

Management Board Meeting – July 18, 2024  
*Chesapeake Bay Program*  
*Presented by Climate Resiliency Workgroup (CRWG)*



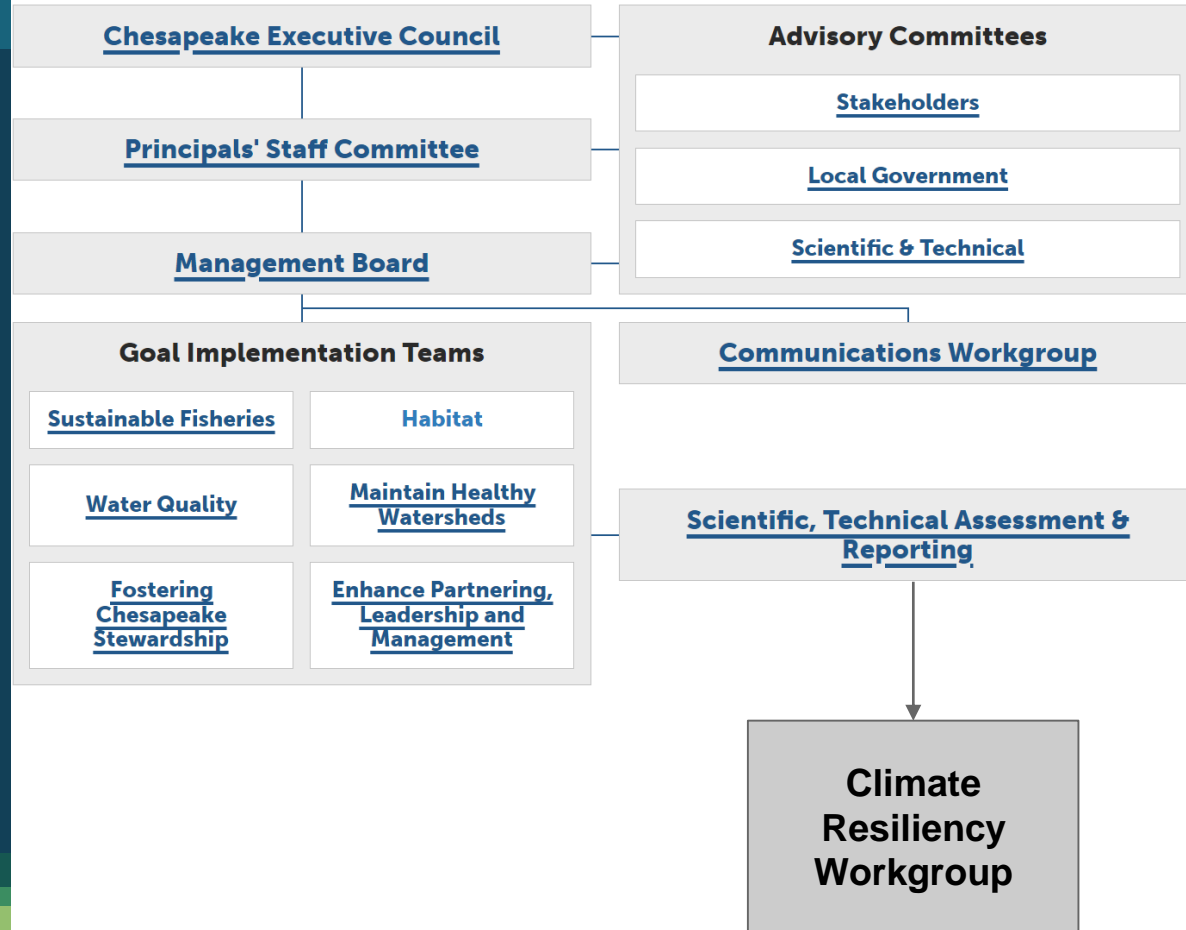
# Climate Adaptation Outcome Progress

*Chairs:*  
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# CBP Structure



*Through the Chesapeake Bay Watershed Agreement, the Chesapeake Bay Program has committed to...*

## Goal: *Climate Resiliency*

### **Climate Monitoring and Assessment**

Monitor and assess trends and likely impacts of changing climatic and sea level conditions on the Chesapeake Bay ecosystem, including effectiveness of restoration, protection policies, programs and projects.

### **Climate Adaptation**

Pursue, design and construct restoration and protection projects to enhance resiliency of the Chesapeake Bay and aquatic ecosystems from the impacts of coastal erosion, coastal flooding, more intense and more frequent storms and sea level rise.

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## Climate Adaptation Outlook & Challenges



- **Lacks quantitative goals**
- **No mechanism for project tracking**
  - Climate resilience projects are happening with influx of competitive resilience funding through BIL/IRA
- **Unknown project success for enhancing Bay and ecosystem resilience**
  - Difficult to obtain research funding for Performance Metrics
  - Requires long-term monitoring and project maintenance

## 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

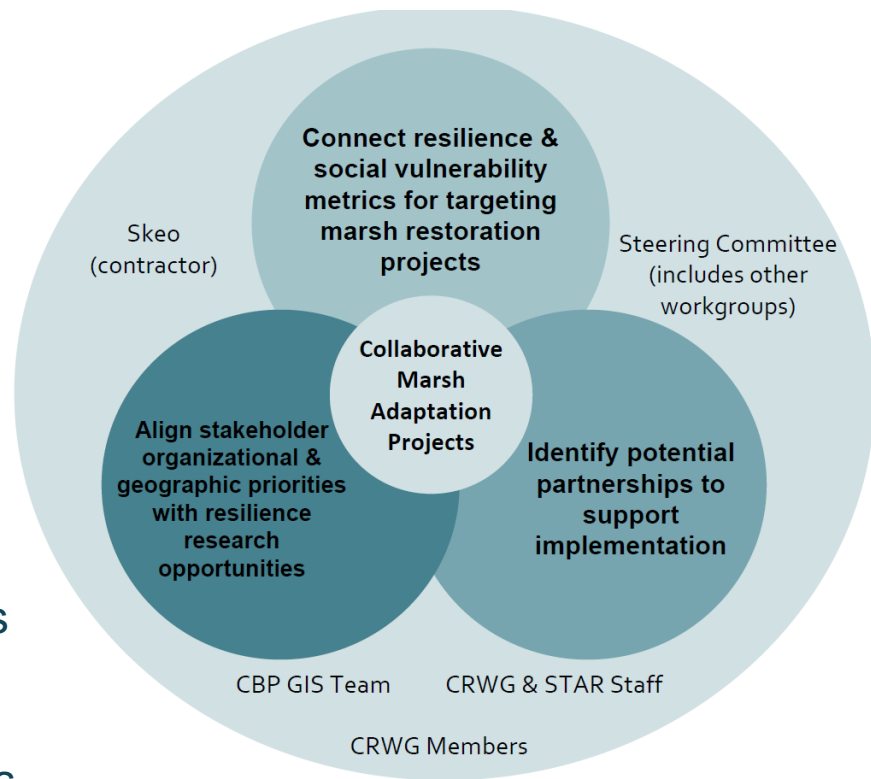
## Partnership-Building for Collaborative Marsh Adaptation Projects (2022-2024)

### Goals

- Incorporate climate change data and resilience strategies into marsh restoration and conservation
- Enhance longevity and health of tidal marshes

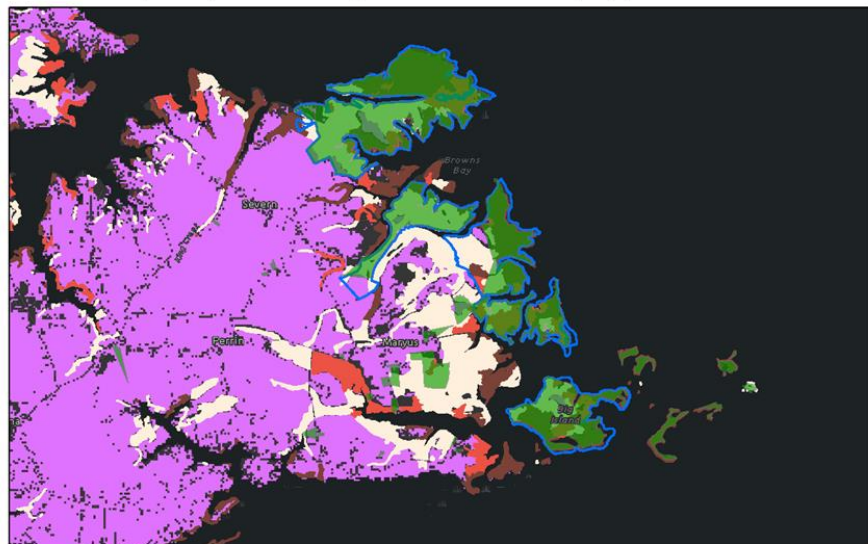
### Outcome

- Marsh Adaptation Mapper (7 focus areas identified)
- Workshop to collaboratively identify marsh adaptation opportunities in 2 focus areas (Middle Peninsula, Va and Wicomico/Deal Island, MD)



## Marsh Adaptation Mapper

Marsh Health (UVVR) and Marsh Migration Corridor Envelope (2') with VA Protected Lands



- Co-produced with end users (marsh restoration practitioners)
- Includes overlays of marsh migration, marsh condition, social vulnerability, and state conservation metrics
- Working with CBP GIS team on publicly accessible version for ChesapeakeData and CBP Targeting Tool Portal
- Using to inform mini-workshops and grant applications



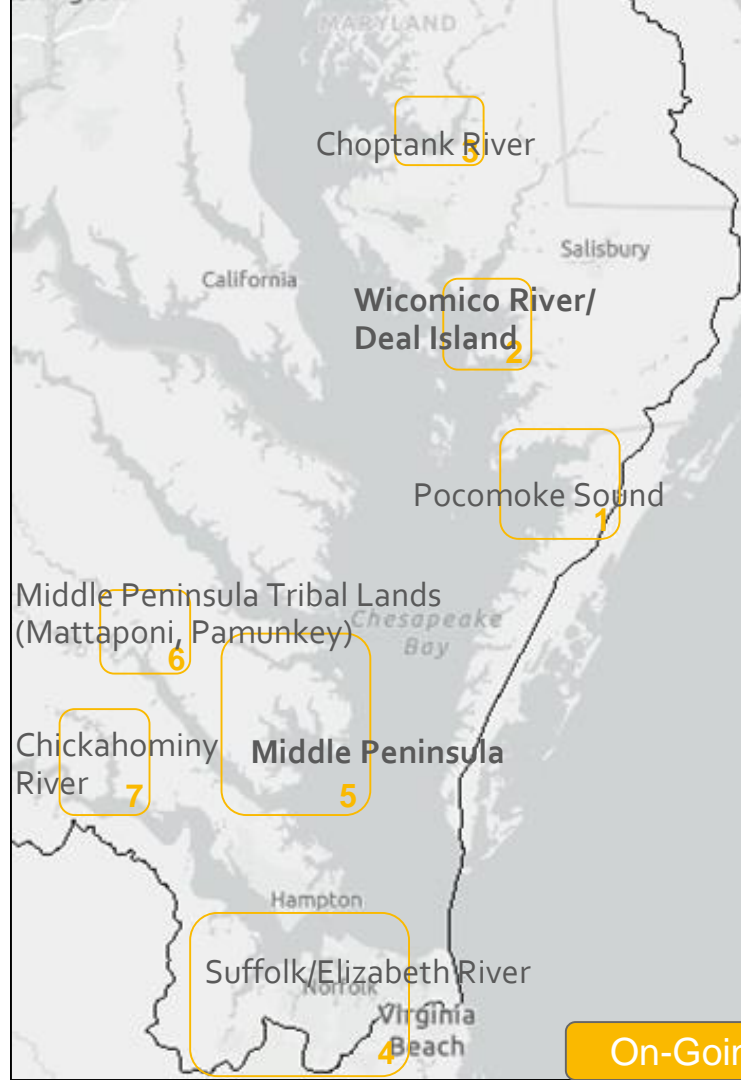
## Marsh Adaptation Continued

### CBT Wetland Strategic Plan

- Integrating data and mapper to inform strategic plan

### Marsh Adaptation Mini-Workshops

- Partner with local organizations to host additional workshops
- Ensure continued use of mapper and workshop resources
- Planning 3-hr workshop with Envision the Choptank (tentatively Fall 2024)



## Proposal Support for Nature-Based Solutions

### Guinea Marsh (VA) Restoration

- Partners submitted to federal funding:
  - NOAA Transformational Habitat and Resilience
  - NFWF National Coastal Resilience Fund
- Informed by marsh adaptation information from mapper and workshop
- Pending funding decisions

### Performance and siting metrics

- Oyster-related nature-based solutions
- NOAA Effects of Sea Level Rise (\$1.6 million)
- Provided letter of support and feedback
- Offered advisory support via workgroup meetings
- Not selected for funding (scored well; highly competitive)

## Connecting Community Resilience Efforts

### **Best Practices for Community-Engaged Resilience Planning (UVA)**

- Guide for local governments in VA
- Minimizing the flooded areas from which communities must retreat
- Enabling economic drivers to support planned relocation, when necessary

### **Baltimore Climate Vulnerability Assessment (NCCOS)**

- Evaluates social, structural, and natural resource vulnerability against climate hazards (flooding, sea level rise, urban heat)
- Impact of natural infrastructure and restoration on culturally valuable sites
- Engineering thresholds of vulnerability (i.e., tipping points)

### **3D Mapping and Climate Communication (USGS)**

- 3D visualizations of climate impacts in communities
- Immersive experience for local engagement

## Needed for Outcome Success



- **Clear GIT-funding process and decision framework**
  - Funding amount/mechanism, priorities, and decision process
- **Full-time CRWG staffer position as a recurring standing position**
  - Dedicated coordinator and climate staffer positions have been critical assets in supporting progress on climate resilience activities
- **Tracking/metrics for coastal adaptation projects**
  - Jurisdictional representation to advance restoration/protection projects
- **Better alignment between program structure and outcome**
  - Under STAR, CRWG functions as a science support workgroup
  - Climate Resiliency Goal does not have a Goal Implementation Team
  - Would benefit from quantitative outcome language

## Needed for Bay Program Climate Progress

### Climate Adaptation

**Pursue, design and construct restoration and protection projects to enhance resiliency** of the Chesapeake Bay and aquatic ecosystems from the impacts of coastal erosion, coastal flooding, more intense and more frequent storms and sea level rise.

### Beyond 2025 Climate Small Group Recommendations:

- Coastal protection through nature based solutions and restoration
- Carbon stewardship through conservation and climate modeling
- Species and ecosystem resilience to changing climate conditions
- Impact of climate change on water quality and bmps
- Regenerative agriculture

# Request: Management Board Feedback

Climate adaptation progress structural and resource needs

Potential CRWG development of quantitative climate outcomes