

# Beyond 2025 Phase 2 Urgent Action Assignment from Management Board



**Julie Reichert-Nguyen, NOAA/CRWG Coordinator**

**Climate Resiliency Meeting  
12/19/2024**



# Beyond 2025 Urgent Priority Action Assignment

**Purpose: Identify actions needed now to advance the Beyond 2025 EC Charge in the long-term**

- Relates to Beyond 2025 Phase 1 Recommendations, including B25 Steering Committee Report, Small Groups, Charting a Course to 2025, ERG
- Urgent and additional (minimize missed opportunities)
- Cross-outcome
- Initial actions due Jan. 3, but iterative and dynamic process
- Management Board endorsed
- No additional resources





# Beyond 2025 Overarching Recommendations – Relevant to Climate Resiliency Outcomes

- Integrate climate change projections to better understand changes across multiple indicators and inform strategic planning at the local and state level.
- Improving access to information and cooperation among organizations to share data.
- Prioritizing climate science and research on land use and anticipated changes related to how conservation practices may respond.
- Support system-scale conservation and restoration planning of nearshore habitats and communities.
- Better target and prioritize resources to adaptively manage and provide technical assistance and communication of outcomes.



# Prioritizing Climate Science and Research

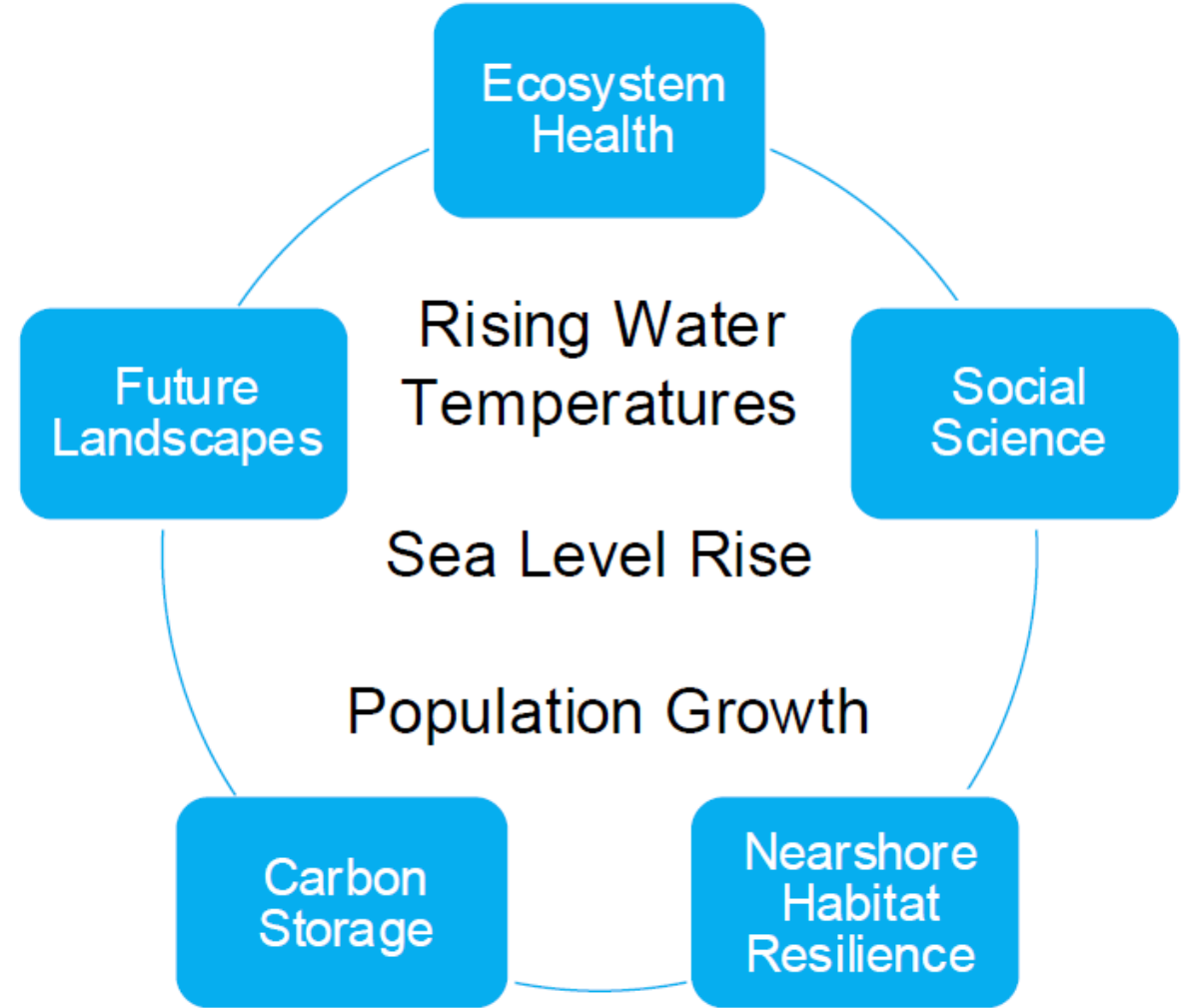
## Climate Small Group Recommendations:

- Improve modeling of ecosystem response
- Maximize use of nature-based solutions
- Integrate climate adaptation decision framework
- Promote carbon stewardship through conservation
- Promote regenerative agriculture

SCOPE CHANGE

LESS

MORE







# Climate Resiliency Identified Actions

Submit by January 3rd to be discussed during January 16th Management Board meeting:

- Advancing Marsh Adaptation (draft write-up complete)
- Integrating climate resilience across outcomes and governance, per 2021 EC Climate Change Directive (draft being written)

Consider submitting by May 2025

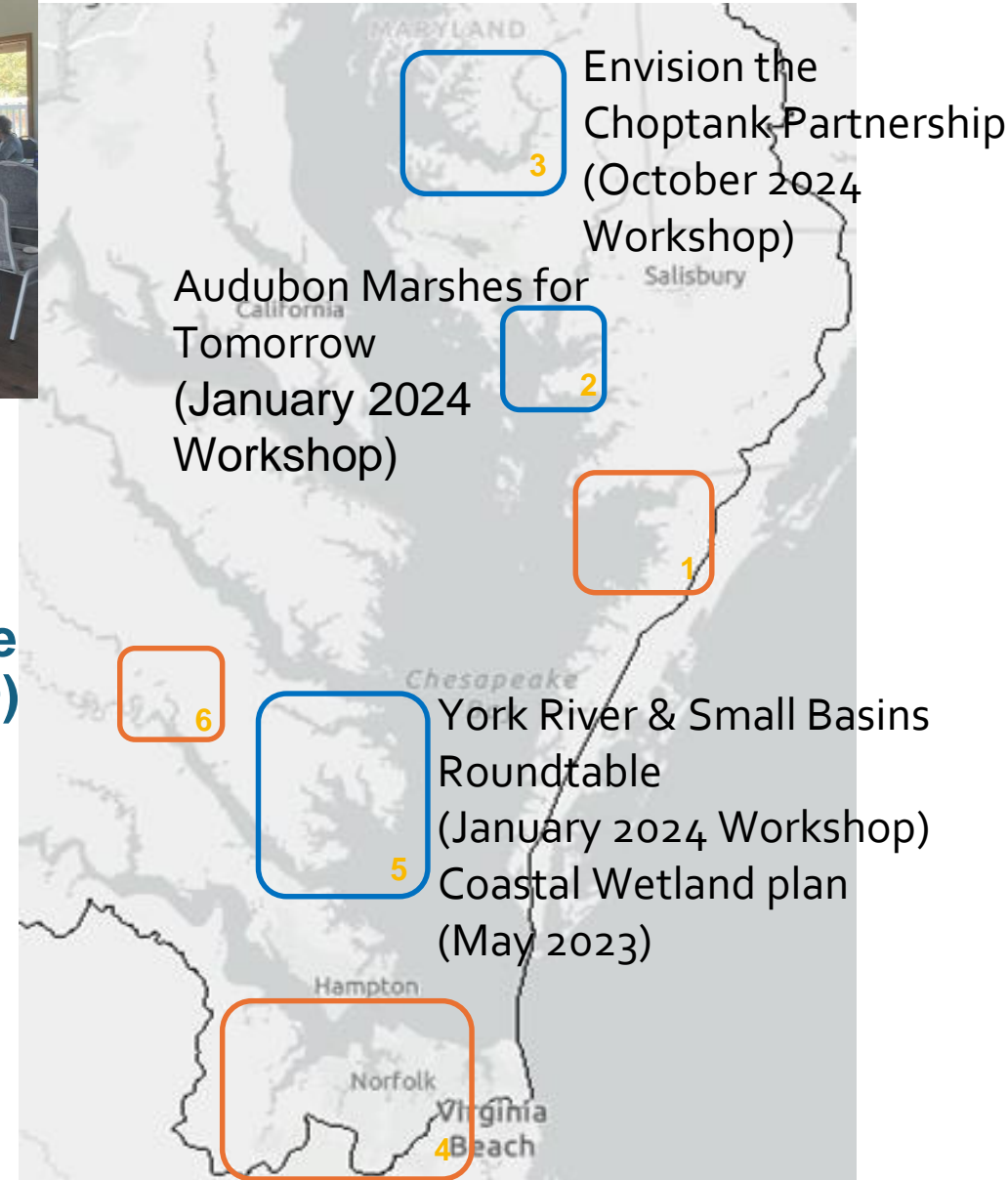
- Measuring resilience progress (need more discussion)



# Advancing marsh adaptation - continuing work identified during GIT-funded project



1. Pocomoke Sound Area (Crisfield, MD to Saxis, VA)
2. **Wicomico River (Monie Bay to Deal Island, MD)**
3. **Choptank River, MD**
4. Suffolk/Elizabeth River, VA
5. **Middle Peninsula, VA**
6. Middle Peninsula Tribal Lands (Mattaponi, Pamunkey)



# Advancing marsh adaptation - priority action rationale

- **Existing support:** CRWG in collaboration with Wetlands Workgroup, CBP GIS Team, and partners are already actively assisting three focus areas.
- **Filling a need:** Continuation of technical assistance is allowing for partners to be more strategic in incorporating marsh adaptation considerations.
- **Timely:** Partners have received BIL/IRA funding for implementation and interested in marsh adaptation design elements; other partners need assistance in developing coastal wetland resilience plans for their areas.
- **Resources:** University of Michigan Master SEAS Program – four Master students and two professors will assist with product development needs from January 2025-April 2026; EPA Region 3 Wetlands Branch interested in discussing effort
- **Alignment:** Helps address several recommendations in the Beyond 2025 Phase 1 report.

# Integrating climate into Phase 2 charge (outcome & structure reviews)

## **Why we have to consider it:**

- 2021 EC Directive directs climate to be in outcomes & structure
- This is in both parts of Beyond 2025 Phase 2
- Principle of 2014 Agreement (p. 2)
- “Anticipate changing conditions, including long-term trends in sea level, temperature, precipitation, land use and other variables.”

## **Why we should be considering it:**

- Beyond 2025 Phase 1 Report: Climate small group recommendations
- SMART
- Outcome can't be “achievable” or “relevant” without climate
- In other words, each outcome logic model “theory of change” is much less plausible without climate

## **Therefore recommend 2 immediate actions:**

- EPA and STAR work with Management Board to set up process to assist GITs/workgroups to incorporate climate science & policy into their outcome reviews occurring now
- EPA and STAR work with Management Board to set up process to include climate in the Phase 2 governance and structure review



# Measuring resilience enhancement

- Feasibility assessment with existing data/information – project-level resilience metrics to regional level indicators
- Metric identification and indicator methodology
- Monitoring and assessment plan to fill knowledge gaps
- Data science and approaches to scale - observational, remote sensing, modeling, AI/deep learning
- Potential Resources: STAC Science Synthesis Funding Opportunity
- Urgent Element: missed opportunity to align research with funded project implementation through BIL/IRA funding



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Consider submitting by May 2025

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# Outcome Assessment Assignment from Management Board



**Breck Sullivan, STAR Coordinator (USGS)**

**Climate Resiliency Meeting  
12/17/2024**

# Beyond 2025

**Phase 1 – By EC 2024 scope  
& breadth of what should  
be undertaken**



**Phase 2 – after EC 2024 execute  
plan**





# Initiating Phase 2

## Outcome Assessment

- Rolling due date (February & March)
- CRWG due date: January 30th
- Responsible Party: Outcome Leads
- Product: 2-pager to answer “Big Question”

## Priorities List

- Due January 3rd
- Responsible Party: Goal Implementation Team
- Description of projects for moving Phase 1 recommendations forward
- Template available

Draft Executive Council Charge -  
Confirmed on Dec. 10<sup>th</sup> EC Meeting

Why an  
Outcome  
Assessment?

Draft Executive Council Charge -  
Confirmed on Dec. 10<sup>th</sup> EC Meeting



Complete Revisions of Watershed  
Agreement Outcomes by end of CY 2025

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Confirmed on Dec. 10th EC Meeting] --> B[Complete Revisions of Watershed  
Agreement Outcomes by end of CY 2025]; B --> C[Effort should reflect engagement of all  
communities as active stewards];
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Complete Revisions of Watershed  
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Effort should reflect engagement of all  
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Complete Revisions of Watershed  
Agreement Outcomes by end of CY 2025



Effort should reflect engagement of all  
communities as active stewards



Address water quality and living resources

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Address water quality and living resources



Measurable and time bound

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Address water quality and living resources



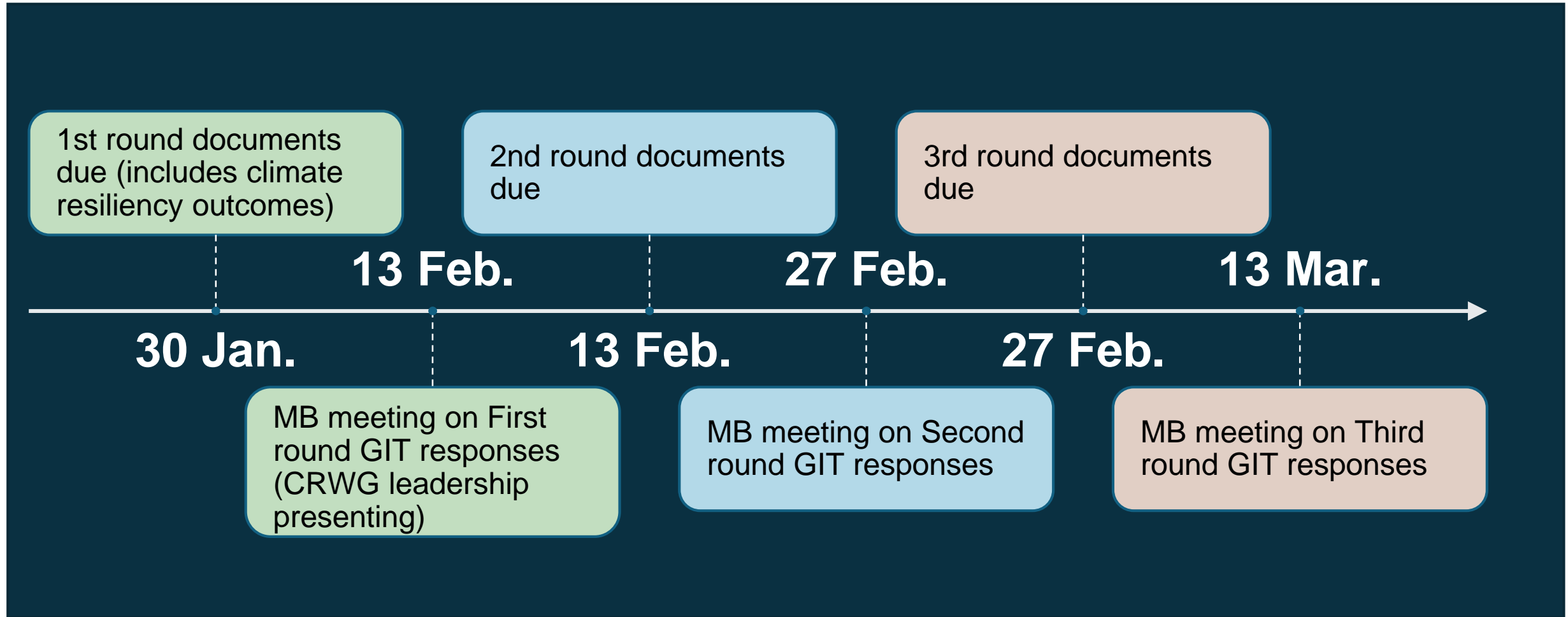
Measurable and time bound



Elevate Conservation

Why an  
Outcome  
Assessment?

# TIMELINE





# How to conduct an outcome assessment?

**The December 10, 2024 Executive Council Charge is the driving document for this effort and, therefore, addressing the Charge and its intent must be the primary consideration in drafting responses to the posed question. Particular attention should be given to recommending revisions to the Outcomes that address the seven bullet points on page 2 of the Charge**

# Big Question: What advice do you have for the Management Board on how to consolidate, reduce, update, remove, replace or add new outcomes within your GIT?

## Guidelines when doing the Outcome Assessment:

1. In reviewing your outcome, provide advice to the Management Board on whether "to consolidate, reduce, update, remove, replace or add new outcomes".
  - a. Don't need to provide updated Outcome language at this point in the process.
  - b. If consolidation is recommended, which outcome(s) do you advise combining with?
  - c. Should the outcome be moved or restructured?
2. Consider if the Outcome is SMART, and specifically, whether the current outcome meets the definition of an outcome, as described in the 2014 Chesapeake Bay Watershed Agreement ("Agreement"), or if that outcome is an output or indicator.
  - a. Review ERG's Beyond 2025 Report for existing assessment of **S**pecific, **M**easurement, and **T**imebound.
  - b. Consider the Secret Sauce
3. Consider the challenges to and opportunities for achieving the outcome. You are encouraged to leverage past documentation and learnings from the Strategy Review System process, as well as Charting a Course to 2025 report and Beyond 2025 Small Group recommendations as they pertain to the outcome.
4. Consider how the outcome relates or could relate to the Bay Agreement mission, vision, and themes/pillars

Big Question:  
What advice do  
you have for the  
Management  
Board on how to  
consolidate,  
reduce, update,  
remove, replace  
or add new  
outcomes within  
your GIT?

5. Consider the timescale for completing the outcome (5, 10, 15 years). Determine if achieving the outcome is an incremental step or is it a final outcome.
6. Consider resource needs and availability (high, medium, low).
7. Consider the risk or unintended consequences of removing the Outcome.
8. What value is added by having the Chesapeake Bay Program work on the outcome?
9. Consider how the Outcome, as written, benefits the public. Does the outcome reflect public input already received and have the potential to galvanize public support/engagement?
10. We will provide links to the supplemental information, including:
  - a. 2014 Chesapeake Bay Watershed Agreement
  - b. Secret Sauce
  - c. Beyond 2025 Recommendations
  - d. Charting a Course to 2025 report



# Questions



# Continued Management Board Process and Timeline

| <b>April 10, 2025</b>     | Continued discussion to consolidate, reduce, update, remove, replace or add new outcomes.<br><br>Outcomes identified as being kept or combined are assigned to workgroups for rewriting |
|---------------------------|---|
| <b>May 7-8, 2025</b>      | Finalize outcome assessment/evaluation  |
| <b>May 2025</b>           | PSC Check in on Draft List of Outcomes. Share approach for structure development and governance review  |
| <b>June 12, 2025</b>      | Work through any PSC feedback on outcomes. Prepare final outcome list for public sharing  |
| <b>July 2025</b>          | Discussion of overall Partnership Structure.<br>Includes all partnership Goal Teams/workgroups/action teams   |
| <b>August 14, 2025</b>    | Continue Grouping /Structure Development/ Governance  |
| <b>August 2025</b>        | PSC Check-in Grouping /Structure Development/ Governance  |
| <b>September 11, 2025</b> | Continue work on Structure/ Governance and draft list of outcomes   |
| <b>October 9, 2025</b>    | Finalize outcomes and Complete Draft of New Structure   |
| <b>October 2025</b>       | Presentation of Final Draft to PSC  |
| <b>November 2025</b>      | Preparation of Final Package Based on PSC feedback  |



# Beyond 2025 Outcome Assessment Discussion



**Julie Reichert-Nguyen, NOAA/CRWG Coordinator**

**Climate Resiliency Meeting  
12/19/2024**

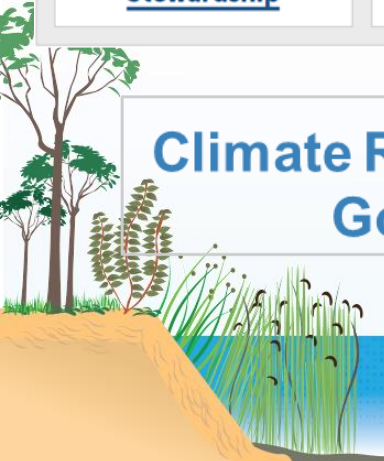


# Climate Resiliency Goal

- Increase the resiliency of the Chesapeake Bay and watershed, including its living resources, habitats, public infrastructure and communities, to withstand adverse impacts from changing environmental and climate conditions.

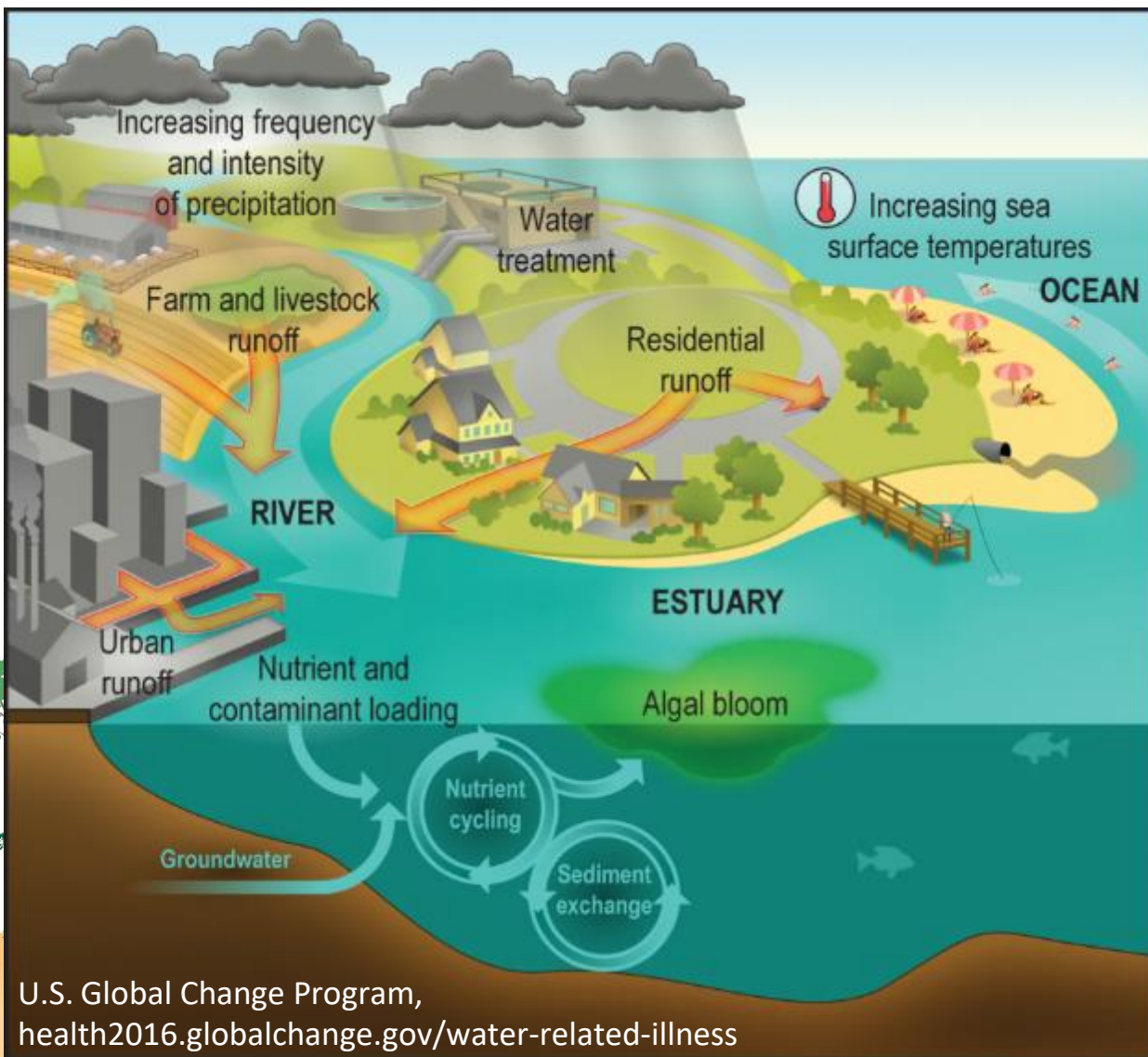








# Adaptation - Coastal Focused



- Sea level rise—land/habitat loss; sunny day flooding
- Extreme storms—human health/safety
- Coastal flooding—infrastructure damage
- Coastal erosion—degraded shoreline, water quality and habitats
- All the above—ecosystem change
- Missing: warming impacts, nontidal watershed

# Climate Adaptation Portfolio



RECENT PROGRESS  
**INCREASE**

## Marsh Adaptation

Collaborative identification  
of marsh restoration and  
conservation opportunities

Consideration of sea level  
rise and social vulnerability

## Nature-Based Solutions (NBS)

Support partner proposals  
for BIL/IRA resilience  
funding

Support research that  
evaluates the performance  
of NBS under changing  
climate conditions

## Community Resilience

Support partner projects  
that identify best practices  
for community engaged  
adaptation

Integrate social  
vulnerability metrics into  
climate resilience initiatives



# Main considerations today

**“Update”** = Outcome intent is largely kept intact. Unique language may be necessary if it is more than just a SMART update. Key principle is maintaining the intent.

**“Consolidate”** (i.e., Combine) = Multiple Outcomes would be combined in a single Outcome, or activities contributing to an Outcome are dispersed across others.

**“Remove”** = The Outcome is removed from the 2014 Agreement.

## Thoughts from STAR/CRWG Leadership

→ Best course of action for the Climate Adaptation outcome

→ Consider for Climate Monitoring and Assessment outcome – combine with Adaptation outcome

→ Consider for climate Monitoring and Assessment outcome – becomes an output of other outcomes





# Other actions in the EC that could be final actions, but may not make sense at this stage...

- **“Replace”** – This language suggests that a novel Outcome replaces a current one. That could take place later during April/May when gaps become clearer, but probably not appropriate at this stage.
- Reducing – This language suggests that the total number of Outcomes are reduced, which is a culmination of multiple decisions. Unsure what “reducing” a single Outcome looks like, where this phase is trying to determine an action for each Outcome.
- Adding – This step is about reviewing the current features of the 2014 Agreement. Again, gaps may become clearer in April/May of what could be added as an Outcome, however, you could also think of that as “replacing” “removed” Outcomes.

# Challenges

- Defining resilience enhancement
- Qualitative language - need quantifiable language to track progress
- Current structure under STAR is science-focused (lacking jurisdictional representation)  
- to be successful, need support from implementing organizations

## Workgroup Input:

- Goal is broad - each jurisdiction is focusing on different things (MD focuses on coastal wetlands). What are other jurisdictions focusing on – how to be inclusive in the resilience work?
- Outcome language is too narrow being coastal-focused. How do we incorporate the inland nontidal watershed issues - compounding challenge for resources; do we address it in overarching CBP governance structure or through updating the outcome language? How not to be duplicative with other outcomes?
- Larger scope for outcome will need more resources - PSC responsibility to fund.
- Is there a need for a Climate Advisory Committee?

## SMART Outcome – Current Language No

### SMART Ideas

- Specific place-based areas to work in – e.g., within eight identified adaptation focus areas, plan and implement nature-based strategies that will enhance the longevity of habitat and ecosystem services beyond 2050.
- Measurable objectives – e.g., have 50% of project plans implemented by 2035, and 100% of by 2045; establish monitoring and assessment to track resilience progress in focus areas.
- Achievable – incremental milestones.
- Realistic – 20 year timeframe; work with practitioners to evaluate feasibility of types and scale of projects
- Timebound – see above

### Workgroup Input:

- Land Conservation is a necessary strategy for maintaining carbon sequestration and serves as the baseline for sequestration gains. I see overlap between SMART land conservation goals and SMART climate resilience goals.
- Consider spectrum of time bound goals over time. Implementation to 2050 and measuring progress after 2050; need more guidance in middle timeframe 2050-2075; consider menu of options - forecasted problems and list of strategies to address impacts within the timeframes.
- Consider directional outcome language - include language on the change you want to see in the outcome; outputs are the immediate deliverables to reach that outcome.
- More granular modeling of climate scenarios could help with making “climate stewards” within communities.
- Whole watershed (tidal and nontidal) language.
- Outcome needs to be tangible and achievable - scaling expectations is important.



## Value Added–Benefits to Public

- Shoreline protection – erosion control, lessening of coastal flooding impacts
- Protecting ecosystem function of coastal habitats under changing climate conditions - supports local and regional economies (tourism, fishing, birding, hunting, recreation and quality of life)
- Dedicated effort on filling knowledge gaps on quantifying resilience benefits of nature-based strategies in the nearshore environment

### Workgroup Input:

- Targeted shoreline stabilization is key - not every shoreline needs to be stabilized.
- Both inland and coastal communities rely on clean water and sustainable habitats - communities most vulnerable to climate risks need increased capacity to be resilient.
- NOAA's National Marine Sanctuaries run their climate program using multiple sub-workgroups –science, adaptation, communications; CBP could consider the same.
- Consider an indicator-approach based on ecosystem services/benefits quantified.

## Unintended Consequences if Removed

- Communities focus on hardened shorelines for coastal resiliency
- Continuing knowledge gap on benefits of nature-based solutions to enhance coastal resiliency

### Workgroup Input:

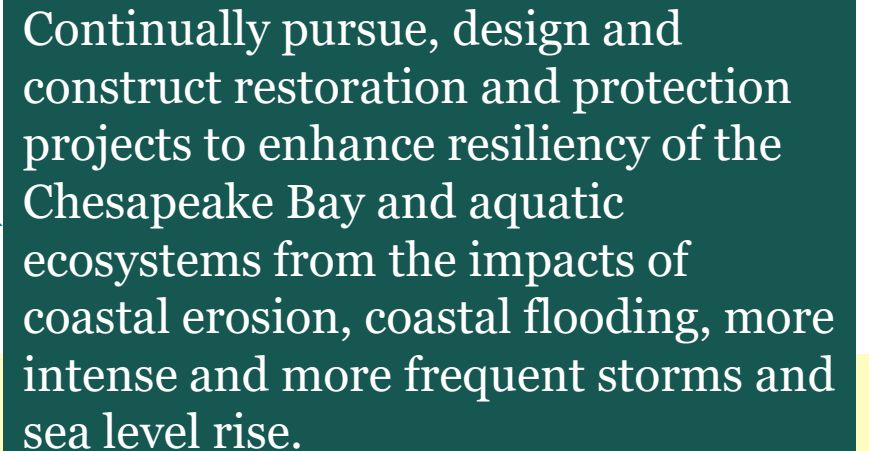
- Removal of outcomes runs the risk of losing partners, including federal agencies and NGOs/foundations who invest in and leverage this work.
- It's also helped us drive legislative change at the state level.

## Other Considerations

- Should outcome be expanded to include both tidal and nontidal portions of the watershed? Should there be two climate adaptation outcomes—one coastal/tidal focused, one nontidal watershed focused?
- If adding nontidal focus, how would this outcome be different than what other nontidal focus outcomes are doing?
- If expanded, how do we ensure that the outcome is achievable and manageable?

### Workgroup Input:

- See notes in earlier slides.





# Management Board Climate Change Indicator Decisions

## Exists On Chesapeake Progress

- Leave Method As Is—Updated in 2022
  - Avg. Air Temperature Increase
  - Total Annual Precip Change
- Possible Refinement of Method to Better Connect with Chesapeake Bay Outcomes
  - Stream Temperature Change\* – Relate to healthy watersheds
  - Relative Sea Level Rise – Relate to tidal wetlands
  - Change in High Temperature Extremes – Relate to tree canopy
- Static—No Updates Planned (Need Lead to Better Connect with Chesapeake Bay Outcomes)
  - River Flood Frequency\*
  - River Flood Magnitude\*

## New (Not Currently on Chesapeake Progress)

- Method being Explored
  - Tidal Bay Water Temperature Change – Relate to living resources (key fisheries and SAV)

\*data updates currently not available





# Climate Monitoring and Assessment – Climate Change Indicators



## Examples





# Big Picture Considerations to Inform Jan. 16 CRWG Meeting Discussion

- Consolidate with a SMART place-based adaptation outcome – monitoring and assessment would focus on efforts in identified focus areas.
- Remove and integrate as output under relevant outcomes in watershed agreement.

## Workgroup Input:

- Interpret as evaluating whether other outcomes are incorporating climate considerations.







# Contact Information



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Management Board meeting materials with more in depth  
description of Beyond 2025 Phase 2 tasks and process  
<https://www.chesapeakebay.net/what/event/management-board-meeting-17>

