocates.

This report was developed in response to the Chesapeake Executive Council's charge to the Principals' Staff Committee (PSC) to recommend a critical path forward that prioritizes and outlines the next steps for meeting the goals and outcomes of the Chesapeake Watershed Agreement leading up to and beyond 2025.

Recognizing this charge, we offer the following comments to the draft report and provide recommendations on issues the Chesapeake Executive Council should consider at their December 2025 Meeting. Our primary concern is that the report needs to address the growing evidence that stream restoration projects for TMDL credits and mitigation projects do not work according to the published scientific literature and divert money from more effective and important projects, many of which are also more cost-effective.

The PSC Recommendations Should Be Bold

We reiterate our support for the recommendations made by a diverse group of stakeholders concerned that the Beyond 2025 Steering Committee recommendations do not move quickly enough or go far enough. We also recommend that the Executive Council sunset the Beyond 2025 Steering Committee and support calls for the Executive Council to begin an open stakeholder process to address emerging and growing threats to the Bay and improve public participation in government decisions that affect the watershed's health.

The Report Should Contain a Clear Problem Statement

We are concerned that the report lacks a clear problem statement. As a result, it tends to emphasize the successes of the Chesapeake Bay Program while glossing over or minimizing the challenges and failures of the program.

[1] https://d18lev1ok5leia.cloudfront.net/chesapeakebay/documents/Beyond-2025-Draft-Steering-Committee-Report.pdf

Without a clear problem statement in the draft report, it is often difficult to ascertain how the PSC recommendations will lead to improved outcomes in the health of the Bay.

At a minimum, the problem statement should acknowledge that despite tens of billions of dollars being spent on Bay restoration activities, little progress has been made in cleaning up the Bay. The latest annual "Eco-Report Card" from the University of Maryland's Center for Environmental Science assigns Bay restoration an overall grade of C+ or 55 points.[2] While this is a modest improvement over the Bay's 2022 grade, this is exactly the same score the Bay received in 2002 and only 7 points higher than in 1986. In addition, we note that 71.9 percent of Chesapeake's tidal waters remain impaired — an improvement of only 1.6 percent since 1985, when 73.5 percent of Bay waters were impaired.

The 2023 Principals' Staff Committee Outcome Status Summary notes that the restoration effort is "off course" in the areas of wetlands health, healthy watersheds, forest buffers, tree canopies, toxic prevention, climate adaptation, and habitat for several critical species.[3] We recommend that the PSC use plain language throughout the report that conveys that "off course" means the program will fail to meet the stated goals.

The problem statement should also address emerging issues such as climate change and urban and suburban nonpoint sources, which are rapidly expanding and pose a substantial threat to the health of the Bay.

The Report Should Acknowledge that Stream Restoration Projects Do Not Work

The report should not endorse stream restoration projects and should state that stream restorations do not work and are taking away from the root causes of stream degradation.[4] Consequently, we urge you to amend this sentence:

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[2] Chesapeake Bay • EcoHealth Report Cards (ecoreportcard.org)

[3] Outcome Status Summary - Chesapeake Progress

[4] Numerous scientific reports conclude that stream "restorations" do not work. Just to reference a few articles, an analysis of 644 projects by M. Palmer et. al. found that:

> "Improvements in the five metrics within the water quality category were found for only 7% of the channel reconfiguration projects and for none of the in-stream channel projects." Palmer, M. A., K. L. Hondula, and B. J. Koch, University of MD, 2014, "Ecological Restoration of Streams and Rivers: Shifting Strategies and Shifting Goals," Annu. Rev. Ecol. Evol. Syst. 2014. 45:247-269. (https://akottkam.github.io/publications/Palmerpublications/Palmer2014a.pdf)

An analysis of 40 projects in Maryland by R. Hilderbrand found that "There simply were few ecological differences between restored and unrestored sites. In fact, the unrestored sections upstream [from the restoration sites] were often ecologically better than the restored sections or those downstream of restorations." Hilderbrand, Robert H., et. al., "Quantifying the ecological uplift and effectiveness of differing stream restoration approaches in Maryland," Final Report

> "In addition to sustaining ecosystem-wide management, the Steering Committee recommends planning for the restoration and conservation of nearshore habitats, inclusive of tributary rivers and streams– some of the most important places for people and the most productive habitats for living resources (CESR, P2, SW1).

to state that the recommendation does not include stream restoration projects for TMDL credits and mitigation projects.

While we acknowledge this report is not the place for a detailed discussion on stream restoration projects, this report and the Executive Council's meeting should lay the groundwork for reconsidering these stream restoration programs.

In addition to the change mentioned above, the report should recommend that funds previously directed at failed efforts such as stream and wetland "restoration" should be re-directed to out-of-stream (upland) practices. In fact, the amended Chesapeake Bay Watershed Agreement should require that any Total Maximum Daily Load (TMDL)-related projects must address the root cause of any given problem. If a section of stream is eroding due to uncontrolled stormwater, then the stormwater should be controlled *before* it flushes into streams to eliminate the root cause of stream erosion.

The science behind our comments is conclusive. Stream restoration projects for TMDL credits and mitigation projects do not work and, in many instances, are harming communities throughout the Bay. They divert hundreds of millions of dollars from more worthy projects. Nonetheless, the practice of stream "restoration" has become a big business throughout the Chesapeake watershed. The practice has largely operated with the full encouragement and endorsement of the agencies that regulate actions. The public acceptance of these projects has been changing in recent years, as the scale of the projects has increased and their destruction of habitats more apparent. Also, it is essential to note that stream "restoration" projects, especially when done for mitigation purposes, allow for more development (and more impervious services, loss of trees, vegetation, and intact ecosystems, etc.) while at the same time the "restoration" actually degrades streams and their ecosystem value.

Additional Recommendations

In addition to the above comments, we offer the following comments for your consideration:

1. For Publicly Owned Treatment Works (POTWs), according to EPA's ECHO database, the Blue Plains Wastewater Treatment Plant discharged over 1.6 million pounds of nitrogen in 2024, with the plant being in non-compliance with its permit. Glen Rock STP in PA discharged over 850,000 lbs. of nitrogen last year, half of Blue Plains, despite a discharge flow of less than 100 times the amount. Control of the point sources in the Chesapeake Bay

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Submitted to the Chesapeake Bay Trust for Grant #13141, 2020 (https://cbtrust.org/wp-content/uploads/Hilderbrand-et-al_Quantifying-the-Ecological-Uplift.pdf)

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Watershed is pitiful, and any other attempt through conservation efforts will have a minuscule improvement compared to controlling the point sources.

2. Point sources are still a massive problem in the Bay watershed. The Bay Program has covered up the enormity of the point sources due to politics and the fact that the EPA does not want to fight with the states when they refuse to take appropriate actions. The official story is that it is too expensive for these facilities to upgrade, but that is nonsense. Consider the amount of N and P being reported by industrial facilities, not including the toxics. See the Water Pollutant Loading Tool (Loading Tool), which is a public access website designed to help one determine who is discharging, what pollutants they are discharging and how much, and where they are discharging: https://echo.epa.gov/resources/general-info/loading-tool-modernization.
3. Monitoring is a great thing and is desperately needed. However, the monitoring must meet the SMART (specific, measurable, achievable, relevant, and time-bound) criteria the report lays out, which, to date, it has not. Monitoring, not modeling, must drive and verify the results and determination of the achievement of performance measures. The SMART criteria combine some good elements of indicator criteria for performance measures. SMART monitoring should be promoted as a cost-effective method of determining a return on the investments. Monitoring should be encouraged throughout; otherwise, these projects, whichever ones occur, will not have monitoring to determine if they were effective.

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PennFuture

August 30, 2024

Submitted via comments@chesapeakebay.net

Beyond 2025 Steering Committee
Chesapeake Bay Program
1750 Forest Drive, Suite 130
Annapolis, MD 21401

RE: Public Comments on "A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025"

Dear Chair Killius and Chair Shimkin:

Citizens for Pennsylvania's Future (PennFuture) submits these comments on the July 2024 Report entitled "A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025" **(**Beyond 2025 Draft Report). PennFuture joined in the comments submitted by the Choose Clean Water Coalition, and we offer these additional comments to highlight Pennsylvania-specific issues. Our comments will focus on climate resiliency, changing land use, and appropriate funding to meet the goals of the 2014 Chesapeake Bay Agreement (2014 Agreement).

PennFuture is a member-supported, statewide environmental advocacy nonprofit and watchdog, leading the fight for an equitable, job-creating state economy by advancing clean air, pure water, and climate change solutions through legal advocacy, policy engagement, and empowering all Pennsylvanians. For decades we have focused on improving the water quality of the Susquehanna River and Chesapeake Bay watersheds through policy, advocacy, outreach, and, when needed, litigation. The Susquehanna River in Pennsylvania supplies 55% of the freshwater flowing into the Chesapeake Bay and contributes approximately 44% of the nitrogen load and 24% of the phosphorus load to the Bay. The Commonwealth's outsized impact on the Bay means that we need to be leading by example when it comes to looking at new ways to approach our protection, restoration, and conservation work to meet the existing goals of the 2014 Agreement.

As an initial matter, the extension of the comment period on the Beyond 2025 Draft Report, from 30 to 60 days as outlined in our August 7, 2023 letter, is greatly appreciated. However, it is essential for the Bay Program to adequately review and, if necessary, incorporate the feedback received. The mere 10 business days (from the August 30 comment deadline to the September 17 meeting of the Principals' Staff Committee) is woefully insufficient to give any kind of meaningful review and thoughtful consideration – let alone adequate responses and incorporation. Therefore, we urge the Steering Committee to take the necessary time for review and incorporation of

comments, both for this comment period and future comment periods, to ensure that this comment process is more than a mere formality.

PennFuture acknowledges that although Pennsylvania will not meet the 2025 goals set forth in the 2014 Agreement, we have made great progress towards meeting those goals, especially in light of population growth, climate change, rapid land use changes, and lack of sufficient funding in Pennsylvania. The Steering Committee and other regulators must not sideline the suite of "non-water quality" goals and focus only on the direct pollution-based water quality goals when looking how to get us back on track. The solution to the Bay problems requires the entirety of the categories of the goals, and issues such as climate resiliency, conserved lands, and engaged communities recognize the interconnected nature of the needed solutions. To that end, we must remain fully committed to the holistic suite of goals set forth in the 2014 Agreement as it looks "Beyond 2025."

Changing Climate is Critical for Both Analyzing the Problems and Developing the Solutions

As part of the Beyond 2025 review, the Steering Committee must not simply recommit to the existing goals in the 2014 Agreement. Rather, it must look at past successes and failures to tailor a realistic and achievable plan based on the reality of our situation. This includes reviewing and updating, as necessary, the inputs and actions of the Chesapeake Bay Program's Climate Directive, and ensuring that the impacts of a changing climate are based in science and reality.

When looking "Beyond 2025," we must take into account the impacts of the changing climate in both the goals *and* the solutions. For example, many of the solutions to pollution in the Bay also can result in carbon sequestration or adaptation strategies. Land conservation and no-till agriculture reduce nitrogen pollution and sequester carbon. Legacy sediment removal eliminates important sources of sedimentation but also create flood plains to manage the increased stormwater from more frequent storms. Additionally, installed best management practices (BMPs) should be graded on climate resilience. The Department of Conservation and Natural Resources has begun reevaluating tree species for planting with an eye toward the climate of the future. Increased precipitation and flooding creates a danger that existing BMPs will fail based on their location. These are just several examples of ways that climate can be factored into looking "Beyond 2025," and PennFuture believes the Steering Committee must include this type of thinking in its recommendations in order for us to achieve the goals.

Climate is more than a factor that increases the amount of pollutants entering our waterways. It must necessarily dictate the type of solutions that are incentivized and funded.

Not All Changing Land Use Patterns Have the Same Impacts

Pennsylvania is seeing a rapid change in land use, primarily in our agricultural areas within the Bay Watershed. According to the 2022 Census of Agriculture, Pennsylvania has lost about 220,000 acres of farmland since the 2017 Census.[1] When farmers can no longer farm the land (whether by choice or circumstance), what the land is converted to has a significant impact on Pennsylvania's ability to meet our Bay goals. The Steering Committee must recognize this fact and understand the true water quality and climate impacts of incoming development. PennFuture believes that properly sited renewable energy development, primarily solar, must be encouraged and other high-impact, impervious development be discouraged within the Bay Watershed in order to meet both the water quality and climate goals of the 2014 Agreement.

For example, 70% of the acres of PA's farmland lost in the state between 2001 and 2016 is estimated to be lost to low-density residential housing development (LDR).[2] What's more, this LDR is 23 times more likely to result in the urbanization of surrounding agricultural land.[3] Studies show that the "pervious" surface left in LDR often acts like impervious surface and that LDR often means increases in off-site impervious infrastructure.[4] The US EPA summarized the inherent water quality impacts of LDR:

> Furthermore, water quality suffers not only from the increase in impervious surface, but also from the associated activities: construction, increased travel to and from the development, extension of infrastructure, and chemical maintenance of the areas in and surrounding the development. Oil and other waste products, such as heavy metals, from motor vehicles, lawn fertilizers, and other common solvents, combined with the increased flow of runoff, contribute substantially to water pollution. As imperviousness increases, so do associated activities, thereby increasing the impact on water quality.[5]

All of these impacts pale in comparison to the recently expanding threat from commercial and industrial conversion of farmland from distribution centers, data centers, cryptocurrency mining operations, and other massive facilities with hundreds of thousands if not millions of square feet of impervious surface. The emergence of these industries was either in the early stages or nonexistent when the Bay Agreement was signed in 2014. Therefore, it is crucial for any "Beyond 2025" actions to assess the impact of these facilities on the Bay Watershed.

On the other hand, large-scale solar development has been found to be much less impactful, and even in some cases beneficial, to water quality. A recent Penn State study found that with

[1] https://www.farmanddairy.com/news/ohio-and-pennsylvania-continue-to-lose-farms-farmland/813342.html
[2] https://extension.psu.edu/mitigating-the-impact-of-declining-farms-in-pennsylvania
[3] *Id.*
[4] https://www.epa.gov/sites/default/files/2014-03/documents/protect_water_higher_density1.pdf
[5] *Id.*

thoughtful BMPs, both natural and built, stormwater runoff should not be a problem.[6] Proper stormwater BMPs are something that PennFuture has fought for on solar development, and is something that we're seeing both the industry and regulators embracing.[7] And unlike LDR or distribution or data centers, solar installations can be temporary and not a forever land use change. The Steering Committee must embrace solar as a conservation measure when farmland is lost, one that can ensure the integrity of our water resources when appropriate siting, planning, construction, and maintenance considerations are applied as outlined by the PA Department of Conservation and Natural Resources in their 2022 report.[8]

Moreover, the Steering Committee should embrace solar, namely agrivoltaics, as a way to preserve farmland and open space. This is something that we know farming families in Pennsylvania support.[9] Even when compared with the water quality impacts from farming, solar can be beneficial. Solar facilities can decompact soils and utilize vegetation that has deeper roots resulting in better infiltration and nutrient retention than agriculture crops. Scientists reviewing a recently proposed solar farm in Wisconsin found that replacing existing crops with mixed grasses associated with a solar development can reduce phosphorus runoff by 85-98%, preventing 100,000 pounds of phosphorus from being added to local streams over 30 years.[10] Coupled with the fact that we must increase our renewable energy supply in order to reduce greenhouse gas emissions,[11] which in turn create changing precipitation patterns that can impact the water quality goals of the 2014 Agreement, the Steering Committee must recognize the benefit of solar development in the Bay Watershed when compared to other development pressures.

Changing Metrics Without Sufficient Funding Will Not Meet the Goals

Finally, PennFuture believes that creating new metrics or new goals will not make it any easier for Pennsylvania to comply. We may not have achieved all the targets by the 2025 timeframe, but that does not mean that we *can't* achieve them in the near term. But to do this, we

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[6] https://www.alleghenyfront.org/penn-state-stormwater-runoff-solar-farms-proper-management/; https://ieca.mynewscenter.org/creating-water-quality-value-in-ground-mounted-solar-photovoltaic-sites/

[7] https://www.pennfuture.org/Blog-Item-Swiftwater-Solar-Settlement-A-win-for-all-in-the-Poconos

[8] https://elibrary.dcnr.pa.gov/PDFProvider.ashx?action=PDFStream&docID=4659215&chksum=&revision=0&docName=Conservation_Considerations_for_Grid-Scale_Solar_Systems_Pennsylvania_Sept2022&nativeExt=pdf&PromptToSave=False&Size=3890968&ViewerMode=2&overlay=0

[9] https://www.alleghenyfront.org/pasa-group-pitches-farms-on-solar-model-that-keeps-farmland-usable-pennsylvania/

[10] https://www.renewwisconsin.org/wisconsin-solar-farms-can-improve-water-quality/

[11] Pennsylvania's climate goal includes a 26% reduction in net greenhouse gas emissions statewide by 2025 and an 80% reduction by 2050 (from 2005 levels). https://greenport.pa.gov/elibrary/GetDocument?docId=8188822&DocName=PA%20PRIORITY%20CLIMATE%20ACTION%20PLAN.PDF%20%20%3cspan%20style%3D%22color:green%3b%22%3e%3c/span%3e%20%3cspan%20style%3D%22color:blue%3b%22%3e%28NEW%29%3c/span%3e

need the support of federal, state, and local governments to help ensure that Pennsylvania has sufficient funding to comply with the goals.

In 2021, PennFuture released a report entitled "Underfunded and Polluted: Solutions to Fund Clean Water in Pennsylvania and the Chesapeake Bay Watershed," which outlines a legislative agenda designed to achieve the $521 million in annual projects that will cut water pollution in PA's portion of the Chesapeake Bay Watershed.[12] What this report identifies, and what regulators must acknowledge, is that setting more stringent goals to compensate for the missed deadline will achieve nothing if Pennsylvania continues to struggle to fund the work that we know will reduce our pollutant loads. Therefore, we believe that the Steering Committee, and federal and state agencies, must incorporate a realistic view of not only the problems we face, but also the solutions for states like Pennsylvania to meet our Bay goals. We agree that a more holistic approach to planning and prioritization will hasten the ability to meet the 2014 Agreement goals, but that alone will be insufficient to change the fact that without adequate funding, little will change. The Beyond 2025 recommendations must include viable options for increased funding support as part of the solution, much as we outlined in our 2021 report.

Thank you for your consideration of these and other comments submitted by PennFuture.

Respectfully submitted,

Pattrick McDonnell
President and CEO
PennFuture

[12] https://www.pennfuture.org/Files/Admin/Final-Chesapeake-report.pdf

Stakeholders' Advisory Committee
TO THE CHESAPEAKE EXECUTIVE COUNCIL

August 30th, 2024

Chesapeake Bay Program
1750 Forest Drive, Suite 130
Annapolis, MD 21401
sent via email: comments@chesapeakebay.net

Re: Stakeholders' Advisory Committee's feedback on the draft report outlining a critical path forward for the Chesapeake Bay Program partnership Beyond 2025 (draft B25 report).

Dear Beyond 2025 Steering Committee,

Thank you for the opportunity to review the Beyond 2025 Steering Committee's recommendations to the Chesapeake Bay Program (Bay Program) Principals' Staff Committee (PSC). Members of the Stakeholders' Advisory Committee (Stakeholders' Committee) have been involved in and closely observed this process since its inception and appreciate the hard work, passion, and dedication of the Steering Committee and other participants. We note with gratitude that in many cases the work of Steering Committee members has been in addition to their "day jobs."

We fully appreciate the demands of this effort and the many thought leaders who contributed toward the completion of the 2022 charge from the Bay Program Executive Council (EC). The Stakeholders' Committee believes it is entirely appropriate that the Pathways document includes a list of notable accomplishments, it is the view of our membership that conditions within the Bay and its Watershed would be substantially worse were it not for the *2014 Chesapeake Bay Watershed Agreement* (*2104 Watershed Agreement*) and the efforts of the jurisdictional and federal partners. We also believe that as the next phases of this work unfold, embracing a deep value to Bay Program operational transparency now and in the future will enable the broader watershed community's ability to co-create a path forward with shared ownership and commitment.

As your independent advisors representing a sample of the watershed's stakeholders, we respectfully offer feedback around the following overarching themes: Recommitment;

Chesapeake Bay Program
Science. Restoration. Partnership.

Jessica M. Blackburn, Committee Coordinator
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ALLIANCE for the Chesapeake Bay

Streamlining; Bay TMDL; Social Science; Conservation; Diversity and Inclusion; Tracking/Accountability; and Report Language.

Elaborated below, our membership strongly supports both of the Steering Committee's overarching recommendations to the Executive Council.

1. **The Stakeholders' Committee strongly encourages the Executive Council to quickly affirm its continued commitment to meet the goals of the Chesapeake Bay Watershed Agreement as expressed in EC Recommendation #1.**
   (Note: We reject the notion that the EC's directive to undertake the Beyond 2025 process constitutes of itself such an affirmation.) Related to this, we believe the Bay Program should define what successful watershed restoration looks like, given the *Comprehensive Evaluation of System Response* (CESR) report's assertion that the Chesapeake Bay of the future will not resemble the one of the past because of population growth, land use changes, and a changing climate. It is necessary that the Bay Program be adaptive and revise the next version of the *2014 Watershed Agreement* in response to changing conditions. We recommend that:
   a. The Executive Council charges the PSC to lead an evaluation and revision of the current 10 goals and 31 outcomes within one year and identify suggested changes to bring to the EC at their 2025 meeting. This review and revision should:
      i. Continue to allow the signatories to opt-in or opt-out of outcomes as stipulated through the *2014 Watershed Agreement*;
      ii. Adapt the partnership's outcomes as needed to be more compatible with future landscape conditions, changes in climate, population growth, imported pollutant loadings, and projected land use changes;
      iii. Center equity and inclusion; and
      iv. Develop a multi-benefit strategy that simultaneously addresses water quality, climate change, toxics, and community resilience.

2. **The Stakeholders' Committee supports strengthening the Chesapeake Bay Program with measures to simplify and streamline the partnership's structure, process, and governance as addressed in EC Recommendation #2.**
   As previously stated in our comments on the ERG report, the findings demonstrate how large and complex the bureaucracy of the CBP has become – while continuously failing to meet the water quality goals at the core of the TMDL. We remain uncertain how the current structure can drive the actions necessary to meet all of the goals. Furthermore, if the Bay Program embraces supporting local implementation, then it should define for itself the concept of network science and assess its capacity to tap into existing networks and trusted sources. Designing a new streamlined structure to make the Bay Program a central hub in a network out to local implementers would magnify local impact. We recommend that:
   a. By December 2025, facilitate a process to streamline decision-making, eliminate duplicative systems, and ensure the Bay Program is structured to advance the tenets of the Agreement's Vision of an "environmentally and economically sustainable Chesapeake Bay watershed with

clean water, abundant life, conserved lands and access to the water, a vibrant cultural heritage and a diversity of engaged stakeholders."

b. Address barriers within the structure of the Bay Program to elevate living resources and prioritize stakeholder engagement. Considerations include:
    i. reviewing funding programs and increasing equitable access to grants for community-based organizations;
    ii. meaningfully engage all federal leadership with consistent convenings of the Federal Leadership Committee; and
    iii. meaningfully engage with the Advisory Committees.

We offer below feedback and insights on specific considerations in the draft B25 report:

3. The Stakeholders' Committee believes the EC should adopt a new deadline for achieving the goals of the Bay TMDL that will not be achieved by 2025.

We note with concern the draft report's lack of details on the Bay TMDL beyond 2025. We believe the final report should be more explicit about a renewed commitment to the water quality accountability framework and a new near-term deadline for the Bay TMDL. As is reflected in many watershed organizational stakeholders' thinking, we recommend:

a. By the 2025 Executive Council Meeting, assess the current TMDL Accountability Framework, including the Conowingo Dam Watershed Implementation Plan, and identify opportunities for additions and improvements to ensure the signatories are meeting their clean water commitments, including:
    i. Fully and consistently utilize existing regulatory and enforcement authorities;
    ii. Fully and consistently implement the Accountability Framework;
    iii. Clearly define the different roles of EPA Region III and EPA Chesapeake Bay Program to ensure broad and consistent enforcement of the Clean Water Act and authorities under other EPA statutes;
    iv. Develop an implementation structure that is mutually accountable to ensure progress toward all the goals and outcomes in the *2014 Watershed Agreement;*
    v. Develop effective local river basin implementation strategies to delist a target number of rivers by a future date with interim milestones along the way;
    vi. Continue 2-year milestone reporting frequency for Watershed Implementation Plans to maintain accountability for jurisdictions and decision-makers and streamline the reporting process to shorten the time it takes EPA to publish their evaluations; and
    vii. Reinstate the EPA Senior Advisor of the Chesapeake Bay and Anacostia River.

4. Need for Greater Clarity in Bay Program Plans to Employ Social Science Resources.

The draft B25 report recommends the Bay Program utilize and support "social science" to help achieve its objectives as noted in each of the sections in 'Science' pg.10, 'Restoration and Conservation' pg.12, and 'Partnership' pg.14. While we support this in general, we offer some observations and reservations.

In the first place, we note that "social science" is a broad and sometimes amorphous cluster of distinct – sometimes mutually inconsistent – fields of research and analysis. The different fields of social science can be divergent in approach, methodology, orienting assumptions, modes of problem formulation, and operationalization of applicable variables and research constructs. There is significant methodological divergence even within basic, well-recognized disciplinary categories such as economics, sociology, geography, anthropology, and psychology. The framing of social science in the draft B25 report seems to imply specific forms of social science that we think should be articulated to reflect what approaches would be applied to specific issues, questions, or topical domains.

Additionally, we caution that Bay Program social science research needs to be conceived, designed, and conducted in a manner that: (1) includes diversity within the research team itself; (2) is sensitive to community values and perceptions; and (3) is designed with anti-racism tenets and conducted to avoid harming over-researched, under-engaged communities.

As written, some within our membership fear that the term "social science" might be limited to behavioral science and other disciplines that have historically been used to manipulate, marginalize, and damage communities of color. In regards to the potential use of social science as a tool to engage with specific communities—regardless of race, but with specific consideration towards the legacy of social sciences with communities of color—we offer the following observations and concerns:

a. The Bay Program should devise a social science agenda that is developed by a diverse panel of social scientists, including those who research in partnership with communities, rather than "on" communities. This effort will not only guide the research, but it will also help advance the understanding of social sciences amongst the Bay watershed community.
b. If social science intersects with engaging marginalized and impacted communities of color to "spur stewardship, drive restoration and conservation momentum" as stated in 'Partnership' recommendation #4, then the Bay Program should:
    i. First address the internal inclusion and belonging issues before trying to influence these communities (more below);
    ii. Recognize that social science has a legacy of causing harm and distrust in communities who perceive themselves as over-researched by academia and under-engaged in the decisions impacting their lives. This applies to both communities of color as well as rural residents. In regards to behavior change programs, in particular, it is essential to problematize targeting of communities of color by a predominantly white workforce.
    iii. Prioritize research conducted in partnership with communities to ensure that the goals of the research are community-driven, rather than Bay Program-driven. It is difficult for us to envision using social science to "drive restoration" (e.g., Bay Program priorities) in communities that are just trying to survive. Moreover, relying only on

academics as a primary source of knowledge and solutions makes community members feel like they are being studied and manipulated.

5. **The Stakeholders' Committee supports the draft B25 report's emphasis on conservation and land use and the high-level considerations that focus on nearshore habitats and better incentives for practices that maximize benefits to living resources and people.**
   We support the reasoning that "Adoption [of] a more holistic approach to addressing emerging challenges requires a strategic approach both before and after restoration practices are implemented on the ground. More strategic planning and prioritization could optimize the impact of our restoration investments and enable leveraging of new funding sources." We note that:
   a. In our 2022 Recommendations to the Executive Council, we acknowledged this idea and encouraged the Bay Program to "Convene the Chesapeake Bay States and relevant federal agencies to coordinate a watershed-wide approach to planning for large-scale solar development in our region. CBP guidance of best practices informed by science and a comprehensive look at solar development practices and policies will help meet the demands of renewable energy while also protecting the high-quality ecosystem functions, sustainable agriculture, and water quality targets." Since then, the development of data centers and transportation corridor expansion have emerged as new and compounding challenges.
   b. Bay Program data and modeling tools can and should be designed for easy application in local scale planning tools, comprehensive multi-year planning exercises, zoning analyses, and other contexts through which conservation-related objectives can be addressed.
   c. Additionally, we recommend the Bay Program develop an implementation structure with increased emphasis on characterizing watershed health at the local level as well as the entire basin that relies on monitoring data sources.
   d. The *Charting a Course to 2025* report recommended fast-tracking existing action plans, including "Keystone interventions are Forest Buffers and Wetlands, and each now has new action plans crafted by state jurisdictions and their partners. These action plans have spatial components that can inform the design and selection of implementation projects for greater targeted impact." Given buffers and wetlands are critical to water quality, living resources and climate resilience, we strongly recommend technical assistance and incentives to accelerate. These outcomes are well positioned to advance pay for performance approaches.

6. **The Stakeholders' Committee supports the draft B25 report's overall emphasis on Diversity, Equity, Inclusion and Justice (DEIJ).**
   We offer the following recommendations to improve the Bay Program's commitment to inclusive and meaningful engagement of people and communities that have been historically underrepresented, under-resourced and underserved. We recommend the Bay Program clearly define the audience of "local level" and work with those audiences to co-develop strategies of equitable and meaningful engagement. While we especially applaud 'Partnership' recommendation #3, we feel strongly that it should:
   a. Explicitly address factors that continue to impede the ability of small, minority groups to:

i. Independently access Bay Program grant resources;
ii. Effectively and independently administer Bay Program grants, like Small Watersheds, Innovative Nutrient and Sediment Reduction, and Capacity Building Grants Programs. Specifically, we recommend that:
    1. The EC directs the PSC to lead a Partnership-wide effort to identify key factors that frustrate community-level groups in their administration of Bay Program grant funding.
    2. Consistent with grant administration concerns, this effort should involve Federal, State, Departmental, and Agency grants officers, legal counsel dealing with contracts and grants, and relevant officials from oversight bodies such as OMB, DCAA, and state-level counterparts.
    3. This effort should address all factors that inhibit community group's ability to efficiently administer grants including regulatory and OMB prescriptions.

b. To bolster capacity, particularly in the form of administrators and program staff with expertise in leading organizational and social change towards diversity, inclusivity, equity, and justice, who can:
    i. Acknowledge and address how the Bay Partnership's internal operations and interactions have left BIPOC and other minority participants feeling unwelcome, ignored, or unsafe. In this context, it is particularly important that the Bay Program demonstrate the value of the DEIJ statement by first committing to equity, inclusion, and belonging internally by and through leadership-level DEIJ expertise that is capable of recognizing, handling, and responding to biases, microaggressions, and other forms of discriminatory behavior.
    ii. Consistent with this, we recommend that the EC direct the PSC to work with Agency Personnel staff within the Partnership to develop Principles of Engagement (POE) for all Bay Program meetings and fora. These POE, co-created by those who have experienced exclusionary behavior, would define appropriate modes of interaction, frame a complaint process, and outline appropriate resolution and management interventions.
    iii. Recognize that operationalization of the DEIJ Implementation Plan has been a slow and halting process and needs to ramp-up quickly.

7. **The Stakeholders' Committee strongly supports commitments to improving progress-tracking and accountability; accelerating efforts to reduce nonpoint source pollution; prioritizing conservation as a main goal; and clearly communicating progress as addressed in the Steering Committee's high-level recommendations under the Restoration and Conservation section.**

8. **Need to Simplify Report Language**
   While generally well-written, the draft B25 report has a tendency to rely on terminology that is technical and perhaps obscure to many readers. As noted above, we feel the terms "social science" and "local level"

should be more fully defined. Similarly, 'Restoration and Conservation' recommendation #1 calls for a "systems approach" to help formulate new approaches to Bay restoration and stewardship. Please further define what is meant by a "systems approach." Explain for instance, why and how Bay Program activities conducted between 2014 and the present were not systematic in their approach and application and what needs to be done moving forward. 'Restoration and Conservation' recommendation #3 calls for a "holistic" approach to planning and accountability. Is a "holistic" approach the same as a systems approach? Finally, 'Partnership' recommendation #1 also refers to a "systems approach," but in this instance grounds the term within a logic model proposed to help evaluate the Bay Program's governance and structure.

We respectfully submit the Stakeholders' Committee feedback with the hope of full consideration by the Beyond 2025 Steering Committee and the PSC. As always, we welcome follow-up discussion on elements of our letter. We are eager to be engaged in the future phases of the work. We believe that over 40 years of the Bay Program's learning and experience, the Partnership is perfectly poised to respond to the shifting current of the Bay watershed movement's collective desire and adaptive approach for a healthy and sustainable Chesapeake Bay watershed.

In partnership,

Dr. Charles Herrick
Chair, Stakeholders' Advisory Committee

Chesapeake Bay Program
SCIENTIFIC AND TECHNICAL ADVISORY COMMITTEE
645 Contees Wharf Road, P.O. Box 28, Edgewater, MD 21037
Phone: (410)798-1283 Fax: (410)798-0816
http://www.chesapeake.org/stac/

August 30, 2024

Dear Beyond 2025 Steering Committee,

On behalf of the Chesapeake Bay Program's Scientific and Technical Advisory Committee (STAC), I am pleased to submit the attached letter offering our comments on the draft Beyond 2025 report. This letter outlines STAC's primary concerns and provides recommendations for the final version based on our extensive review and the key findings from our Comprehensive Evaluation of System Response (CESR) report. We appreciate the opportunity to provide input during this critical phase and aim to ensure that the Beyond 2025 report fully reflects the challenges and opportunities facing the Chesapeake Bay Program.

Our comments emphasize the need for the report to more explicitly recognize the substantial challenges that lie ahead and to incorporate essential recommendations that may currently be underemphasized. We believe that addressing these points is crucial for ensuring the effectiveness of the Chesapeake Bay Program as it moves forward.

STAC remains committed to supporting the Chesapeake Bay Program through independent scientific and technical guidance. We hope our feedback will be helpful in refining the report and shaping a robust path forward beyond 2025. Should you require any further clarification or wish to discuss our comments in greater detail, please do not hesitate to reach out.

Thank you for your consideration.

Sincerely,

Meg Cole

Meg Cole
Coordinator, Scientific and Technical Advisory Committee (STAC)
Chesapeake Research Consortium

Chesapeake Bay Program
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August 30, 2024

Dear Beyond 2025 Steering 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,

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

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Chesapeake Bay Program
1750 Forest Drive Suite 130
Annapolis, MD 21401
Re: Chesapeake Bay- Beyond 2025 Report; July 2024

Submitted via email to: comments@chesapeakebay.net

The Stormwater Equipment Manufacturers Association (SWEMA) appreciates the opportunity to provide comments on the Chesapeake Bay Program's Beyond 2025 Steering Committee July 2024 Report titled, *A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025.* We are an industry association with diverse membership consisting of innovative stormwater solution providers, laboratories, and other professional organizations sharing the common goal of seeing defensible, scientifically-sound, and easily implementable stormwater regulations and policies established across the country. We hope that our collective expertise will be useful to you.

Currently, the Bay Program model does not include a consistent method for effectively quantifying pollutant removal reductions achieved by the innovative, proprietary stormwater management best management practices (BMPs) manufactured by our members. Proprietary BMPs, also known as manufactured treatment devices (MTDs), are an effective compliance tool utilized to manage and treat stormwater runoff from highly impervious, urbanized projects or watersheds.

To date, the lack of a standardized evaluation process for the inclusion of MTDs within the Chesapeake Bay Model has necessitated each Bay partner to create their own accounting methodology and/or implementation guidance regarding use of these systems. This has led to a patchwork regulatory framework throughout the watershed and created confusion regarding the overall efficacy of these much-needed compliance options.

With thousands of systems already installed, the potential exists that significant pollutant reductions, particularly for nutrients, are not being credited correctly today Since many Bay partners currently report a deficit for total phosphorus and total nitrogen reductions, this exacerbates an existing problem while making future compliance more difficult and costly. As the Chesapeake Bay Watershed continues to urbanize, an equitable, scientifically-sound solution regarding MTD crediting is necessary to provide stormwater programs and the development community with as many tools as possible. In addition, the development of an equitable MTD evaluation standard to properly assess pollutant reduction performance of proposed systems aligns with the Report's stated intent to incentivize innovation within stormwater management while also relying on science-based decision-making to make the Bay more resilient.

During this open public comment period, we would like to offer the following recommendation:

1) In alignment with this 2024 report and the 2022 Executive Council Directive (October 2022), which encourages the identification and use of new and emerging scientific data and studies,

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prioritize the establishment of a pollutant reduction performance standard for legacy and new MTDs within the watershed.

There are multiple verification and certification programs with robust testing protocols in existence that the Bay Program could reference to make the process of recognizing MTDs quick and easy. These existing programs provide independently verified, scientifically robust data. The Bay Program would simply have to define its performance requirements. The existing programs are:

- Technology Assessment Protocol- Ecology (TAPE) from the Washington State Department of Ecology.
    - TAPE is the "gold standard" field monitoring protocol in, and a widely referenced regulatory standard across, the country. Full approval via TAPE is assured when a tested system has obtained a General Use Level Designation (GULD), which means they have met the performance goals for the removal of specific pollutants of concern in Washington State.
        - https://ecology.wa.gov/regulations-permits/guidance-technical-assistance/stormwater-permittee-guidance-resources/emerging-stormwater-treatment-technologies
- New Jersey Department of Environmental Protection (NJDEP) Certification Program/New Jersey Corporation for Advanced Technology (NJCAT) Verification Process
    - NJDEP establishes the laboratory testing protocol while NJCAT facilitates the testing process. For use in New Jersey, an MTD must be NJCAT verified and NJDEP certified.
        - https://dep.nj.gov/stormwater/stormwater-manufactured-treatment devices/
        - http://www.njcat.org/verification-process/technology-verification-database.html
- The Stormwater Testing and Evaluation for Products and Practices (STEPP) initiative, led by the National Municipal Stormwater Alliance (NMSA)
    - An active national verification entity for both proprietary and non-proprietary BMPs. STEPP utilizes ASTM as its foundational testing protocols. ASTM field and laboratory monitoring standards are based off the NJDEP and TAPE protocols.
        - https://ms4nmsa.org/stepp/

Thank you again for the opportunity to provide input. We hope it adds value to this process and guides decision-making around proper MTD crediting moving forward beyond 2025. Please contact our

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Managing Director, Laurie Honnigford, at laurie@stormwaterassociation.com or (720) 353-4977 with any questions or for further engagement. We look forward to serving as an on-going informational resource to the Chesapeake Bay Program.

Sincerely,

Jay Holtz	Jacob Dorman	Laurie Honnigford
SWEMA GARC Chairman	Liaison	Managing Director

PennState

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August 30, 2024

Beyond 2025 Steering Committee
Chesapeake Bay Program
Annapolis, Maryland

To whom it may concern,

Thank you for the opportunity to comment on the Beyond 2025 Steering Committee's recommendations to the Chesapeake Bay Program Principals' Staff Committee in the report, *A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025*.

I am writing in my capacity as the Principal Investigator and Project Director of a USDA National Institute of Food and Agriculture (NIFA) funded grant, *Thriving Agricultural Systems in Urbanized Landscapes* (Thriving Ag, https://thrivingag.org/). This 6-year, $9 million project is working to create economically thriving and environmentally beneficial agricultural systems along the rural-urban interface. The Chesapeake Bay watershed is the case study and testbed for the Thriving Ag project. We recently held a workshop, "Opportunities in Agriculture for a Thriving Chesapeake Bay Watershed Beyond 2025," in collaboration with the Chesapeake Bay Commission.

Attached please find comments from scientists working on the Thriving Ag project. These comments are based on their research and feedback on the research from project stakeholders throughout the Chesapeake Bay watershed.

The Thriving Ag project is a collaborative effort among eight institutions: Penn State University, University of Maryland, University of Maryland Center for Environmental Science, Virginia Tech, George Washington University, Ohio State University, Stroud Water Research Center, and Utah State University. The attached comments reflect the views of the project scientists and should not be attributed to any of the institutions on the project.

Sincerely,

David Abler

David Abler
Professor and Department Head
Thriving Ag Project Director

A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025
Comments from Thriving Ag Project Scientists

Regarding the recommendation in the Partnership section of the report to "2. Enhance Capacity Building and Administrative/Technical Assistance through Local Networks. **The Steering Committee recommends enhancing the Program's structure so it can better serve as a partnership of networks that connect local implementors with data, tools, resources and technical assistance that build capacity at the local level."**

Our scientific research supports the idea of connecting existing partners to promote goals. What may be missing from this recommendation is an emphasis on engaging the agricultural community in problem-solving and providing sufficient financial resources. Our research suggests that financial incentives are the most consistently effective at promoting agricultural BMP adoption compared to non-financial approaches (peer engagement, information dissemination) (Read et al. 2023) and that farmers rely heavily on technical assistance providers to help them choose practices and navigate cost-share programs. Farmers value technical assistance providers who listen to their concerns and share information about practices that address those concerns and help them achieve farm management goals. Further, they trust advice from those who have knowledge of agricultural production systems so they are confident in what practices will work with their operations.

In addition to using existing networks, we should be looking critically at which programs are effective and why and adaptively managing programs to improve them. Lessons learned by technical assistance providers and academic researchers can be used to enhance technical assistance outcomes and make efforts more cost-effective.

Numerous studies support improving the effectiveness of pollution control efforts by targeting them to areas with the most potential to reduce the pollutant(s) at the least cost. Targeting can involve the selection of practices to be supported as well as the types and locations of farms where practice subsidies will be awarded. For example, some farms in the Chesapeake Bay watershed have higher potential to deliver pollutant loadings to the Bay due to their proximity to the Bay. Subsidies to reduce loadings on such farms will be more cost effective compared to subsidies awarded to similar farms located further from the Bay which deliver proportionately less of their pollution to the Bay (Xu et al., 2020).

Targeting can also involve the selection of practices that achieve pollution reduction at lowest cost. For example, conservation practices on working land may be more cost effective than land retirement in reducing nutrient pollution. Working lands practices include reduced tillage, cover crops, nutrient management, and enhanced nutrient management, which involves subsidizing farmers to reduce nutrient applications below agronomic recommendations (Chesapeake Bay Commission, 2004). Idling land may result in other land being brought into agricultural production. As a result, the effective amount of land retired is less than intended, a phenomenon called slippage. Slippage reduces the total amount of pollution reduction achieved by land retirement, which raises the cost of nutrient reduction. Hu et al. (2024) found for a given government budget

expenditure, that enhanced nutrient management reduced nitrogen loadings by a greater amount than land retirement.

Stakeholders at our recent workshop on providing advice to the Beyond 2025 added to these conclusions with the following comments.

- Environmental and agricultural funding sources are not designed to complement one another.
- Incentives for conservation practices can also be created through private companies. Examples include nutrient use efficiency that can be achieved through precision agriculture techniques and incentives created by product buyers who insist on adoption of certain practices.
- Funding is not only needed for technical assistance providers but is needed to properly maintain practices over a long contract period. Forest buffers were mentioned as a practice that requires annual maintenance to promote desirable native trees at appropriate densities.
- Farmers who are reluctant adopters of conservation practices will likely need multiple engagement visits and sufficient resources will be needed for voluntary programs.
- Farmers in the Chesapeake Bay are diverse but technical assistance providers may only have experience with a limited set of production types.
- Wait times are very long for conservation district assistance.
- Streamlining the paperwork requirements and providing some flexibility of practice design within cost-share programs would promote adoption.
- Cost-share programs might be adapted by paying for nutrient use efficiency, rather than practice installation.
- We are not learning from the pilot projects that we have tried in terms of practice success/failure and effective incentive types.
- Paying for performance, particularly environmental outcomes, could be more effective than the current system but is also challenging since farmers tend to prefer immediate payments.
- Insurance or yield guarantee programs can be used to reduce the risk that farmers bear when they change practices

Regarding the recommendation in the Science section of the report to "1. Optimize monitoring, modeling, and analysis. Monitoring allows Chesapeake Bay Program partners to assess and evaluate progress from restoration and conservation efforts, while identifying gaps where more attention is needed in the future. **The Steering Committee recommends developing a long-term strategy to maintain the integrity of core monitoring networks and pursue opportunities for enhancements in monitoring."**

Our research supports the goals of: (i) better monitoring; (ii) focusing on the characterization of watershed health at the local level; and (iii) linking multiple models (Wrenn, Klaiber, and Newburn, 2019; Hua, Klaiber, and Wrenn, 2024). It also supports the goal of being able to integrate climate change projections to better inform strategic planning at the local and state levels.

Population growth and the attendant changes in urban land use are impacted by factors across multiple spatial and temporal scales. However, local demand (e.g., housing values, amenities, job markets, etc.) and local supply (e.g., land prices, housing values, land-use regulations, etc.) factors play an outsized role in determining where and when this takes place. Moreover, those changes interact at a local scale with biophysical processes that can improve or degrade ecological outcomes at that same level and scale up to impact broader environmental outcomes. Our research suggests that modeling processes at the local scale and connecting the outcomes with impacts on the environment and the feedback between the two merits continued work. Data on land-use change as well as data on local land-use policies and land and housing prices are available or can be readily collected at a fine spatial scale across much of the Bay watershed. Having detailed monitoring data on environmental outcomes across space and time that match up with these human-driven outcomes will make addressing local impacts and benefits and costs easier and more impactful from a policymaking perspective.

Regarding the recommendation in the Restoration and Conservation section of the report to "1. Support System-Scale Conservation and Restoration Planning and Implementation for Habitats and Communities. Given the land use pressures associated with a growing population, **the Steering Committee recommends that the Bay Program elevate Conservation as a key guiding pillar alongside Science, Restoration and Partnership."**

Our research supports efforts to "….elevate Conservation as a key guiding pillar…" Our research highlights the role that targeted land-use policies and policies related to agricultural conservation practices can play in impacting land-use and environmental outcomes (Wrenn, Klaiber, and Newburn, 2019; Wrenn, Klaiber, and Hua, 2024). Two things that may be missing are: (i) the role that land Preservation policies, as distinct from Conservation policies, play in impacting outcomes; and (ii) how housing affordability initiatives interact with Conservation and Preservation.

States in the Bay region have some of largest shares of preserved farmland in the nation with most counties having some type of agricultural land preservation program. An important question relates to how a Preservation policy designed to preserve productive agricultural land interacts with and enhances Conservation goals. In some instances, preservation may mandate enhanced environmental outcomes, but in others it may not. Understanding this interaction will help us understand how preservation programs, which are orders of magnitude larger than conservation programs in most cases, can be used to promote conservation and environmental goals.

Housing affordability has become a key initiative at all levels of government in the U.S. While some policies focus on demand-side affordability, most evidence suggests that it is a lack of supply (supply-side issues) and its interaction with rising urban pressures that impact housing prices. Conservation and Preservation goals that remove land from production or make development more difficult could work against affordability goals. It will be important to understand when this is the case, and what the tradeoffs are in meeting affordability and environmental goals.

Regarding the recommendation in the Science section of the report to "3. Prioritize research that addresses knowledge gaps in existing and emerging challenges. The **Steering Committee recommends enhancing the partnership's understanding of anticipated changes, and how conservation practices respond to those changes, by prioritizing climate science and research on land use change."**

Based on our research, we have demonstrated the deep interdependence between agricultural systems in the Chesapeake Bay watershed and the broader, complex global food system (Mohammadpour and Grady, 2023; Gomez et al., 2024). This interconnectedness suggests that incremental changes alone will likely fall short in achieving measurable progress on nutrient pollution reductions. As we look beyond 2025, it is crucial to adopt systematic approaches that drive larger-scale changes across interconnected systems. This perspective will be key to making meaningful advancements in the Chesapeake Bay Program's goals.

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August 26, 2024

Re: Beyond 2025 Report Comments
Submitted to: Beyond 2025 Steering Committee

Dear Beyond 2025 Steering Committee,

The Nature Conservancy (TNC) recognizes the critical importance of the Chesapeake Bay to our region's biodiversity and the communities that benefit from its natural resources. Guided by science, TNC is dedicated to restoring a healthy Chesapeake Bay that supports over 3,700 species of plants and animals, thriving local communities, and sustainable industries such as fisheries, farming, and tourism. By collaborating with public and private partners, TNC advances nature-based solutions that improve water quality and provide habitat, climate resiliency, and climate mitigation benefits. We bring a global perspective, working with communities worldwide facing similar challenges, while also engaging locally in each state of the Chesapeake Bay.

The Chesapeake Bay Partnership is essential in advancing our collective efforts toward a healthy Chesapeake Bay watershed. The leadership provided by the Bay Program in setting a collective vision, engaging diverse stakeholders from all sectors and geographies, and tracking progress toward science-based targets lays a foundation for partners to build upon and advance conservation efforts for bay-wide impact. We appreciate the work of the Beyond 2025 Committee in developing recommendations to continue these efforts into the future. Please find our comments and suggestions on these recommendations below.

Comments on Executive Council Recommendations

1. **Expedite the timeline** - We support seeking commitment from all Chesapeake Bay jurisdictions and partners to continue working together for a healthy Chesapeake Bay. We also recognize the need to update current outcomes and metrics to incorporate the latest science and learnings from the past decade. We urge the steering committee to expedite the timeline to have updated goals and outcomes completed by the end of 2025 (currently goals are set for 2025 and outcomes for 2026). This is a critical first step to ensure that the necessary organizational improvements to increase the partnership's efficiency and effectiveness can be crafted to align with the updated goals and outcomes and be completed by 2026.

Comments on Chesapeake Bay Program Recommendations

2. **Perform a holistic evaluation of goals and outcomes** - When evaluating Bay goals and outcomes, we recommend a top-down approach, starting with a collective assessment of the goals, followed by an evaluation of the outcomes for each goal. For example, we should ask, "Are these the right goals? Are any goals missing? Should any goals be combined or integrated?" and then ask the same questions for the outcomes under each goal. This approach is crucial for updating how the partnership operates and leading to effective structural changes. Incremental changes and recalibration of metrics alone will not suffice; we need to work differently to overcome barriers to provide meaningful ecosystem, climate resilience, and diversity, equity, and inclusion improvements across the Bay Partnership.

3. **Integrate climate impacts and resiliency into all outcomes** – Climate change is an existential threat to the Chesapeake Bay, impacting our ability to meet all our goals. The impacts of climate change should be critically evaluated and integrated into the outcomes of each strategy rather than as a separate goal. For example, as precipitation and runoff volumes change, conservation practice effectiveness must consider

the impacts of changing weather patterns and reflect these changes in setting outcomes to achieve the goals.

4. **Focus on systems restoration rather than individual practices** – The Partnership should focus on restoring ecological systems rather than segmented practices. For example, integrating buffers, streams, floodplains, and wetlands to restore riparian/stream systems will result in improved ecological and water quality outcomes, greater ability to overcome barriers by focusing funding and technical assistance, and more efficient delivery of restoration to landowners and communities. This holistic approach will accelerate progress toward a healthy Chesapeake Bay.

5. **Determine a new land conservation outcome -** Land conservation is critical to meeting and maintaining progress toward a healthy Chesapeake Bay. As stated in the Beyond 2025 Recommendations "Conservation, defined here as protection from development and other land use transitions, is much cheaper than restoration and can help ensure the durability of investments in water quality and habitat restoration." The partnership should celebrate meeting current goals and build on this success to create a new and more ambitious land conservation outcome for beyond 2025.

6. **Include both restoration and protection in habitat outcome updates –** When evaluating and updating outcomes, the Partnership should consider the loss of habitat (e.g. forest, wetlands) from climate change and conversation to other land uses (i.e. development and agriculture). Strategies should be developed to achieve net gains in habitat using both protection to minimize future loss and restoration to mitigate for past and future losses.

7. **Ensure outcome accountability** – During the outcome evaluation process, ensure that the updated metrics developed are science-based, significantly contribute to the Chesapeake Bay goals, and that there is buy-in from those responsible for advancing progress. Each jurisdiction should identify a person or position accountable for each outcome and who engages with the appropriate Chesapeake Bay workgroups to accelerate progress.

8. **Reframe Diversity, Equity, Inclusion and Justice (DEIJ)** – DEIJ is identified as an "emerging challenge" on page 7. However, DEIJ challenges in the watershed are not new; only the recognition of them is new. DEIJ should not be viewed as a challenge similar to climate change or development, which are generally seen as negative for the watershed. Instead, DEIJ should be discussed as an opportunity, emphasizing engagement and listening to these communities as part of the science, restoration, conservation, and partnership efforts of Beyond 2025. The Nature Conservancy supports the Beyond 2025 recommendation to rely on proven social science best practices and processes to inform decision-making and foster a collaborative organizational culture that includes diverse voices. DEIJ should be explicitly incorporated across all goals and outcomes and have a specific goal that is tracked to hold the Partnership accountable for making progress.

Thank you for your time to support an incredible Chesapeake Bay Partnership and continue to improve the effectiveness and efficiency of our efforts to achieve a healthy Chesapeake Bay watershed. Please don't hesitate to reach out with any questions.

Sincerely,

Amy Jacobs
Interim Chesapeake Bay Director

August 30, 2024

Chesapeake Executive Council
Management Board and Principals' Staff Committee
1750 Forest Drive
Annapolis, MD 21401

To Whom it May Concern,

The Virginia Farm Bureau Federation, Virginia Agribusiness Council, Virginia Cattlemen's Association, Virginia Grain Producers Association, Virginia Poultry Federation, and the Virginia State Dairymen's Association appreciate the opportunity to submit comments on the *Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025* draft report. We do not believe that a new *Watershed Agreement* is necessary, and as partners in the over 40-year progress made, we affirm our commitment to improve the health and resiliency of the Chesapeake Bay and its tributaries.

Agriculture is Virginia's number one private industry, contributing $82 billion to the Commonwealth's economy and providing over 381,000 jobs. Approximately 39,000 farms spanning across 7.3 million acres call Virginia home. Advances made by farmers in conservation and sustainability have greatly contributed to Virginia meeting 80% of its goal in nitrogen reduction, 62% of its goal in phosphorus reduction, and 100% of sediment reduction. In July, we saw the Bay earning its highest grade in over two decades. Virginia has been critical to these improvements. In April, Virginia achieved a huge milestone in its completion of the Lower York River Oyster Restoration Goal, restoring more than 200 acres of oyster reef in the York River. In June, it was reported that Virginia had planted 298 miles of forested buffers in 2023. Virginia is charting the path forward for progress in the Bay.

Three short years ago, Virginia began fully funding its Agriculture Best Management Practices Cost Share Program. In Governor Youngkin's FY24-FY26 biennial budget, a record $207 million has been allocated to implementing best management practices across the Commonwealth. The achievement of our goals with the Bay hinges on the continued full funding of voluntary best management practices. Farmers have long been an important partner in the reduction of pollutants in the Bay, remain committed to that effort, and are eager to do so with the increased funding available. We are grateful for our partner organizations and their efforts to make producers aware of increased funding and provide technical assistance.

We appreciate the directive to the Principals' Staff Committee to "propose amendments to the *Watershed Agreement* necessary to incorporate new scientific understandings, to account for emerging challenges like climate change and more effectively engage the people living within the watershed," but have some concerns about whether these amendments would change the original intent and shared goals of the *Watershed Agreement* that our farmers have been working to achieve. While it is important to incorporate evolving science, we think it equally important to reaffirm the commitment to our current goals set in place. We would also like to see the Executive Council ensure that the model encapsulates all the on the ground practices that are being implemented, as there is evidence that many practices exist across the Commonwealth but are not being counted. We would welcome an additional explanation as to what additional or new data would be looked at by the Executive Council to validate the model. There must be efforts to improve the accuracy of the model and its inputs, including accurate and up-to-date reporting and inclusion of verified BMPs. A report from the Chesapeake Research

Consortium indicates that there is a disconnect between CAST modeling and monitoring data for water quality in the Bay, creating a lack of trust in the data gathered. This needs to be addressed. The long lag time in our ability to use current data must also be addressed. Strengthening the accuracy and efficiency in reporting will continue to increase the trust and use of BMPs by producers in the Bay watershed and we agree that improvements are needed in progress-tracking to identify problems and focus strategies.

In "defining existing and emerging challenges," the inclusion of massive land use changes resulting in significant losses of farm and forestland creating increased impermeable surface development and the urbanization of Virginia is critical to understanding how and when we can meet our goals. While accounting for these new challenges, we also ask that you take into consideration how these challenges will impact timelines for our goals.

We encourage continued and amplified regional partnership, increased efforts to eliminate excess complexities within the Chesapeake Bay Program structure, and transparency. We would also welcome the opportunity to provide comments on Phase II of this report.

The Virginia Farm Bureau Federation, Virginia Agribusiness Council, Virginia Cattlemen's Association, Virginia Grain Producers Association, Virginia Poultry Federation and Virginia State Dairymen's Association respectfully submit these comments and affirm our commitment to the long-term health of our watersheds and the Chesapeake Bay. We appreciate the Executive Council's commitment to this effort and look forward to continued partnership with you as we work towards a cleaner Chesapeake Bay.

Sincerely,

Martha Moore
Sr. Vice President, Governmental Relations
Virginia Farm Bureau Federation

Cliff Williamson
Executive Director
Virginia Agribusiness Council

James Riddell
Government Affairs Specialist
Virginia Cattlemen's Association

Taylor Hubbard
Government Affairs & Member Relations
Virginia Grain Producers Association

Hobey Baughan
President
Virginia Poultry Federation

Eric Paulson
Executive Secretary
Virginia State Dairymen's Association

Virginia Association of Counties

Connecting County Governments since 1934

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Executive Director
Dean A. Lynch, CAE

General Counsel
Phyllis A. Errico, Esq., CAE

Chesapeake Bay Program
1750 Forest Drive
Annapolis, MD 21401

August 23, 2024

Dear Members of the Beyond 2025 Steering Committee,

I write on behalf of the Virginia Association of Counties (VACo), to outline our thoughts and comments regarding the, *"Beyond 2025 Draft Report,"* written by members of the Beyond 2025 Steering Committee.

VACo would like to reaffirm our commitment to meeting the goals of the *Chesapeake Bay Watershed Agreement.* VACo believes this is essential to improving the health and longevity of the Chesapeake Bay and to all of those who depend on a prosperous Bay for their livelihood, as a cultural value and for adventure. VACo is proud to be one of the many organizations across the six states and Washington, D.C., that are part of the Chesapeake Bay watershed working toward restoring this great body of water. Furthermore, counties in Virginia have and will continue to do great work in this arena, and we appreciate the partnership with state agencies whose expertise and funding have contributed greatly toward Bay restoration goals.

VACo has been a longstanding partner with many of the entities that are part of the Beyond 2025 Steering Committee as well as actively involved in the Local Government Advisory Committee (LGAC). It is our hope that while some members of the Steering Committee revise the recommendations of the, "*Beyond 2025 Draft Report*," we urge that you keep in mind the plentiful local governments, both rural and urban, within the Bay Watershed that do the work on the ground every day with the end goal of a restored and vibrant Chesapeake Bay.

Sincerely,

James Hutzler
Government Relations Associate
Virginia Association of Counties

1207 E. Main St., Suite 300
Richmond, Va. 23219-3627

Phone: 804.788.6652
Fax: 804.788.0083

Email: mail@vaco.org
Website: www.vaco.org

Dear Chesapeake Bay Program:

Thank you for the opportunity to share comments and have a conversation concerning the draft of A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025.

As partners in the over 40-year progress we affirm our commitment to work together to continue efforts which improve the health and resiliency of the Chesapeake Bay and its tributaries. With thousands of farms and landowners across the Commonwealth we represent one of the largest land uses in the bay region.

As our watersheds are changing rapidly especially over the last 15 years, we must evolve strategies to proactively deal with massive land use changes including significant losses of farm and forestlands, large increases in impermeable development, serious population increases, and our changing climate. The suburbanization of Virginia and loss of farms and forestlands to non- ag development will continue to negatively effect the Chesapeake Bay. We have lost 5000 farms over the last 5 years in Virginia.

We applaud the Chesapeake Bay Program efforts to break down the excess complexity and to enhance efficiency, efficacy, and transparency.

As part of this effort there must be clear eyed efforts to improve the accuracy of the model and the model inputs. There must be accurate and up-to-date reporting and inclusion of verified data of in use BMPs --which continue to be the focus of long-term prevention strategies. There continues to be a very long lag time – in our ability to use current data.

Strengthening the accuracy of the reporting and results will continue to increase the use and trust of Ag BMPs by the Bay watershed producers.

There must be continued funding of voluntary best management practices which directly affect long term, on the ground pollution reductions. We must continue to proactively install cost-shared BMPs on private lands to reduce non-point pollution.

All the while we must consider and utilize new science and research and open up avenues for better communication, reporting and stronger outcomes. We agree improvements are needed in progress-tracking and accountability to identify problems and focus strategies.

We also agree with the recommendations for increased efforts to work regionally.

We are committed to working to improve water quality and the long-term health of our watersheds and the Chesapeake Bay.

This is 2024. Let's examine our goals, our inputs and strategies, and our outcomes and impacts to improve on accuracy, transparency, and effectiveness.

Thank you for your efforts in this endeavor.

Chesapeake Bay Program Veterans

August 22, 2024

The Honorable Michael S. Regan, Administrator
U.S. Environmental Protection Agency
Mail Code 1101A
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Dear Administrator Regan:

We, the undersigned, have played roles in crafting and implementing multiple Chesapeake Bay Agreements from the first one in 1983 through the present 2014 Chesapeake Bay Watershed Agreement. We have had roles as elected officials, state and federal agency executives, scientists, lawyers, environmental advocates, and philanthropic sponsors. We gained rich experience in the development of goals and outcomes and the implementation of efforts to achieve them. We are now retired or otherwise have no official responsibilities regarding the Chesapeake Bay Program (CBP) partnership, but retain an abiding interest in Bay protection and restoration.

We join together to strongly support sustaining the multijurisdictional partnership embodied in the Chesapeake Bay Watershed Agreement. Here, we also offer our advice on accelerating the achievement of its outcomes in concert with actions to reduce greenhouse gas emissions and adapt to the changing climate.

The CBP partnership has achieved much in the 41 years since the first agreement and is a global exemplar for large-scale ecosystem protection and restoration. Pollutant loads have been reduced, in spite of substantial population growth, and water quality is improving, even under the changing climate. The Bay would be much more degraded now without these efforts. However, the CBP's Executive Council (EC) has acknowledged that the partnership is not on track to meet several important outcomes by the 2025 target year as specified in the Watershed Agreement. The most notable of these outcomes is to have all practices and controls installed to achieve the nutrient and sediment pollution load reductions necessary to achieve water quality standards as articulated in the Chesapeake Bay Total Maximum Daily Load (TMDL) document. Reducing sources of water pollution has been a central objective in all Bay agreements from the first in 1983. The outcomes for wetlands and forest buffers, both of which also contribute to reducing nutrient and sediment pollution as well as provide vital habitats, are also off track.

On October 11, 2022 the Executive Council charged the Principals' Staff Committee (PSC) with "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." The CBP generated two reports in response to this charge: *Charting a Course to 2025* and *A Critical Path Forward for the Chesapeake Bay Program Partnership Beyond 2025*. The *Charting a Course* report stressed the need to focus on nonpoint source pollution and on regulatory and voluntary measures sufficient to implement the Watershed Implementation Plans designed to achieve the TMDL. It also noted that fundamental changes are needed to accelerate the rate of implementation of forest buffers and wetlands outcomes.

The draft *Beyond 2025* report recommends that the Executive Council, at its 2024 meeting, affirm its continued commitment to meet the goals of the Watershed Agreement and direct its PSC to propose amendments to its vision, principles and goals for consideration at the EC's 2025 meeting. It further recommends that the EC direct the CBP to review and revise the outcomes associated with these goals, with every effort to complete most reviews and revisions by the 2026 EC meeting. The draft report also recommends that the EC direct the PSC to streamline the partnership's structure and processes to enhance its efficacy, transparency, and adaptive management. The report does not suggest a time frame for completing this last task.

The *Comprehensive Evaluation of System Response* produced in 2023 by the CBP's Scientific and Technical Advisory Committee (STAC) further confirmed that practices to reduce nonpoint sources of nutrient pollution have not produced sufficient levels of implementation to meet the TMDL. Furthermore, STAC indicated that some practices may not be producing the pollutant reductions expected. The CBP's Monitored and Expected Reduction Indicator provides further evidence of this shortcoming for many tributary watersheds. STAC concluded that incentives have not been sufficient for adoption of agricultural practices with the largest pollution reduction benefits. Also, reductions are being partially offset by regional increases in imported nutrients due to the growth of concentrated livestock production, leading to mass imbalances of nutrients that increase discharges to the Bay. STAC found that additional funding of existing implementation efforts, alone, is unlikely to produce the intended nutrient reduction outcomes. To overcome this shortfall, the Bay partnership must develop and adopt new implementation programs and tools that account for actual load reductions and target effective controls on high nutrient loss areas and operations.

With our past experiences and these current reports in mind, we respectfully recommend that the Executive Council take the following actions at its December 2024 meeting:

1. **Affirm the partners' continuing commitment to meeting both the goals and the outcomes of the 2014 Watershed Agreement pending any amendments that incorporate new scientific understanding, account for emerging challenges, and engage the populace**. Suspending the partners' commitments to the outcomes and goals of the Agreement while amendments are being considered is counterproductive to progress. Many actions taken to achieve existing outcomes should proceed regardless of future modifications to the Agreement.

2. **Direct the Principals' Staff Committee to lead the collaborative development of an amended Watershed Agreement for consideration by the end of 2025.** Based on our experience, it is not necessary to spend a year to amend only the goals of the Agreement. Similar goals for living resources, water quality, vital habitats, land use and conservation, and public engagement, education and access were included in the 1987 Chesapeake Bay Agreement and the Chesapeake 2000 Agreement, with relatively small variations in form. Only the climate resiliency goal is truly new in the 2014 Watershed Agreement and we offer suggestions on this goal as our third recommendation. The other goals are enduring and have evolved only modestly. When some of us faced the new challenge of developing goals for the first time in 1987, it did not take multiple years. Fine-tuning the existing goals seems to us a quickly achievable task.

The Principals' Staff Committee should deliberately proceed with evaluation and amendment of outcomes over a one-year period that would allow the EC to recommit to an updated Agreement by the end of 2025. The amended outcomes should contribute to the overarching goals as well as accommodate the appropriate considerations presented in the *Beyond 2025* report. Proposed outcomes should provide clear direction and appropriate timelines and provide for means for accountability in implementation that include, but are not limited to, actions taken by the U.S. Environmental Protection Agency. As in the past, outcomes can be stated broadly enough with the understanding that specific aspects will be developed shortly thereafter. For example, the Chesapeake 2000 Agreement committed to continue efforts to achieve and maintain the nutrient reduction goals agreed to in 1987, while initiating a process to define water quality conditions and assign load reductions to each major tributary. The 2014 Watershed Agreement made a commitment to have practices and controls installed by 2025 to achieve water quality standards as articulated in the Chesapeake Bay TMDL, with the specifics of WIPs adjusted in two additional phases.

3. **Charge the Principals' Staff Committee to include in the amended Agreement the integration of appropriate Bay and watershed-related goals with federal, state and local actions to reduce greenhouse gas emissions**. The climate resiliency goal and outcomes in the 2014 Watershed Agreement focus, somewhat fatalistically, on withstanding adverse impacts from changing environmental and climate conditions. Climate change is already affecting water quality, living resources, habitats, public infrastructure and communities and these effects are sure to intensify. Restoring Bay and watershed ecosystems as soon as possible will enhance their resilience. However, since 2014, federal, state and local governments, institutions, and industries have made commitments, enacted laws, and made huge investments in reducing greenhouse gas emissions to net-zero over the next 25 years to avoid catastrophic warming. This is a far shorter schedule than the time course of the Chesapeake Bay Program thus far. The energy and other transitions that are required to achieve net-zero emissions present opportunities for alleviating vexing pollution and land-use threats confronting the Bay and its watershed. For example, transition away from fossil fuels to renewable energy will further reduce atmospheric deposition of nitrogen and affect land uses and stormwater runoff. The Inflation Reduction Act provides substantial federal funding for reducing greenhouse gas emissions from agriculture, not only carbon dioxide, but also nitrous oxide (resulting from crop fertilization) and methane (largely from concentrated animal production). While sea-level rise unavoidably results in tidal marsh erosion and loss of low-lying agricultural fields, it is also creating new wetlands that can be managed for water and habitat quality. In short, the amended goal and outcomes related to climate should address the opportunities as well as the threats.

4. **Agree to implement the *Beyond 2025* committee's recommendations for simplifying and streamlining the Chesapeake Bay Program structure and processes by the end of 2026**. An independent evaluation found that stakeholders view the CBP and its components as too complex, overly siloed, inadequately transparent, and trying to accomplish too much. Structure and processes should be improved, but form should follow function. To be effective, streamlining must achieve the amended outcomes. The

Principals' Staff Committee should monitor the streamlining process in alignment with the amended Agreement, reporting back to the EC in 2026

5. **Direct the Chesapeake Bay Program partnership to commission a technical evaluation of options for nonpoint-source pollution reduction that could achieve at least the Phase III Watershed Implementation Plans outcome within another decade.** Neither the *Charting a Course* nor the *Beyond 2025* reports identify and prioritize specific steps that could meet the elusive outcomes for Watershed Implementation Plans, wetlands and forest buffers. However, the Scientific and Technical Advisory Committee has advised that these outcomes are unlikely to be achieved just through existing implementation approaches, even with additional funding. It recommended the development and adoption of new implementation programs and tools that incentivize and account for actual load reductions (i.e., that are performance-based) and target effective controls on high nutrient loss areas and operations. Technical evaluation of options for more effective approaches should not be deferred pending the amendments to the Agreement outcomes. We recommend the appointment in early 2025 of a tightly charged (focusing on actions rather than research needs) and time-constrained task force to develop options for achieving the nonpoint-source load reductions required to meet the existing WIPs. The task force would be comprised primarily of experts in agricultural and stormwater nutrient management, environmental processes and effects, economic and social sciences, and law. The options developed would then be subject to stakeholder inputs and discussion that inform considerations by decision makers.

We greatly appreciate your consideration of these recommendations and stand ready, collectively or individually, to provide any clarification or assistance.

Submitted on behalf of the signatories below,

Donald F. Boesch
boesch@umces.edu

William C. Baker
Past President, Chesapeake Bay Foundation

Richard A. Batiuk
Former Associate Director for Science, Analysis & Implementation, Chesapeake Bay Program

Mark J. Belton
Former Secretary, Maryland Department of Natural Resources

Donald F. Boesch
President Emeritus, University of Maryland Center for Environmental Science

Walter R. Boynton
Professor Emeritus, Chesapeake Biological Laboratory

Clyde E. Cristman
Former Director, Virginia Department of Conservation and Recreation

William M. Eichbaum
Former Assistant Secretary, Environmental Programs, Maryland Department of Health and Mental Hygiene

Frances H. Flanigan
Former Executive Director, Alliance for the Chesapeake Bay

J. Charles Fox
Former Assistant Administrator, U.S. EPA; Former Secretary, Maryland Department of Natural Resources

Caren Glotfelty
Former Deputy Secretary, Pennsylvania Department of Environmental Resources

John R. Hanger
Former Secretary, Pennsylvania Department of Environmental Protection

David E. Hess
Former Secretary, Pennsylvania Department of Environmental Protection

Robert W. Howarth
Atkinson Professor of Ecology, Cornell University

Joseph H. Maroon
Former Director, Virginia Department of Conservation and Recreation

Jon A. Mueller
Former Vice President for Litigation, Chesapeake Bay Foundation

David K. Paylor
Former Director, Virginia Department of Environmental Quality

Margaret L. Sanner
Former Virginia Director, Chesapeake Bay Foundation

James M. Seif
Former Regional Administrator, U.S. EPA; Former Secretary, Pennsylvania Department of Environmental Protection

James S. Shortle
Distinguished Professor Emeritus, Pennsylvania State University

Robert M. Summers
Former Secretary, Maryland Department of the Environment

Bernard W. Sweeney
President Emeritus, Stroud Water Research Center

Christophe A. G. Tulou
Former Secretary, Delaware Department of Natural Resources and Environmental Control; Former Director, D.C. Department of Environment

John T. Wells
Director Emeritus, Virginia Institute of Marine Science

Brian E. Frosh
Former Chair, Chesapeake Bay Commission; Former Maryland Attorney General

John R. Griffin
Former Secretary, Maryland Department of Natural Resources

Verna Harrison
Former Assistant Secretary, Maryland Department of Natural Resources; Former Executive Director, The Campbell Foundation

Roy A. Hoagland
Former Virginia Director, Chesapeake Bay Foundation; Director, Former Virginia Coastal Policy Center

Hamid Karimi
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Patrick McDonnell
Former Secretary, Pennsylvania Department of Environmental Protection

Robert J. Orth
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Robert Perciasepe
Former Secretary, Maryland Department of Environment; Former Assistant & Deputy Administrator, U.S. EPA

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Kevin G. Sellner
Former Executive Director, Chesapeake Research Consortium

Charles A. Stek
Former Project Director for U.S. Senator Paul Sarbanes

Ann P. Swanson
Former Executive Director, Chesapeake Bay Commission

Albert H. Todd
Former Assistant Director, USDA Forest Service; Former Executive Director, Alliance for the Chesapeake Bay

Dennis H. Treacy
Former Director, Virginia Dept. of Environmental Quality; Former Member, Chesapeake Bay Commission

August 30, 2024

Chesapeake Bay Program
1750 Forest Drive, Suite 130
Annapolis, MD 21401
Chesapeake Bay Program Leadership and Partners,

Thank you for the opportunity to comment on the Beyond 2025 Steering Committee draft recommendations. Partners across the watershed have worked hard to reach the two million acre land conservation goal in the current Bay Agreement, and Virginia's nonprofit land trusts are pleased that it looks like we are on track to meet the goal. The two million acre achievement should be celebrated, but the landscape has changed since the last Bay Agreement. We are seeing a rapid conversion of land due to data centers, utility-scale solar, and the impacts of climate change.

We urge the Chesapeake Bay Program to modify the Protected Lands Outcome and set 2030, 2040, and 2050 goals for permanently protected acreage that ensure equitable inclusion of all communities.

We support the Steering Committee's recommendation:

> ***that the Bay Program elevate Conservation as a key guiding pillar alongside Science, Restoration, and Partnership (HW 4).*** *Taking a more holistic, systems approach requires broadening our vision of restoration to incorporate management, stewardship and conservation of land and aquatic environments. Conservation, defined here as protection from development and other land use transitions, is much cheaper than restoration and can help ensure the durability of investments in water quality and habitat restoration. Conservation and stewardship of land and aquatic environments can support watershed health, expand and enhance publicly accessible natural areas and ensure the resilience of ecosystems that provide clean water, store carbon, and provide numerous other ecosystem service and socio-economic benefits to local communities (C3, HW4). The partnership should identify mechanisms to further integrate conservation and stewardship throughout the Program.*

Permanent land conservation is a direct way to save the most ecologically and important places in the Bay watershed. Land conservation can leverage additional resources and layer conservation practices. Without permanent conservation the initial benefits of restoration can often be lost over time. We need more permanent land conservation to serve the needs of living resources and people in this watershed. Land trusts, landowners, and other conservation organizations are working hard to access federal funding. We welcome a partnership to efficiently access federal funds.

We urge the Chesapeake Executive Council and Principal Staff Committee to accept the thoughtful recommendations in the Beyond 2025 Steering Committee Report and make land conservation as a key guiding key pillar in the next Chesapeake Bay Agreement.

Sincerely,

Blue Ridge Land Conservancy
Broad Water Innovations
Capital Region Land Conservancy
Central Virginia Land Conservancy
Chesapeake Conservancy
Coastal Virginia Conservancy
Historic Virginia Land Conservancy
Northern Virginia Conservation Trust
Old Dominion Land Conservancy
Piedmont Environmental Council
Potomac Conservancy
Shenandoah Valley Conservancy
The Nature Conservancy
Virginia Conservation Network
Virginia's United Land Trusts

I’m writing as a community member who has experienced first-hand how regional forces such as unchecked development, poor enforcement, climate-driven storms, and agricultural pollution have overwhelmed local gains in reducing water pollution. Now is the time for bold leadership and innovation to chart a new course for the Chesapeake Bay Agreement and to implement real change that will lead to the achievement of the Chesapeake Bay Total Maximum Daily Load (TMDL) targets, while emphasizing progress in shallow water habitats. There needs to be a shift from a practice-focused approach to one that measures actual load reductions. Most importantly, we need to recognize the recommendation of the leading Bay scientists to take a more holistic focus on the threats to living resources and the toxic and emerging contaminants threatening our communities, especially those communities impacted the most by pollution due to historical environmental injustices.

After four decades of tireless effort, our waterways and communities are still far from the Bay Agreement restoration goals. Recent findings detailed in the Comprehensive Evaluation of System Response (CESR) report, show that while some areas have seen improved water quality since 1985, overall progress has been slow and uneven. There are significant challenges in achieving restoration goals due to inadequate enforcement of violations from point sources and implementation of actions to reduce nonpoint sources of nutrients. Today, 71.9% of Chesapeake's tidal waters remain impaired under the Clean Water Act—an improvement of only 1.6% since 1985 when 73.5% of Bay waters were impaired. Agriculture, the largest remaining source of nutrient loads, and urban and suburban nonpoint sources, which are rapidly expanding, pose substantial obstacles.

Now is the time for state leaders and the Bay Program to recommit to the Chesapeake Bay Agreement, and revise goals and strategies to prioritize top-down accountability, climate change data and resiliency projects, and solutions for communities who face the same environmental threats as the Bay. For the future health of the Bay, local waterways, and our communities, there is no other option than to take bold and immediate action to recalibrate the Bay Program’s work. The Bay Program, and state and federal leaders must ensure a Beyond 2025 strategy that is accountable, addresses the impacts of climate change, and has real solutions for communities facing often catastrophic environmental threats.

WATERKEEPERS® CHESAPEAKE

P.O. Box 11075
Takoma Park, MD 20913
(800) 995-6755
www.waterkeeperschesapeake.org
CFC#: 31891

August 13, 2024

To: Chesapeake Bay Program, comments@chesapeakebay.net

Re: Comments on draft recommendations for meeting the goals and outcomes of the *Bay Watershed Agreement* beyond 2025

Introduction

For over 20 years, Waterkeeper programs in the Chesapeake Bay region have worked with their communities to monitor their waterways to identify and address pollution threats. Focusing on the tributaries of the Chesapeake, they have experienced first-hand how regional forces such as unchecked development, poor enforcement, climate-driven storms, and agricultural pollution can overwhelm local gains in reducing pollution. Now is the time for bold leadership and innovation to chart a new course for the Chesapeake Bay Agreement and to implement real change that will lead to the achievement of the Chesapeake Bay Total Maximum Daily Load (TMDL) targets, while emphasizing progress in shallow water habitats. There needs to be a shift from a practice-focused approach to one that measures actual load reductions. Most importantly, we need to recognize the recommendation of the leading Bay scientists to take a more holistic focus on the threats to living resources and the toxic and emerging contaminants threatening our communities, especially those communities impacted the most by pollution due to historical environmental injustices.

Waterkeepers Chesapeake fights for clean water and a healthy environment by supporting Waterkeepers throughout the Chesapeake and coastal regions as they protect their communities, rivers, and streams from pollution. A network of Waterkeepers began collaborating in 2004 and now includes 16 Waterkeepers working in Virginia, Maryland, West Virginia, Pennsylvania, Delaware, and Washington DC. In 2012, the Waterkeepers established Waterkeepers Chesapeake as a nonprofit, and in 2014, became licensed under Waterkeeper Alliance.

Recommitment & Bold Change

After four decades of tireless effort, our waterways and communities are still far from the restoration goals we've dreamed of and worked for. Recent findings from the Chesapeake Bay Program, as detailed in the Comprehensive Evaluation of System Response (CESR) report, show that while some areas have seen improved water quality since 1985, overall progress has been slow and uneven. These findings disappoint stakeholders and community groups, including Waterkeepers, who have long championed the Bay's health and continue to advocate for stronger action and support in achieving our restoration aspirations. By 2020, only about a third of the Bay area met water quality standards, a small increase from 27%, indicating significant obstacles remain in our path to full recovery.

The Chesapeake Bay faces significant challenges in achieving Total Maximum Daily Load (TMDL) targets due to inadequate enforcement of violations from point sources and implementation of actions to reduce nonpoint sources of nutrients. Today, 71.9% of Chesapeake's tidal waters remain impaired under the Clean Water Act—an improvement of only 1.6% since 1985 when 73.5% of Bay waters were impaired. **Agriculture**, the largest remaining source of nutrient loads, and **urban and suburban nonpoint sources**, which are rapidly expanding, pose substantial obstacles.

Despite efforts to incentivize best management practices (BMPs), particularly for nitrogen (N), actual reductions have fallen short of TMDL requirements. From CESR: "*Tens of millions of pounds of N reductions are needed to achieve the TMDL goal, but a decade of implementation since 2010 has produced only 3 million lb/yr of nonpoint source N reductions (as estimated by the CBP watershed model)*." Nearly 50% of the nitrogen reductions achieved under the TMDL since 2009 have been negated by previously unaccounted for factors including lack of enforcement, greater agricultural fertilizer use, more farm animals, global warming, Conowingo dam reservoir filling to capacity, more development of land, and less effective farm BMPs than presumed.

CESR also highlights that increases in livestock and imported nutrients exacerbate **nutrient mass imbalances** in the watershed, further complicating efforts to control nonpoint source pollution. Evidence suggests that BMP implementation has not consistently translated into expected nutrient reductions, underscoring a **response gap** in achieving TMDL goals, particularly for phosphorus (P). Monitoring indicates limited evidence of observable reductions in phosphorus, in direct contradiction to what modeling shows.

Addressing these challenges, we need to shift our approach to tracking and accounting for progress. A key requirement is shifting from a practice-focused approach to one that measures actual load reductions. The CESR report recommends finer-scale modeling, targeted restoration and monitoring, and innovative incentive programs like pay-for-performance, which could enhance the effectiveness of nonpoint source control efforts. Managing regional nutrient imbalances through technology adoption and improved nutrient distribution systems also emerge as critical strategies. Waterkeeper organizations throughout the watershed are poised and ready with decades of tidal and nontidal water quality and bacterial datasets, as well as deep community connections and expertise to help the Bay Program make this critical transition. Ultimately, overcoming these complexities demands institutional innovation and flexibility in policy approaches and new management strategies. The CESR report underscores the need for adaptive, evidence-based approaches to substantially reduce nonpoint source pollutants across the Chesapeake Bay watershed.

Now is the time for state leaders and the Bay Program to **recommit** to the Chesapeake Bay Agreement, and **revise** goals and strategies to prioritize top-down **accountability**, **climate change** data and resiliency projects, and solutions for **communities** who face the same environmental threats as the Bay. Waterkeepers Chesapeake and the undersigned Waterkeepers who work daily to protect our local waterways and to restore the Bay and its tributaries offer the following recommendations to accelerate and achieve success Beyond 2025.

Accountability, Climate & Communities

Waterkeepers with a wealth of knowledge and experience working on local waterways for the past few decades stand in a unique position to help the Bay Program Partners and EPA undertake the CESR-recommended shift toward shallow waters. We have been here for decades, fighting to prevent illegal pollution of these waters and working with communities to restore them, knowing that progress in these waterways will flow into progress for the Bay itself. We have even taken legal action to halt the elimination of local TMDLs. Thus, we welcome the Bay Program or anyone else to come to us for assistance in transitioning the Bay restoration strategy and we offer specific strategies and recommendations for a successful and sustainable Bay restoration. These strategies and recommendations outlined in Appendix A prioritize top-down **accountability**, centralize **climate change** data and resiliency projects, and elevate solutions for **communities** who face the same environmental threats as the Bay. *This is not an exhaustive or final list.* Any solutions should be adaptive as new science and monitoring data are known, and should engage impacted communities.

Accountability from the Top Down
Strategies:

1. Leadership Accountability for all 31 Bay Agreement Outcomes, non-point source pollution reductions, and State enforcement;
2. Industry Accountability for the nutrient mass imbalance and toxic pollutants;
3. Local Agency Accountability and increased capacity for planning, development, and enforcement.

The EPA, Bay Program and state leadership more often than not have failed to be accountable for achieving the Bay Agreement goals and outcomes and for enforcing the permits and programs that the Bay TMDL relies upon. We stand with the Choose Clean Water Coalition's recommendation that there must be accountability for all 31 Bay Agreement Outcomes. Leadership now must step-up to recommit to the Bay Agreement, restructure to reflect our current science and future needs, use existing enforcement authorities, and achieve effective pollution reductions from agriculture and urban/suburban stormwater sectors. Industry needs to be held accountable for reducing agriculture pollution (specifically CAFOs to address the nutrient mass imbalance), greenhouse gas emissions, toxic pollution such as PCBs, PFAS, and microplastics, and the overwhelming pollution stuck behind the Conowingo Dam. While the focus has been on the federal and state level, there needs to be a heightened focus on local accountability, implementation, funding, and monitoring to ensure that federal and state programs are effective and producing results. Importantly, any tiered approach that shifts focus toward shallow water habitat improvement must take a holistic approach supported via the establishment of a TMDL for that subwatershed; we know better than anyone that any shallow water approach to Bay restoration reliant on scattered, or even targeted, restoration projects is doomed to failure without adequate watershed-scale planning, and full use of Clean Water Act permitting and enforcement.

Importantly, as we collectively work to respond to CESR's recommendation that we take a more holistic view of achieving water quality standards in the Bay watershed, we must acknowledge the

role that enforcement of the Clean Water Act and state water pollution control laws must play. EPA data confirms that noncompliance is rampant. While the status quo elevates considerations of nutrient pollutants and the dissolved oxygen levels in the main stem of the Bay, the path forward must elevate the role that enforcement of illegal pollution from point sources has on protecting humans and wildlife from toxic and carcinogenic substances. Given that pollution levels disproportionately affect certain communities, increasing efforts to clamp down on water pollution will produce substantial benefits for our most vulnerable communities.

Centralize Climate Change Data and Impacts

Strategies:

1. Improve models, maps, and precipitation curves to reflect current climate change data;
2. Protect our communities and investments from climate impacts;
3. Prioritize habitat and nature-based solutions to accelerate success.

Climate change data and recognized impacts have advanced since the 2014 Bay Agreement. All efforts should be made to ensure that models, maps and intensity, duration, and frequency (IDF) curves that are used in state and local regulations reflect current data. We need to vastly increase investment in state and federal (e.g., USGS) surface and groundwater monitoring stations, and update impervious surface data, including compacted soils in urban environments. To protect our communities and investments from climate impacts, we need to hold states accountable for upholding their wetlands protections and adhering to the Agreement's wetland restoration goal, require more effective MS4 and construction stormwater controls, establish guardrails for sprawl and over-development, develop a roadmap for retreat and restore tactics, and build coastal and flood-plain resilience and protections. To accelerate success, habitat and nature based solutions should be prioritized, such as increasing near-shore ecosystem restoration and riparian buffers, protecting non-tidal stream health, and accelerating tree protections and plantings. These policies must focus on communities most likely to be impacted by urban heat islands, severe storms, and flooding due to historical disenfranchisement and environmental racism.

Elevate and protect our communities

Strategies:

1. Increase community engagement efforts;
2. Fund and certify community monitoring efforts;
3. Weigh human health risks equal to nutrient pollution.

The Bay Agreement with its goals and 31 outcomes needs a renewed commitment to inclusive and meaningful engagement of people and communities that have been historically underrepresented, under-resourced, and underserved. Communities need to be centered in all restoration planning and implementation. Community engagement should include increased and improved public access, funding and programs to support residents' efforts to decrease pollution, and funding and programs to educate and engage youth. States need to fund and certify existing and expanded water quality monitoring programs to utilize community data sets to evolve and inform models. Human health risks need to be prioritized alongside nutrient pollution reduction efforts. Infrastructure updates for wastewater treatment plants, sanitary sewer systems, and combined

sewer overflow systems must be prioritized and funded, and consent decrees for ending overflows must be enforced. Related to this, states should establish appropriate action plans for environmental agencies to respond to areas with chronically high bacteria counts -- with point source and nonpoint source contingencies. Goals and outcomes for toxic contaminants such as PFAS and coal ash should reflect the most up to date science and EPA regulations and guidance, and states should be proactive in not just monitoring for, but also regulating PFAS and other toxics, and investing in remediation where necessary to protect local communities and waterways.

Summary

For the future health of the Bay, local waterways, and our communities, there is no other option than to take bold and immediate action to recalibrate the Bay Program's work. Agricultural and developed lands nonpoint sources must be aggressively addressed in a new plan with new regulations and accountability, and better enforcement of existing regulations, or the majority of Bay waters will remain impaired and will very likely worsen. In addition to the recommendations and strategies offered by Waterkeepers, we support the adoption of the recommendations and new management strategies put forth by the Choose Clean Water Coalition. Waterkeepers stand ready to work with the Bay Program and other partners to ensure a Beyond 2025 strategy that is accountable, addresses the impacts of climate change, and has real solutions for communities facing often catastrophic environmental threats. For questions or comments on these recommendations, please contact Robin Broder, robin@waterkeeperschesapeake.org.

Sincerely,

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