Management Strategies for Goal 2: Clean Water

Goal

Reduce pollutants entering the Bay and its rivers to achieve the water quality necessary to support aquatic life and wildlife, and support human health.

Note for CWGT and workgroups: This August 21 draft is provided for initial review and feedback with the acknowledgment that some sections are still missing or incomplete. Given the partnership deadlines we hope this draft allows you to get an initial sense of the situation analyses, challenges and management approaches for the Goal and each of our three outcomes. An updated decisional draft will be provided ahead of the September 28-29 CWGT meeting; we will do our best to incorporate early feedback into that draft while we fill in the gaps and edit this version. Please provide your thoughts and input to the CWGT Coordinator (hansonj@chesapeake.org) no later than Tuesday, September 8th.

Situation Analysis for Goal 2: Clean Water

Clean water is the foundation of healthy fisheries, habitats, farmlands and communities across the Chesapeake Bay watershed, and reducing the pollutants that degrade the Bay and its rivers remains central to the partnership's shared Vision. Over its more than four decades, and through fifteen years of implementing the Chesapeake Bay Total Maximum Daily Load, the Bay Program partners have achieved measurable reductions in nitrogen, phosphorus and sediment. The partnership has built and improved its monitoring, modeling and assessment capacity that offers insights and accountability alongside that progress.

As acknowledged at the signing of the 2025 Agreement, much has been accomplished, and much remains to be done. Population growth, the loss of farm and forest lands, aging infrastructure, emerging contaminants and changing environmental conditions continue to press on water quality, and the reductions still required are increasingly concentrated where they are hardest and most costly to achieve.

The three Outcomes under this Goal describe complementary dimensions of the work to achieve Clean Water that supports aquatic life and wildlife and human health.

- **Reducing Excess Nitrogen, Phosphorus and Sediment** (RENPS) focuses on implementing and maintaining the practices and controls needed to reduce loads and meet water quality standards. The wastewater sector has achieved nearly all of its commitments thanks to rigorous policies and dedicated public funding sources. As the partnership prepares to revise its planning targets using the next generation of modeling tools, the largest remaining reductions must come from agriculture and developed lands.

- **Toxic and Emerging Contaminants** (T&EC) confronts a burden that remains substantial and complex through a renewed, value-added emphasis on connecting researchers, managers and practitioners across the watershed.
- **Water Quality, Standards Attainment and Monitoring** (WQ, SAM) sustains the networks and analyses that allow the partnership to measure changing conditions, interpret trends, and understand the lag between pollutant reductions and the Bay's response.

These Outcomes are not uniform in the maturity and depth of partnership resources available to advance them. However, they share many challenges, some of which the partnership is positioned to influence more directly than others. The partnership cannot address every challenge at once, and this Management Strategy reflects a deliberate focus on those where a coordinated, watershed-wide approach adds the greatest value and is most likely to accelerate and demonstrate progress within the next six years. As the partnership has learned across more than forty years, implementation is locally inspired and driven: local governments, farmers, tribes, businesses, watershed organizations and community members are essential partners in this work. The Management Approaches that follow will describe how the partnership can ultimately better engage, inform and support its network of partners. The Outcome-level situation analyses below identify the challenges specific to each Outcome. The Management Approaches, and separate workplans, translate this shared understanding into the concrete, accountable actions the partnership will pursue to achieve clean water for the people and living resources of the Chesapeake Bay.

In the table below, the Goal Team has summarized the most critical challenges facing each of its Outcomes that are within CBP's ability to impact or influence. The Goal Team and its Workgroups, as appropriate, have identified those challenges shown in **bold** as critical for Workgroups to begin addressing within the next six years via the development and implementation of Management Approaches. Challenges associated with Changing Environmental Conditions are denoted with an asterisk (*).

	Outcomes		
Challenges	RENPS	T & EC	WQ,SAM
Adaptively managing by revising nitrogen, phosphorus and sediment targets with the latest science and the latest generation of modeling tools (Phase 7)	X		
Updating and applying latest science or data into partnership tools and products through partnership review and approval processes	X		X

Tracking, reporting and verification of implemented BMPs	X		
Gaps in information and analysis to better understand observed trends and response gaps to management actions and changing environmental conditions	X		X
Understanding and communication of the ability of BMPs or management actions to provide multiple benefits across varying audiences or scales	X	X	X
Communication and outreach of the lag from reducing pollution loads to WQS attainment (ecosystem response gaps)	X		X
Communication and coordination (general) [**placeholder – will remove but leaving for now**]	X		
Administrative, programmatic or regulatory constraints or uncertainties that may slow or impede data-sharing, tracking, reporting, verification, innovation and/or implementation	X	X	X
BMP implementation gaps [**elaboration needed?**]	X		
Nutrient mass imbalances, complex systemic dynamics, or changes that impact our ability to meet goals, improve plans, or develop innovative strategies (e.g., fertilizer and agricultural markets; growth of developed footprint in less-regulated non-MS4 areas)	X		X
Resources and technical workforce capacity to provide technical assistance, plan, design, implement and accelerate BMP implementation	X		
*Physical constraints (e.g., CEC, landscape characteristics or ownership) or realities (e.g., aging infrastructure, completion of "low-hanging fruit")	X	X	X
Funding and technical workforce capacity to maintain installed BMPs now and into the future	X		
Monitoring network operational vulnerabilities; Resources and capacity to grow or sustain monitoring networks			X
Improved monitoring data use and incorporation within partnership models			X
Communication of monitoring results and difficulties conveying progress across many multiple audiences, timelines, or spatial scales			X
*Seasonal and habitat-specific differences in responses make it difficult to set expectations and interpret progress consistently			X
Sources Information Gap: Limited understanding of the occurrence, concentrations and sources of toxic contaminants in different landscape settings.		X	
Fish Consumption Information Gap: Limited understanding of the effects of legacy and emerging contaminants on both ecological health and human health, through fish consumption.		X	
Emerging Contaminants Information Gap: Fast pace of change and limited knowledge on emerging contaminant issues.		X	
Toxics Mitigation Practices and Co-benefits: Limited information on the current best practices to mitigate contaminants, and the co-		X	

benefits of these practices on reducing nitrogen, phosphorus and sediment.			
Technical Network Connectivity: Limited connectivity among groups hinders technical information transfer within the partnership and beyond.		X	

Management Approaches for Goal 2: Clean Water

Management Approach 2.0.1: Incorporate additional lines of evidence into assessments of progress

New or amended WIPs will be developed by the end of 2030, informed by the updated suite of Modeling Tools. Until then, for the period from 2026-2030, jurisdictions and partners will continue to strive for their interim planning targets, as agreed by the PSC in Month Year. Innovative approaches and emerging opportunities to accelerate progress will be a focus during this period. There is also an opportunity to begin including or testing additional lines of evidence for assessments and communications during this period. The partnership can explore continued improvements to how existing monitoring and modeling information may be employed for communication or strategic ends.

Management Approach 2.0.2: Continue to improve effectiveness of the CWGT and its workgroups as they mutually coordinate and communicate, foster innovation, improve information exchange, adaptively manage and strive to achieve Clean Water goals and outcomes.

Participating partners continue to push the Goal Team to improve its operations and effectiveness, with communications and cross-coordination amongst the most frequently requested areas for improvement. The revised Agreement and CBP structure afford ample opportunities to be creative and innovative in how we operate and work together. This management approach recognizes this timely need for continuous improvement in response to multiple ongoing needs and challenges. In that vein, it also includes efforts that are likely to be cross-goal or cross-outcome in nature, e.g., exploring the role of the Bay Program with respect to understanding and communicating the links or tradeoffs of BMP implementation and maintenance for multiple benefits of audience-specific interest beyond nitrogen, phosphorus and sediment (e.g., soil health, reduced flooding, etc.).

Management Approach 2.0.3: Expand local capacity and technical assistance through strategic cross-partnership collaboration, particularly the workforce outcome

This is inclusive of all sectors engaged throughout the watershed. This seeks to build the sustained operational capacity of local governments, conservation districts, and trusted local organizations that provide technical assistance to select, design, install or maintain BMPs. This approach may include collaborative efforts to assess and generate pathways to train, hire, and retain workers in conservation, restoration and environmental positions. This can continue proactive outreach by partners to historically underrepresented entities—including Tribal nations and disadvantaged communities—to co-design, implement and maintain local restoration projects that bring jobs and other benefits to communities.

Management Approach 2.0.4: Assess and integrate jurisdictional data sources to improve the accuracy of model predictions.

In support of the Agreement's Science Principles, we will continue ongoing efforts to evaluate new or improved jurisdictional and other data sources for integration into our tools for improved accuracy in modeling and planning. Workgroups – including Agriculture, Urban, Watershed Technical, and others – will be core contributors within the partnership structure to assess and evaluate partners' data for continued incorporation or application within modeling tools and/or CBP analysis or products.

Reducing Excess Nitrogen, Phosphorus and Sediment

Reducing Excess Nitrogen, Phosphorus and Sediment: Implement and maintain practices and controls to reduce nitrogen, phosphorus and sediment. These reductions are necessary to achieve the applicable water quality standards, as described in the Bay TMDL. Those water quality standards support living resources and protect human health, as required by the Clean Water Act.

- Through 2030, signatories will continue to accelerate completion of all interim water quality planning targets through implementation of Chesapeake Bay Watershed Implementation Plans, two-year milestone commitments and other innovative strategies to achieve and maintain reduced levels of nitrogen, phosphorus and sediment.
- By December 31, 2030, revise the planning targets approved by the Principals' Staff Committee for nitrogen, phosphorus and sediment, incorporating the latest watershed modeling, monitoring data and research findings, and develop new or amended Watershed Implementation Plans to meet the updated targets by 2040.
- Demonstrate net reductions in nitrogen, phosphorus and sediment through multiple lines of evidence, including modeling and monitoring data.

Baseline and Current Condition

Target 1: Interim water quality planning targets through 2030

Progress toward this Target is assessed against the 2009 baseline established by the Chesapeake Bay Total Maximum Daily Load (Bay TMDL), when an estimated 297.1 million pounds of nitrogen, 16.8 million pounds of phosphorus and 18,830 million pounds of sediment were delivered to the Bay. Jurisdictions report implemented best management practices (BMPs) and wastewater treatment facility load reductions annually, and the partnership's Phase 6 suite of modeling tools translates those reports into estimated loads.

As of 2025, estimated loads were 252.7 million pounds of nitrogen, 12.8 million pounds of phosphorus and 17,555 million pounds of sediment, reductions of roughly 15, 21 and 7 percent from the 2009 baseline. Measured against the partnership's interim water quality targets, the watershed achieved 100 percent of the sediment target, 90 percent of the phosphorus target and 57 percent of the nitrogen target. The sediment target has been met and maintained watershed-wide; the nitrogen and phosphorus targets have not.

The sources of those reductions have shifted over the life of the Bay TMDL. From 2009 to 2017, point sources carried the effort: wastewater accounted for 150 percent of the

watershed's net nitrogen reduction, offsetting load growth occurring in other sectors, and 68 percent of the net phosphorus reduction. From 2017 to 2025, nonpoint sources delivered half of the nitrogen reduction, with agriculture accounting for 49 percent of that nonpoint share — a significant shift from the midpoint assessment, reflecting sustained investment in technical assistance, cost-share programs, and BMP implementation and verification, and illustrated by successes such as record agricultural cost-share funding in Virginia, record cover crop enrollments in Maryland, and local stream delistings under Pennsylvania's Countywide Action Planning process.

Progress against Phase III WIP commitments varies by sector and by jurisdiction. The wastewater sector has met nearly all its commitments and has limited remaining capacity to contribute further reductions. Progress in the agriculture and developed sectors is uneven, and in several jurisdictions load growth from population increase, development and agricultural production has outpaced implementation, producing no net reduction. Most of the nitrogen reduction still needed is expected to come from the agriculture sector. The Conowingo Watershed Implementation Plan separately addresses the additional loads reaching the Bay now that the Conowingo Dam has reached dynamic equilibrium and no longer traps sediment and nutrients; implementation under that plan remains early relative to its targets.

Target 2: Model development, revised planning targets, and new or amended WIPs by December 31, 2030 to meet the updated targets by 2040

The baseline for this Target is the current set of planning targets approved by the Principals' Staff Committee and implemented through the Phase III WIPs, together with the separate Conowingo WIP targets and the 2025 climate change targets. These were established using the Phase 6 suite of modeling tools, and progress against them is currently simulated using CAST-23 as described above under Target 1.

The partnership is developing the Phase 7 suite of modeling tools, which will incorporate updated datasets and methodologies agreed to by the partnership, with key methodological decisions being made during 2026. A draft suite is expected at the start of 2027 for partnership and Scientific and Technical Advisory Committee review, with final partnership-approved tools in 2028. Those tools are the basis for revising planning targets and for the new or amended Watershed Implementation Plans that will carry the partnership to 2040. Until revised targets are adopted and the new modeling tools are fully in use, the interim water quality targets described under Target 1 remain the measure of progress.

The language of Target 2 to integrate "the latest watershed modeling, monitoring data and research findings" applies to the Phase 7 modeling tools, but also acknowledges the partnership's interest in exploring the concept of "tiered implementation of the Chesapeake Bay TMDL." This ongoing effort extends from the Scientific and Technical Advisory Committee's Comprehensive Evaluation of System Response (CESR) report's recommendations.

Once new modeling tools and revised planning targets are set, the partners will be equipped to amend existing Watershed Implementation Plans (WIPs) or develop new WIPs by the end of 2030. As of now (MONTH 2026) the PSC has approved the schedule through the review and release of the Phase 7 model in early 2027 and 2028, respectively. The schedule and other details for both the final planning targets and WIP development are yet to be determined by the partnership.

Target 3: Net reductions demonstrated through multiple lines of evidence

Unlike the first two, this Target has no numeric endpoint. Its baseline is the evidence the partnership can currently bring to bear on whether loads are falling, and its current condition is the degree to which those lines of evidence agree with one another. Modeled progress based on annually reported BMPs simulated through the CBP modeling tools remains the primary line of focus. Multiple others already exist, either as Indicators, tools, or separate data products:

- The TMDL Indicator, which combines monitored and modeled information to estimate progress in reducing annual pollution loading rates since 1995, and;
- METRIC, which compares monitored load trends with CAST-estimated load trends at Chesapeake Bay Non-Tidal Network stations.
- Long-term Non-Tidal Network trend analysis provides a further independent line of evidence.

These lines agree on direction: nitrogen and phosphorus loads are trending toward the planning targets watershed-wide. They do not fully agree on rate, and they vary across the watershed. The TMDL Indicator shows progress, particularly for phosphorus, to be slower than the modeled simulations would predict. These differences, referred to within the partnership as response gaps, may reflect lag time between BMP installation and measurable water quality response, the performance of particular practices, landscape and soil characteristics, or load growth offsetting implementation.

The principal gap this Target addresses is the need expressed across the partnership for extensive discussion at technical and policy levels to establish how existing indicators and available lines of evidence will be combined, reported and communicated, particularly with respect to some of our most visible and impactful products.

Monitoring Progress and Indicators

The Bay Program and its partners rely on several existing metrics and tools to understand our current status and overall progress in reducing excess nutrient and sediment loads. The primary lines of information used by the CWGT are described here, but the ways that we employ our collective datasets may shift as we explore the Outcomes and Targets described in this Chapter.

Modeled Load Reduction Indicator (MLRI)
Reports estimated nitrogen, phosphorus and sediment loads and the share of the necessary reductions achieved, based on BMPs and wastewater controls reported annually by the jurisdictions and simulated through the CBP modeling tools. Updated annually following the jurisdictions' progress submissions. This is the partnership's primary reported measure of progress for Target 1. When the Phase 7 modeling tools and revised targets are in place this Indicator will shift its application to Target 2, or possibly a revised version of Targets 1 and 2.

TMDL Indicator
Combines monitored and modeled data to estimate progress in reducing annual pollution loading rates since 1995 in response to implemented management practices. Because it incorporates observed water quality data, it provides the partnership's clearest current view of where modeled and monitored results diverge, and is a principal reference point for Target 3.

The following existing tools or products are notable for discussion of all three Outcome Targets and subsequent Management Approaches, but are not maintained on ChesapeakeProgress as official "Indicators:"

Monitored and Expected Total Reduction Indicator for the Chesapeake (METRIC)
An application for comparing monitored load trends with CAST-estimated load trends at Chesapeake Bay Non-Tidal Network stations. METRIC supports diagnosis of response gaps at the station and watershed scale and informs where additional research or targeting may be warranted.

Nontidal Network Trends
Nutrient and sediment loads are monitored at 123 river and stream stations throughout the Chesapeake Bay watershed. Water quality samples collected from this nontidal monitoring network are used by the U.S. Geological Survey (USGS) to calculate trends--which describe how loads of nitrogen, phosphorus and sediment have changed over time--every year or every other year.

Tidal Trends
Each year, the Chesapeake Bay Program, Maryland Department of Natural Resources, Virginia Department of Environmental Quality, Old Dominion University, District of Columbia Department of Energy and the Environment, and Metropolitan Washington Council of Governments work together to produce Chesapeake Bay-wide summaries of water quality trends in tidal waters. These annual estimates of nutrients, dissolved oxygen, water clarity and other parameters at more than 150 monitoring stations help measure the health of the Bay and its response to management actions.

Reducing Excess Nitrogen, Phosphorus and Sediment Situation Analysis

The following table identifies challenges that will impact progress towards attaining this outcome and its targets. This analysis considers scientific, environmental, fiscal or policy-related developments that have already or may influence work during the upcoming six-year Management Strategy cycle. Consideration is given to which challenges are within and outside of CBP's ability to influence. Challenges associated with Changing Environmental Conditions are denoted with an asterisk (*). Challenges listed in bold font have been identified by the Goal Team and its Workgroups as being priorities for the Workgroup to seek to address or make progress against through the development and implementation of Management Approaches. [Add or remove rows from the following table as needed to document challenges to Outcome and/or Target attainment. Place an "X" in the corresponding box to classify each challenge as being "within CBP's ability to influence" or "outside of CBP's ability to influence"] The double asterisk (**) indicates challenges where we may only have indirect influence as a partnership, but where strategic efforts may add value towards achieving the outcome.

Table 1 - List of challenges associated with RENPS outcome, with indication of the partnership's relative ability to address the given challenge

Challenges	Within CBPs ability to influence	Outside of CBP's ability to influence
Adaptively managing by revising nitrogen, phosphorus and sediment targets with the latest science and the latest generation of modeling tools (Phase 7)	X	
Updating and applying latest science or data into partnership tools and products through partnership review and approval processes	X	
Tracking, reporting and verification of implemented BMPs	X	
Gaps in information and analysis to better understand observed trends and response gaps to management actions and changing environmental conditions	X	
Understanding and communication of the ability of BMPs or management actions to provide multiple benefits across varying audiences or scales	X	
Communication and outreach of the lag from reducing pollution loads to WQS attainment (ecosystem response gaps)	X	
Communication and coordination (general) [**placeholder – remove or revise?**]	**	
Administrative, programmatic or regulatory constraints or uncertainties that may slow or impede data-sharing, tracking, reporting, verification, innovation and/or implementation	**	
BMP implementation gaps [**elaboration needed**]	**	

Nutrient mass imbalances and complex systemic changes that impact our ability to meet goals, improve plans, or develop innovative strategies (e.g., fertilizer and agricultural markets; growth of developed footprint in less-regulated non-MS4 areas)	**	
Resources and technical workforce capacity to provide technical assistance, plan, design, implement and accelerate BMP implementation	**?	X?
*Physical constraints (e.g., CEC, landscape characteristics or ownership) or realities (e.g., aging infrastructure, completion of "low-hanging fruit")		X
Funding and technical workforce capacity to maintain installed BMPs now and into the future	**?	X?

[Note for CWGT: This next passage may be removed or significantly reduced for space; including it now for context about the challenges]

The Clean Water Goal Team completed a brief poll of its members in July 2026, with 12 voting and 1 non-voting member providing responses. The poll was not intended to be a robust and final determination of members' judgments, but the responses provide a guide. For the challenges listed above, the CWGT members scored them from 1 to 13 as to which challenges are considered the most impactful to achieving the RENPS outcome or the Clean Water Goal more generally, and which challenges are relatively most within the partnership's ability to influence. The higher the score, the greater impact or influence, respectively. The table of challenges above is sorted in descending order based on the "influence" scores, and the following figure and table provide more information.

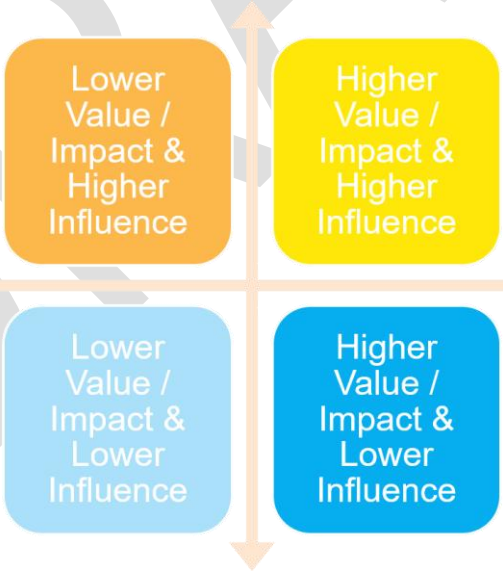

Figure 1 - Conceptual diagram of forced ranking exercise for challenges based on perceived Value or Impact and Relative Influence of the Partnership to address that challenge

Table 2 - Results of forced ranking/scores for RENPS-affiliated Challenges, sorted by descending influence as in previous table

Challenge (sorted by descending INFLUENCE)	VALUE or IMPACT score	INFLUENCE score
Adaptively managing by revising nitrogen, phosphorus and sediment targets with the latest science and the latest generation of modeling tools (Phase 7)	7.15	11
Updating and applying latest science or data into partnership tools and products through partnership review and approval processes	4.62	9.92
Tracking, reporting and verification of implemented BMPs	9.46	9
Gaps in information and analysis to better understand observed trends and response gaps to management actions and changing environmental conditions	6	8.42
Understanding and communication of the ability of BMPs or management actions to provide multiple benefits across varying audiences or scales	4.31	8
Communication and outreach of the lag from reducing pollution loads to WQS attainment (ecosystem response gaps)	4	7.67
Communication and coordination (general)	3.31	6.75
Administrative, programmatic or regulatory constraints or uncertainties that may slow or impede data-sharing, tracking, reporting, verification, innovation and/or implementation	7.54	6.58
BMP implementation gaps	11.23	5.92
Nutrient mass imbalances and complex systemic changes that impact our ability to meet goals, improve plans, or develop innovative strategies (e.g., fertilizer and agricultural markets; growth of developed footprint in less-regulated non-MS4 areas)	7.69	5.33
Funding and technical workforce capacity to provide technical assistance, plan, design, implement and accelerate BMP implementation	8.46	4.58
Physical constraints (e.g., CEC, landscape characteristics or ownership) or realities (e.g., aging infrastructure, completion of "low-hanging fruit")	9.46	4.08
Funding and technical workforce capacity to maintain installed BMPs now and into the future	7.77	3.75

When considering the challenges that the Clean Water Goal Team can address through this Management Strategy, the greatest emphasis will generally be placed on the Management Approaches that align with challenges that fall into the upper quadrants (orange and yellow). Actions may still occur through Management Approaches that address the challenges in the lower (blue and light blue) quadrants, especially in cases where the value or impact is considered high amongst goal team members. However, these are more likely to be actions or tasks that have less direct impact, i.e., they are more likely to be either exploratory or informational in nature. The partnership's Management Approaches listed below will typically have more direct actions or influence on those first six challenges listed above.

Snapshot of Signatory Programs [hyperlink text below to relevant programs]
[Note for CWGT: Signatory responses were requested by end of August; we will incorporate that information in the next version]
Managing a large and difficult restoration and conservation program with "no assurance about the level of funds that may be available beyond the short term" (GAO, 2028) is a challenging undertaking that requires individual and collaborative action from signatory partners, as well as the many communities and individuals who live, work, play and learn in our region. This "Snapshot of Signatory Resources" seeks to better recognize the significant contribution that individual signatory partners and federal agencies make towards outcome attainment. The existing programs and funding spotlighted below are not intended to represent the full range of resources available or required to support progress

towards outcome attainment; only the "biggest ticket" programs are included for each outcome and signatory partner. It is important to note that funding is reported from a single point in time (fiscal year 2025) and is not representative of future investments. Identifying the most critical programs and resources that exist at a particular moment in time can help the partnership focus its collaborative efforts on activities that have the greatest impact, and which don't duplicate the work of existing programs.

[Signatory Name]

- [Featured Program with hyperlink] ([Appropriations for Fiscal Year 2025]) [one sentence max description of how program relates to Outcome attainment]

[Signatory Name]

- [Featured Program with hyperlink] ([Appropriations for Fiscal Year 2025]) [one sentence max description of how program relates to Outcome attainment]

[Signatory Name]

- [Featured Program with hyperlink] ([Appropriations for Fiscal Year 2025]) [one sentence max description of how program relates to Outcome attainment]

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[Signatory Name]

- [Featured Program with hyperlink] ([Appropriations for Fiscal Year 2025]) [one sentence max description of how program relates to Outcome attainment]

Management Approaches for Outcome 1: Reducing Excess Nitrogen, Phosphorus and Sediment

Recalling the top six challenges above, the first three Management Approaches will demand a significant amount of direct partnership effort through 2030. These first three approaches are particularly connected to Target 2.

Management Approach 2.1.1: Complete the Phase 7 Modeling Suite

The next generation of the Chesapeake Bay Program's modeling suite will incorporate new and updated datasets and methodologies that have been agreed to by the partnership. The draft modeling suite will be released by the start of 2027 and will be reviewed by the partnership during that year. The final partnership-approved tools will be available starting in 2028 and are the basis for further approaches to achieve the RENPS outcome, Target 2. Specifically, they will be used to set new planning targets to be achieved through new or amended Watershed Implementation Plans (WIPs).

Management Approach 2.1.2: Revise planning targets for 2040 based on the final Phase 7 modeling suite

The partnership will revise planning targets to guide this outcome for 2040 based on the final Phase 7 modeling suite. See also MA 2.1.5, as the methods for setting new targets is dependent or concurrent with exploring the fulfillment of recommendations from CESR to pursue tiered implementation of the Chesapeake Bay TMDL.

Management Approach 2.1.3: Develop new or amended Watershed Implementation Plans (WIPs)

The Clean Water Goal Team will work collaboratively to identify how the partnership should adapt Watershed Implementation Plans (WIPs) in response to new science, monitoring results, and management priorities/approaches. The Goal Team and associated workgroups will also support jurisdictions by providing updated tools and information that help partners revise their WIPs and accelerate progress toward water quality goals.

The fourth RENPS management approach is particularly linked to Target 1, but with some overlap with lessons learned in concurrent pursuit of Targets 2 and 3.

Management Approach 2.1.4: Continue to increase implementation of Phase 3 WIPs through 2030 to achieve interim planning targets and share successful or emerging innovative strategies or opportunities to achieve greater nutrient and sediment reductions.

Evaluate and update the existing accountability framework to enhance its overall effectiveness tracking reductions. This approach will move beyond relying solely on modeled planning inputs by incorporating multiple lines of evidence—including monitored water quality data, watershed health metrics, and living resource responses—to evaluate progress. This will seek to strengthen the partnership's ability to track, synthesize, and clearly communicate progress to "tell the story" of how conditions are changing across the watershed. This approach will focus on improving how information is compiled, visualized, and conveyed to partners and the public, reducing confusion across disparate indicators and creating clearer, more holistic narratives of progress.

The last two management approaches are primarily connected with Target 2, but have significant overlap with the pursuit of Target 3.

Management Approach 2.1.5: Explore a tiered implementation structure for achieving nitrogen, phosphorus and sediment reductions.
Establish a tiered implementation strategy that prioritizes nutrient and sediment reductions based on improved modeling and assessment tools. Rather than treating all 92 management segments uniformly, this step-wise approach prioritizes receiving waters with a stronger potential for near-term living resource response and possible earlier attainment of water quality standards in the shallow areas where people and wildlife spend the most time.

Management Approach 2.1.6: Assess nutrient mass imbalances and advance new or emerging nonpoint source best management practices (BMPs) or innovations
Identify and assess long-standing systemic nutrient mass imbalances (such as fertilizer surpluses, manure distribution challenges, growth of development outside of regulated MS4 areas) while strengthening coordination between notable programs (e.g., Clean Water Act Section 319(h) nonpoint source programs) and Bay partnership initiatives. A strong emphasis will be placed on scaling up voluntary BMPs by utilizing social science data to understand behavioral motivations, eliminate implementation barriers for landowners and farmers, and optimize the co-benefits of practices that reduce multiple pollutants simultaneously. This can also include efforts to understand and assess the complex impacts of changing environmental conditions have on implementation, maintenance, and progress toward the RENPS outcome.

Participating Partners
The following partners participated in the creation of this Management Strategy and expressed their intention to collaborate on Management Strategy implementation over the next six years. Per the Chesapeake Bay Watershed Agreement, "participation in developing Management Strategies or in the achievement of Outcomes varies by signatory based on differing priorities across the watershed. This participation may include commitments such as sharing knowledge, data or information, educating the public, working on future legislation and developing or implementing programs or verified practices" (2025). Signatory partners may join implementation efforts at any time. Partners also recognize that Signatory participation is voluntary and may vary accordingly.
[Note for CWGT: The Signatories have been asked to provide initial responses for their participation by Nov. 20 for all outcomes; we will update accordingly after that]

- **Signatory Partners**
  -
- **Other Partners**
  - [This list will be confirmed at a later date]

Toxic & Emerging Contaminants

Toxic and Emerging Contaminants Outcome: Reduce the amount and effect of toxic contaminants, such as PCBs, plastics, mercury and PFAS, on the waters, lands, fisheries, wildlife and communities of the Chesapeake Bay watershed through an increased understanding of their impacts and mitigation options.

- Promote information sharing between researchers, program managers and policymakers on the lessons learned, best practices and most up-to-date science, policy and communications around the toxic contaminants impacting the Chesapeake Bay watershed.

Baseline and Current Condition

Information Sharing

The Executive Council in its revised Toxic and Emerging Contaminants outcome language has prescribed a limited role for CBP regarding toxics mitigation because non-CBP toxics programs and partnerships meet many of signatories' needs. Recognizing this limitation in needs, work within the partnership beyond 2025 will transition towards a value-added and strategic approach to disseminate information and connect researchers and practitioners. As of 2026, TCW hosts approximately 14 technical presentations a year and has an average of 33 attendees per meeting, representing various federal and state agencies and academic and non-governmental organizations. Information sharing will be measured against this baseline and other metrics.

The Plastic Pollution Workgroup (formerly Plastic Pollution Action Team) has been leading the way in plastics research, mitigation, and implementation by researching its impacts into living resources and developing important research and monitoring strategies. The team has provided input on a framework for plastic monitoring strategies in the Bay, a monitoring strategy document for microplastics in the Bay, and an ecological risk assessment conceptual model for microplastics in the Potomac River. Transitioning from its focus on the Action Team's original charge, progress on information sharing related to plastics will be measured by the completion, adoption and implementation of these products and by similar metrics to TCW's convening.

Extent of toxic contaminants in the Chesapeake Bay watershed

In 2024, reported data for tidal waters in Delaware, Maryland, Virginia and the District of Columbia showed that 80% of the Chesapeake Bay's tidal segments are fully or partially impaired by toxic contaminants. These contaminants may include polychlorinated biphenyls (PCBs), metals, priority organics, per- and polyfluoroalkyl substances (PFAS) and unknown toxics, often resulting from industrial activities, agricultural runoff and urban pollution. Progress on the Toxic and Emerging Contaminants Outcome will be measured

against this baseline from 2024 Integrated Reports, produced by jurisdictional partners under the federal Clean Water Act, as described via the indicator below.

Monitoring Progress and Indicators

Monitoring Progress: Information Sharing

An Indicator will not be used for this Target. The extent of information sharing between researchers, program managers and policymakers facilitated by CBP will be measured by presentations given, partners engaged at TCW and PPoW meetings, partners engaged through other venues, etc. This information will be shared in the annual Bay Barometer. Given the indirect, delayed impact of information sharing on actual reduction of toxic contaminants, measuring progress on information sharing will more directly reflect the work the partnership is doing to effect toxics reduction.

Indicator: Extent of toxic contaminants in the Chesapeake Bay watershed

Reductions in the amount and effect of toxic contaminants in the Chesapeake Bay watershed will be communicated through a distillation of the toxics-relevant portions of Integrated Reports developed by jurisdictions. This will be adapted from the previous Toxic Contaminants Policy & Prevention (TCPP) Indicator, with potential enhancements based on feedback from recent years, subject to capacity and workgroup interest. This Indicator has and will continue to use as a data source jurisdictions' Integrated Reports required to be submitted biennially to EPA under sections 305(b) and 303(d) of the Clean Water Act. In addition, workgroup membership will explore indicator expansion to nontidal portions of the watershed to add value to the indicator for all signatories. Given the 2024 TCPP Indicator reported no change in toxic contaminant levels since 2014, and given that such a measure is beyond the reach of TCW's direct influence, the new Indicator will be updated less frequently at a yet to be determined periodicity.

Toxic & Emerging Contaminants Situation Analysis

The following table identifies challenges that will impact progress towards attaining this outcome and its targets. This analysis considers scientific, environmental, fiscal or policy-related developments that have already or may influence work during the upcoming six-year Management Strategy cycle. Consideration is given to which challenges are within and outside of CBP's ability to influence. Challenges associated with Changing Environmental Conditions are denoted with an asterisk (*). Challenges listed in bold font have been identified by the Goal Team and its Workgroups as being priorities for the Workgroup to seek to address or make progress against through the development and implementation of Management Approaches.

Challenges	Within CBP's ability to influence	Outside of CBP's ability to influence
Watershed-wide Status: Communicating clearly a watershed-wide status of toxic contaminants when jurisdictions differ in their data and/or assessment methods.		x
Sources Information Gap: Limited understanding of the occurrence, concentrations and sources of toxic contaminants in different landscape settings.	x	
Fish Consumption Information Gap: Limited understanding of the effects of legacy and emerging contaminants on both ecological health and human health, through fish consumption.	x	
Toxics Mitigation Practices and Co-benefits: Limited information on the current best practices to mitigate contaminants, and the co-benefits of these practices on reducing nitrogen, phosphorus and sediment.	x	
Emerging Contaminants Information Gap: Fast pace of change and limited knowledge on emerging contaminant issues.	x	
Plastics Information Gap: Lack of studies from the organismal to ecosystem scale showing the impacts of plastic pollution.	x	
Plastics Monitoring Gap: Lack of repetitive system-wide survey of microplastics in the Chesapeake Bay watershed.	x	
Plastics Resources Gap: Lack of access to and expertise in instrumentation and laboratory resources. Lack of human capital and funding.	x	
Relative Prioritization: Resource constraints for conducting research and developing synthesis products on toxic contaminants. The opportunity cost of the relative emphasis on nutrients and sediment constrains efforts focused on toxic contaminants.		x
Technical Network Connectivity: Limited connectivity among groups hinders technical information transfer within the partnership and beyond.	x	

Snapshot of Signatory Programs [hyperlink text below to relevant programs]
Managing a large and difficult restoration and conservation program with "no assurance about the level of funds that may be available beyond the short term" (GAO, 2028) is a challenging undertaking that requires individual and collaborative action from signatory partners, as well as the many communities and individuals who live, work, play and learn in our region. This "Snapshot of Signatory Resources" seeks to better recognize the significant contribution that individual signatory partners and federal agencies make

towards outcome attainment. The existing programs and funding spotlighted below are not intended to represent the full range of resources available or required to support progress towards outcome attainment; only the "biggest ticket" programs are included for each outcome and signatory partner. It is important to note that funding is reported from a single point in time (fiscal year 2025) and is not representative of future investments. Identifying the most critical programs and resources that exist at a particular moment in time can help the partnership focus its collaborative efforts on activities that have the greatest impact, and which don't duplicate the work of existing programs.

[Signatory Name]

- [Featured Program with hyperlink] ([Appropriations for Fiscal Year 2025]) [one sentence max description of how program relates to Outcome attainment]

[Signatory Name]

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[Signatory Name]

- [Featured Program with hyperlink] ([Appropriations for Fiscal Year 2025]) [one sentence max description of how program relates to Outcome attainment]

Management Approaches for Outcome 2: Toxic & Emerging Contaminants

Management Approach [2.2.1]: Share information on the occurrence, sources and effects of toxic contaminants, including emerging contaminants.

A limited understanding of the occurrence, sources and effects of toxic contaminants in different landscape settings continues to hinder efforts to target mitigation of those sources. TCW will host topical meetings to share the state of the science on contaminants of interest to TCW partners. The group will also continue to develop tools, reports and other materials, as interest and capacity allows, to communicate watershed-wide information on the state of toxic contaminants, including emerging contaminants of concern and contaminants in fish. This may include an update to the prior Toxic Contaminants Policy & Prevention Indicator Map, an assessment of fish consumption advisories, sharing results and lessons learned from source tracking studies, and an update to the publication Toxic Contaminants in the Chesapeake Bay and its Watershed: Extent and Severity of Occurrence and Potential Biological Effects (2012) to guide establishment of future toxic contaminant priorities.

Management Approach [2.2.2]: Synthesize and share research on the efficacy of mitigation practices and communicate the toxic contaminant reduction co-benefits of nutrient and sediment-focused best management practices.
To ensure the impact of information sharing is realized, improving partners' understanding of mitigation practices is critical. TCW meetings will serve as a venue for sharing research on mitigation practices and success stories from jurisdictions to encourage the adoption of innovative and/or impactful practices. Through collaboration with other source sector workgroups in the Clean Water Goal Team, an emphasis will also be placed on sharing research on the co-benefits of best management practices to encourage the implementation of BMPs that provide the best reduction of toxic contaminants in addition to the reduction of nitrogen, phosphorus and sediment.

Management Approach [2.2.3]: Strengthen collaborative connections across the Chesapeake Bay Program and engage new partners and practitioners beyond CBWA signatories.
The strength of the Toxic Contaminants Workgroup and Plastic Pollution Workgroup is on their positioning as conveners of practitioners across the Chesapeake Bay watershed. To widen the visibility and impact of the two workgroups, a greater effort will be made to connect previously under-engaged groups by utilizing the existing network of members and interested parties to bring new people to meetings, attending events outside of workgroup meetings, and hosting joint meetings with other groups in the Chesapeake Bay Program as interest and resources allow.

Management Approach [2.2.4]: Support developing and instituting a plastics monitoring program for the Chesapeake Bay watershed
Develop a watershed-wide program to monitor the status and trends of plastic pollution including microplastics for the Chesapeake Bay watershed using CWA 117(e) funding and/or leveraging other funding sources. The 2024 Framework for Monitoring Plastic Pollution in the Chesapeake Bay makes recommendations on monitoring strategies across various media and includes scale, frequency and location. The framework focuses on leveraging and integrating into existing programs to limit resources required.

Management Approach [2.2.5]: Continue to research and disseminate microplastic pollution findings to understand the threats of plastic pollution to the Chesapeake Bay and its resources.

Continue to develop research studies, for example, ecological risk assessments to understand threats of plastic pollution to resources. The 2021 Microplastic Monitoring and Science Strategy for the Chesapeake Bay recommended support for research to understand microplastic pathways in the Bay, including trophic pathways that may affect living resources such as Striped Bass, Blue Crabs, Oysters, and other species critical to the Bay ecosystem

Management Approach [2.2.6]: Identify and implement management solutions to reduce the occurrence of plastic pollution in the Chesapeake Bay watershed.

Adopt a plastic pollution source reduction strategy for the Chesapeake Bay and revise the strategy periodically based on results from monitoring and other scientific research.

Participating Partners

The following partners participated in the creation of this Management Strategy and expressed their intention to collaborate on Management Strategy implementation over the next six years. Per the Chesapeake Bay Watershed Agreement, "participation in developing Management Strategies or in the achievement of Outcomes varies by signatory based on differing priorities across the watershed. This participation may include commitments such as sharing knowledge, data or information, educating the public, working on future legislation and developing or implementing programs or verified practices" (2025). Signatory partners may join implementation efforts at any time. Partners also recognize that Signatory participation is voluntary and may vary accordingly.

- **Signatory Partners**
  - [Placeholder: Signatory Name]
- **Other Partners**
  - U.S. Geological Survey
  - [Placeholder: Partner/Agency/Organization Name]

Water Quality, Standards Attainment and Monitoring

Measure changing water quality conditions by maintaining monitoring networks and tracking our collective progress toward achieving clean water throughout the Chesapeake Bay and its watershed.

Baseline and Current Condition

Over more than four decades, the Chesapeake Bay Program partnership has built and sustained one of the nation's strongest watershed and estuarine monitoring efforts, establishing core monitoring networks in the 1980s to support analyze bay health status and trends. The CBP maintained them through shared commitment, strategic reviews, and evolving science. These networks have been adapted over time to meet management needs and adapting to science-based recommendations, supported by advances in continuous monitoring, tributary assessments, and emerging tools such as four-dimensional interpolation and satellite imagery. Together, these innovations and ongoing improvements in data synthesis and communication provide more accessible, actionable insights to track change and guide restoration progress.

Target 1. Maintain full core monitoring network operations (i.e., nontidal water quality, SAV, tidal water quality, benthic and community science) annually to support analysis and communication of water quality loads, trends and criteria attainment.

Core monitoring networks within the Chesapeake Bay Program are stronger than ever. Rapid advances in sensor technology, data analysis, and scientific integration have expanded access to high-resolution data and created new opportunities to better inform decision-making and meet partner needs. Since 2022, addressing recommendations provided to the Principals' Staff Committee (PSC) in response to their 2021 request to the Partnership (PSC 2022) for a plan to improve the status and capacity of CBP monitoring networks, enhancements were made to core monitoring networks. Most recently, within the Chesapeake Bay Program, short-term funding support from the Infrastructure Investment and Jobs Act has been critical for maintaining several long-term monitoring networks.

Target 2. Develop and expand partnership-approved approaches for assessing whether water quality criteria are being met for all designated uses. For dissolved oxygen criteria, establish an approved method by 2028 and apply the method for data analysis and reporting by the end of 2030.

Methods for assessing all dissolved oxygen criteria and designated uses, including those needed by the jurisdictions for 305(b)/303(d) regulatory requirements, are being developed and will be shared with the Partnership to support tidal criteria attainment tools, with overall Partnership approval of dissolved oxygen assessment methods targeted for 2028.

Target 3. Maintain or exceed the rate of improvement in the water quality standards attainment indicator relative to the 1985-2022 baseline.

In 2012, the Partnership tasked the STAR Team with developing a method to assess and communicate progress toward water quality standards, resulting in the Estimated Achievement Indicator adopted in 2013. This indicator has been used by the Chesapeake Bay Program to track and publicly report progress since 2014 and remains part of its commitments under the 2025 updated agreement for this target. The Estimated Achievement of Chesapeake Water Quality Standards Indicator shows 29% of tidal waters have met applicable standards in 2022 – 2024. Overall, the indicator shows a positive trend of 0.15% per year between 1985–1987 and 2022–2024, suggesting that Chesapeake Bay is on a recovery trajectory. However, this long-term trend slope is not statistically significant ($p = 0.248$). Our habitat recovery rate remains positive but is slowing down.

Target 4. Analyze and report status/loads, trends and factors affecting those trends for nontidal and tidal water quality

Nontidal and tidal water quality conditions across the Chesapeake Bay watershed continue to be assessed through the partnership's long-standing monitoring networks, which provide consistent measurements of status, pollutant loads, and trends for nutrients, sediments, and related indicators. Current analyses show that while many locations exhibit improving trends relative to the 1985–2022 baseline, progress varies spatially due to differences in watershed inputs, hydrology, land-use change, climate-driven variability, and habitat-specific responses. These factors collectively influence both seasonal and long-term water quality dynamics, shaping the degree to which criteria are attained and informing management actions to sustain and accelerate improvements.

Monitoring Progress and Indicators
[Indicator name hyperlinked to Chesapeake Progress]
[Brief description of the Indicator]

Monitoring: [Outcome or Target Name]
[If an Indicator will be developed but does not yet exist, describe the future Indicator, along with the plan and timeline to attain and report the necessary information]

Monitoring: [Outcome or Target Name]
[If an Indicator will not be developed, describe how progress toward Outcome or Target attainment will be demonstrated, how often progress will be assessed and how CBP will communicate progress to support partner decision-making]

Water Quality, Standards Attainment and Monitoring Situation Analysis

The following table identifies challenges that will impact progress towards attaining this outcome and its targets. This analysis considers scientific, environmental, fiscal or policy-related developments that have already or may influence work during the upcoming six-year Management Strategy cycle. Consideration is given to which challenges are within and outside of CBP's ability to influence. Challenges associated with Changing Environmental Conditions are denoted with an asterisk (*). Challenges listed in bold font have been identified by the Goal Team and its Workgroups as being priorities for the Workgroup to seek to address or make progress against through the development and implementation of Management Approaches. [Add or remove rows from the following table as needed to document challenges to Outcome and/or Target attainment. Place an "X" in the corresponding box to classify each challenge as being "within CBP's ability to influence" or "outside of CBP's ability to influence"]

Challenges	Within CBPs ability to influence	Outside of CBP's ability to influence
Mismatch between monitoring needs and available resources	X	
Unanticipated challenges that may impact monitoring activities		X
Monitoring network operational vulnerabilities	X	
High-priority gaps in monitoring coverage	X	
Network wide quality assurance coordination	X	
Coordinating multiple sampling agencies	X	
Lack of formal assessment methods for DO criteria across all designated uses, seasons, and durations	X	
Inability to fully report on the attainment status of DO criteria in Bay tidal waters consistently across jurisdictions		X
Difficulty communicating differences between partnership attainment metrics and jurisdictional regulatory assessment results	X	
Difficulty explaining environmental drivers behind observed attainment changes (e.g., wet years, pollutant loads)*	X	
Administrative/coordination barriers	X	
Communication challenges across audiences	X	
Lag between watershed load reductions and water quality standards attainment		X
Seasonal/habitat specific variability		X
Water quality trend interpretation difficulties	X	
Analytical gaps	X	
Explaining of complex factors impacting uncertainties	X	

Pollutant load variability and the impact on nontidal and tidal water quality trends		X
Loads vs concentration interpretation challenges	X	
Changing environmental conditions*		X
Environmental lag times		X
Applying insights from small watersheds to larger areas	X	
Dynamics affecting pollutant delivery from the watershed to the Bay		X
Harmonizing datasets about management-practices and other water-quality predictors.	X	
Applying all partnership monitoring data in modeling tools	X	
Differences between monitoring data and model output	X	
Communicating management-relevant implications of monitoring data and model output	X	
How to evaluate progress towards clean-water goals based on monitored water-quality data.	X	
Variability between observed water-responses		X
Explaining complex factors that impact nontidal and drivers that differ over time and location	X	
Isolating management-practice effects from water quality trends and data and model trends	X	

Snapshot of Signatory Programs [hyperlink text below to relevant programs]
Managing a large and difficult restoration and conservation program with "no assurance about the level of funds that may be available beyond the short term" (GAO, 2028) is a challenging undertaking that requires individual and collaborative action from signatory partners, as well as the many communities and individuals who live, work, play and learn in our region. This "Snapshot of Signatory Resources" seeks to better recognize the significant contribution that individual signatory partners and federal agencies make towards outcome attainment. The existing programs and funding spotlighted below are not intended to represent the full range of resources available or required to support progress towards outcome attainment; only the "biggest ticket" programs are included for each outcome and signatory partner. It is important to note that funding is reported from a single point in time (fiscal year 2025) and is not representative of future investments. Identifying the most critical programs and resources that exist at a particular moment in time can help the partnership focus its collaborative efforts on activities that have the greatest impact, and which don't duplicate the work of existing programs.

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Management Approaches for Outcome 3: Water Quality, Standards Attainment and Monitoring

Management Approach 2.3.1: Sustain and Strengthen Core Partnership Monitoring Networks

Ensure long-term continuity and resilience of the Chesapeake Bay Program's core monitoring networks (i.e., nontidal water quality, tidal water quality, submerged aquatic vegetation (SAV), and tidal benthic) by proactively addressing resource vulnerabilities, coordinating partner timelines, maintaining standardized protocols, ensuring the collection of high-quality data, and integrating monitoring priorities into policy and restoration frameworks.

Support monitoring and data consistency by promoting transparent, routine exchanges of information sharing across monitoring among sampling agencies and considering opportunities for innovation capable of maintaining data priorities. Consistent coordination among monitoring agencies regarding sampling methods and data management will support the consideration innovation opportunities that preserve data consistency. Such information exchanges will enable partners to maintain the high-quality

monitoring capacity essential for tracking watershed health, informing restoration decisions, and supporting adaptive management.

Management Approach 2.3.2: Develop and Implement Decision Rules for Assessing Water Quality Criteria for All Designated Uses
Develop formal assessment methodologies for all DO criteria and initiate review of SAV, clarity, and chlorophyll a assessment methods

Management Approach 2.3.3: Maintain and Advance Water Quality Data Analysis to Address Information Gaps and Inform Science-Based Management Decisions
Track measurable improvements utilizing the Chesapeake Bay Program's water quality standards attainment indicator, which evaluates tidal waters for dissolved oxygen, water clarity/SAV, and chlorophyll-a performance. Promote consistent, transparent tracking of Bay-wide conditions and support science-driven decision-making built on long-term monitoring records and partnership-approved assessment methods. Over the next six years, partners will work collaboratively to sustain the upward trajectory of indicator performance relative to the 1985–2022 baseline, communicate results clearly, incorporate new assessment methods as they are approved, and ensure that partners remain informed and engaged.

Management Approach 2.3.4: Improve Monitoring to Model Integration and Transparency
Improve integration of partnership monitoring data into partnership-maintained modeling tools and provide clear documentation explaining how monitoring data: inform load forecasts, watershed planning, and Outcome attainment. This integration will help the partnership evaluate the modeling accuracy, improve future modeling tools, and use monitoring data to more clearly evaluate progress towards attaining clean-water goals.

Management Approach 2.3.5: Develop Unified Progress Narratives and Communication Products Across Audiences and Scales
Compute concentrations, loads, and trends of water-quality conditions in the watershed and the Bay and strengthen the partnership's communication of these monitoring-based results and trends, as well as translation of monitoring results into actionable insights. Develop and deliver clear, audience specific communication tools that explain not only how conditions are changing, but – through enhanced water-quality analyses – why they are changing. Communicating water-quality patterns and drivers across jurisdictions promotes increased understanding of progress, support adaptive management, and clarify the roles of management actions and external environmental forces.

Management Approach 2.3.6: Maintain or Exceed the Rate of Improvement in the Water Quality Standards Attainment Indicator
Track measurable improvements utilizing the Chesapeake Bay Program's water quality standards attainment indicator, which evaluates tidal waters for dissolved oxygen, water clarity/SAV, and chlorophyll-a performance. Promote consistent, transparent tracking of Bay-wide conditions and support science-driven decision-making built on long-term

monitoring records and partnership-approved assessment methods. Over the next six years, partners will work collaboratively to sustain the upward trajectory of indicator performance relative to the 1985–2022 baseline, communicate results clearly, incorporate new assessment methods as they are approved, and ensure that partners remain informed and engaged.

Participating Partners

The following partners participated in the creation of this Management Strategy and expressed their intention to collaborate on Management Strategy implementation over the next six years. Per the Chesapeake Bay Watershed Agreement, "participation in developing Management Strategies or in the achievement of Outcomes varies by signatory based on differing priorities across the watershed. This participation may include commitments such as sharing knowledge, data or information, educating the public, working on future legislation and developing or implementing programs or verified practices" (2025). Signatory partners may join implementation efforts at any time. Partners also recognize that Signatory participation is voluntary and may vary accordingly.

- **Signatory Partners**
  -
- **Other Partners**

Appendix 1. Signatory Statutory Authorities Driving Outcome Attainment

The law and regulation of signatory partners may support, justify or motivate their participation in the collaborative work of the Chesapeake Bay Program related to the attainment of specific Outcomes and Targets of the Watershed Agreement.

The following documentation identifies core statutory authorities that provide part of the impetus for the attainment of Chesapeake Bay Watershed Agreement Outcomes and their related Targets. While Chesapeake Bay Program partners acknowledge that the Chesapeake Bay Watershed Agreement is voluntary, subject to the availability of appropriated funds, and does not preempt, supersede or override any other law or regulation applicable to each signatory, they also acknowledge that the law or regulation of individual signatories can support each partner's participation in outcome attainment. The table below is not an exhaustive list of all relevant laws and regulations. Rather, this appendix identifies the driving motivators that can bring about signatory partner engagement in efforts described in this Strategic Plan, associated Management Strategies, and Workplans.

Goal 2: Clean Water

Outcome: RENPS	
Signatory	**Statutory Authority**
[Signatory Name]	
[Signatory Name]	
[Signatory Name]	
[Signatory Name]	
[Signatory Name]	
[Signatory Name]	
[Signatory Name]	
[Signatory Name]	
[Signatory Name]	

Outcome: T & EC	
Signatory	**Statutory Authority**
[Signatory Name]	
[Signatory Name]	
[Signatory Name]	
[Signatory Name]	
[Signatory Name]	
[Signatory Name]	
[Signatory Name]	
[Signatory Name]	

Outcome: WQSAM	
Signatory	**Statutory Authority**
[Signatory Name]	
[Signatory Name]	
[Signatory Name]	
[Signatory Name]	
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