Partnership-Building and Identification of Collaborative Marsh Adaptation Projects

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Climate Resiliency Workgroup Meeting

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Marsh Adaptation

Working Definition:

Incorporating climate change information and resilience strategies when planning, designing, implementing, and managing marsh restoration and conservation projects to enhance longevity of marsh area and health

Climate Change Factors	Resilience Strategies
Sea Level Rise	• Identify and conserve marsh migration corridors • Restore/preserve healthy marsh sediment dynamics and vegetation • Ensure habitat connectivity
Increase in storm events & precipitation	

Why we need collaborative marsh adaptation projects

- Manage marshes to be resilient to sea level rise and other climate change impacts to preserve ecosystem services.
- Implement strategic large-scale restoration strategies with cross-goal benefits instead of opportunistic, disconnected projects.
- Increase understanding of geographical and organizational priorities to build partnerships to support large-scale implementation.
- Align marsh resilience research opportunities with implementation to increase data and information on the success of strategies.

Project components

Phase 1

- Review existing Marsh Workshop findings
- Review existing resilience, ecological and social vulnerability metrics
- Partner outreach survey
- Select two regional focus areas for in-depth workshop conversations

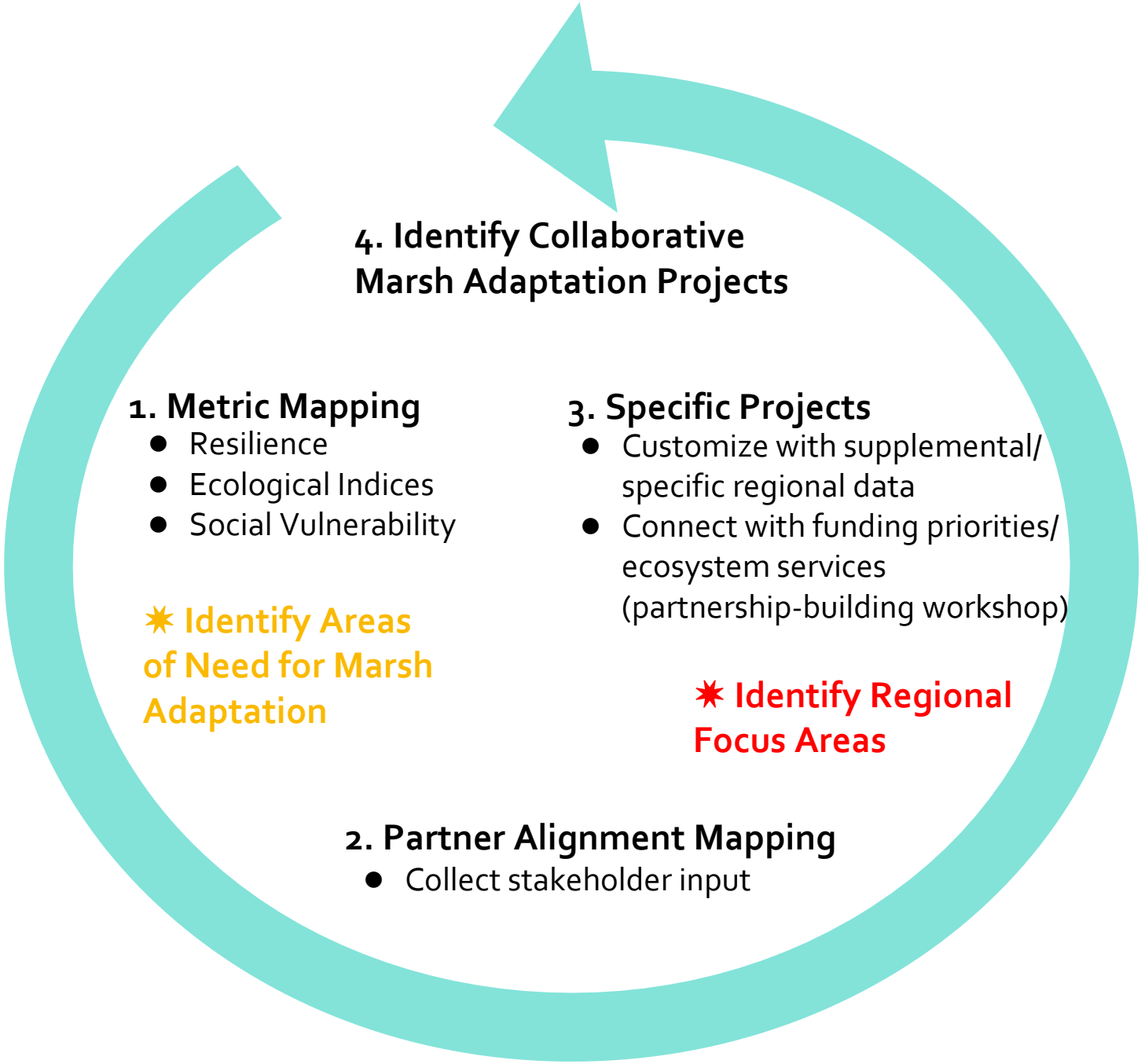
Phase 2

- Design 2-day workshop for MD, VA, and/or tribal stakeholders
- Identify large-scale marsh restoration and research projects and supporting partnerships

Phase 3

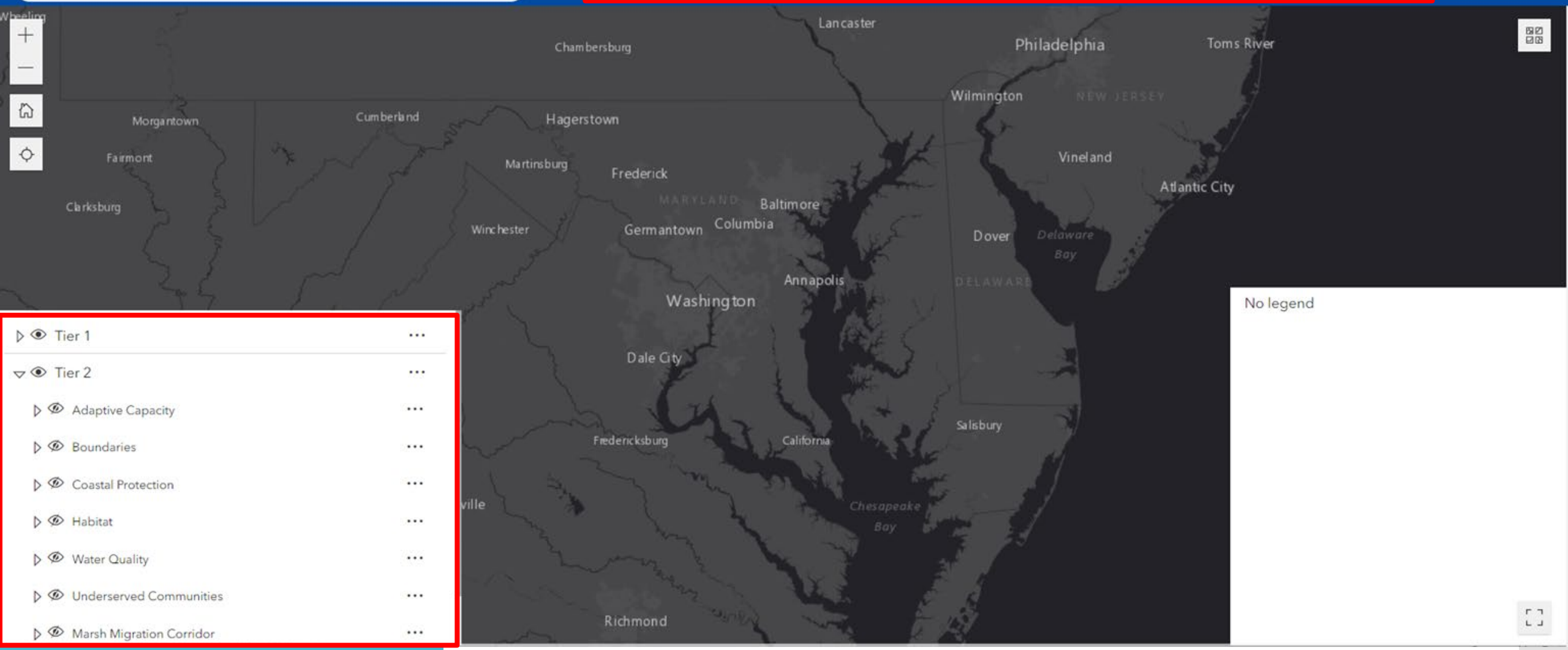
- Prepare project report and stand-alone communication documents on metrics, identified projects, and supporting partner networks
- Link prioritized projects with list of potential funding opportunities
- Identify challenges to collaborations

Coproduction Framework for Targeting Collaborative Marsh Adaptation Projects



Collaborative Marsh Adaptation Projects - Tiers 1 and 2

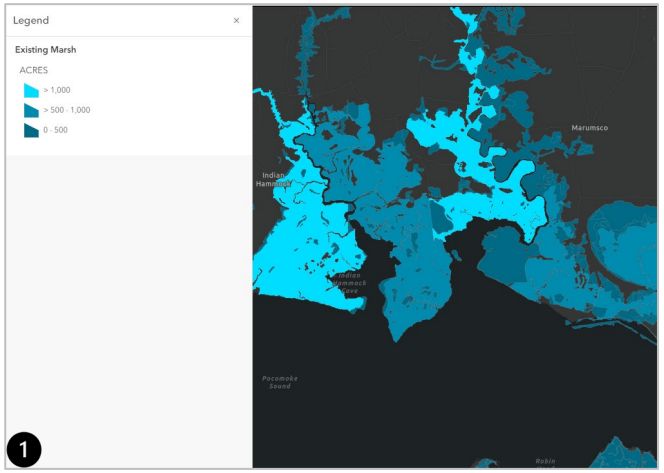
Web Map | Tier 1 Data Sources and Descriptions | Tier 2 Data Sources and Descriptions

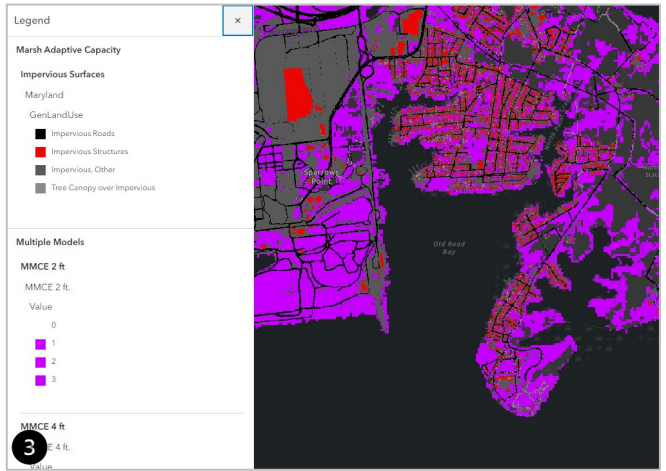


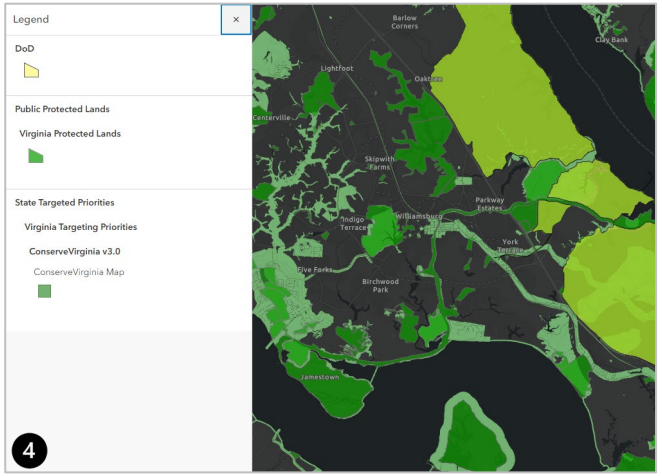
Web Mapper: https://gis.chesapeakebay.net/climate/marshadaptation/tiers1-2/
Working Mapper: https://chesbay.maps.arcgis.com/apps/mapviewer/index.html?webmap=ab5eb6ef41c64708b7f82e9d775061fd

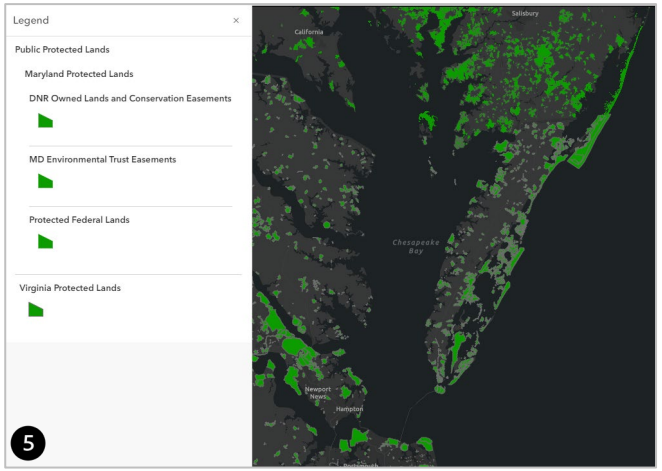
Tier 1 Mapper Visual Analysis Resilience & Ecological Metrics

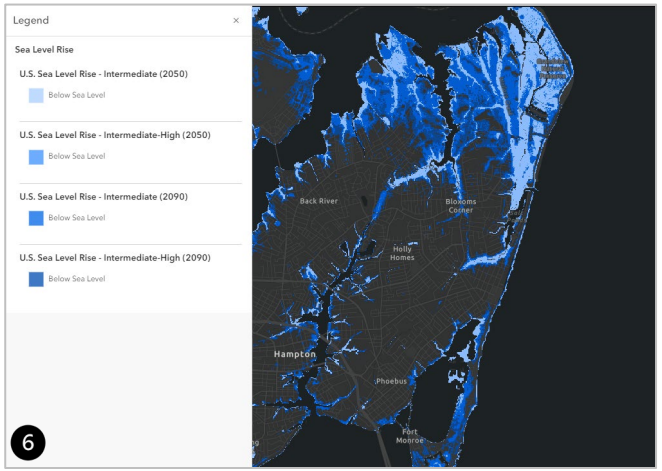
1. Existing Marshes, Marsh Size
2. Marsh Stability (UVVR)
3. Marsh Adaptive Capacity
4. Protected Lands
5. State Targeted Priority Areas
6. SLR Projections





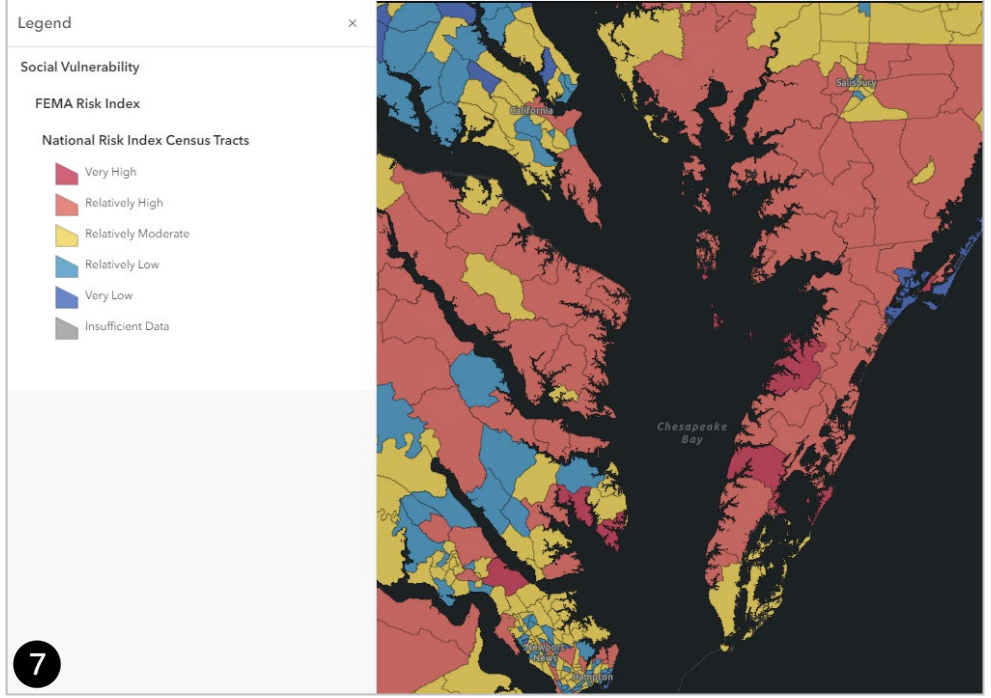


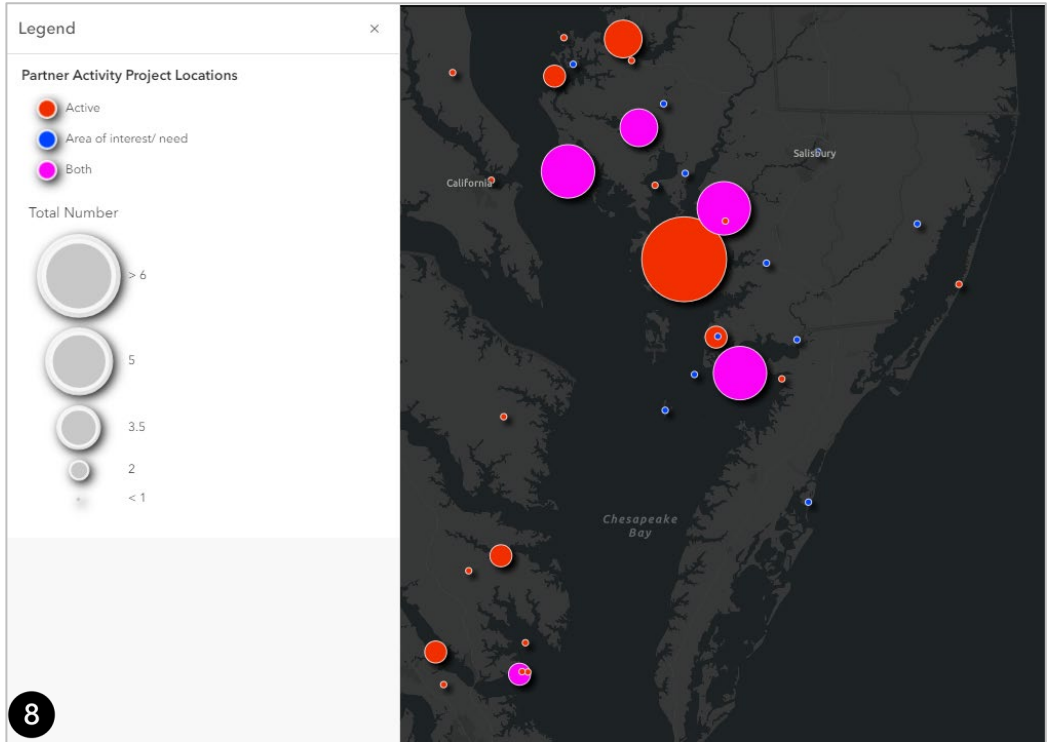




Tier 1 Mapper People Metrics

7. Social Risk and Vulnerability
8. Partner Area of Interests & Activity

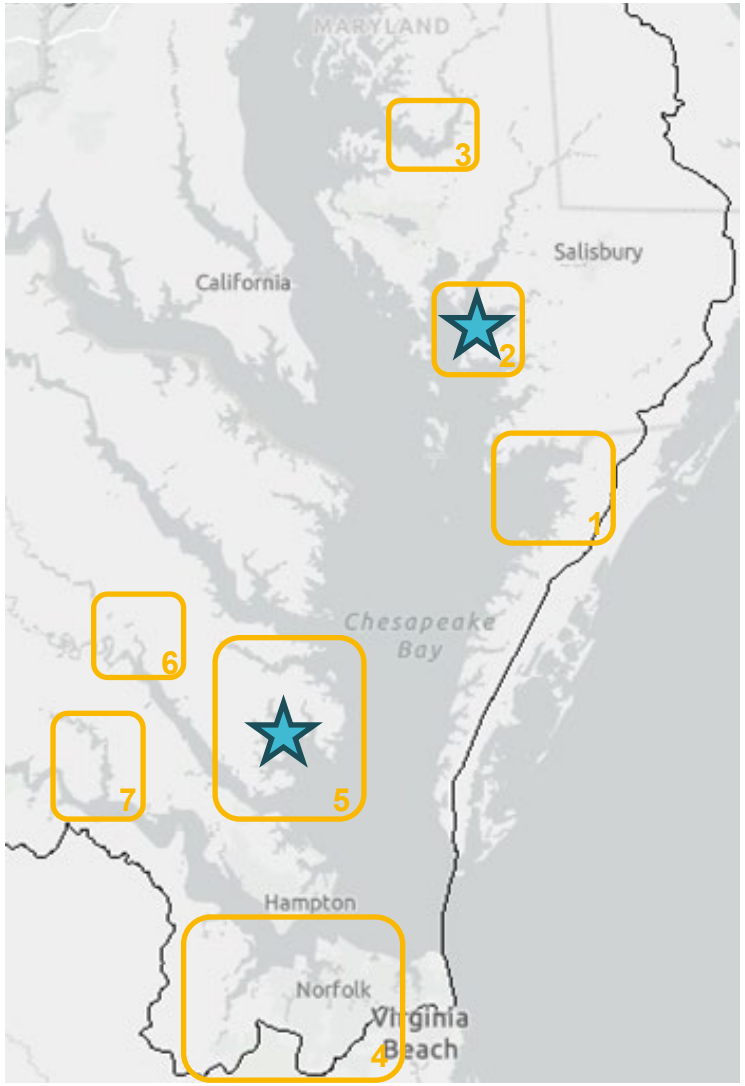




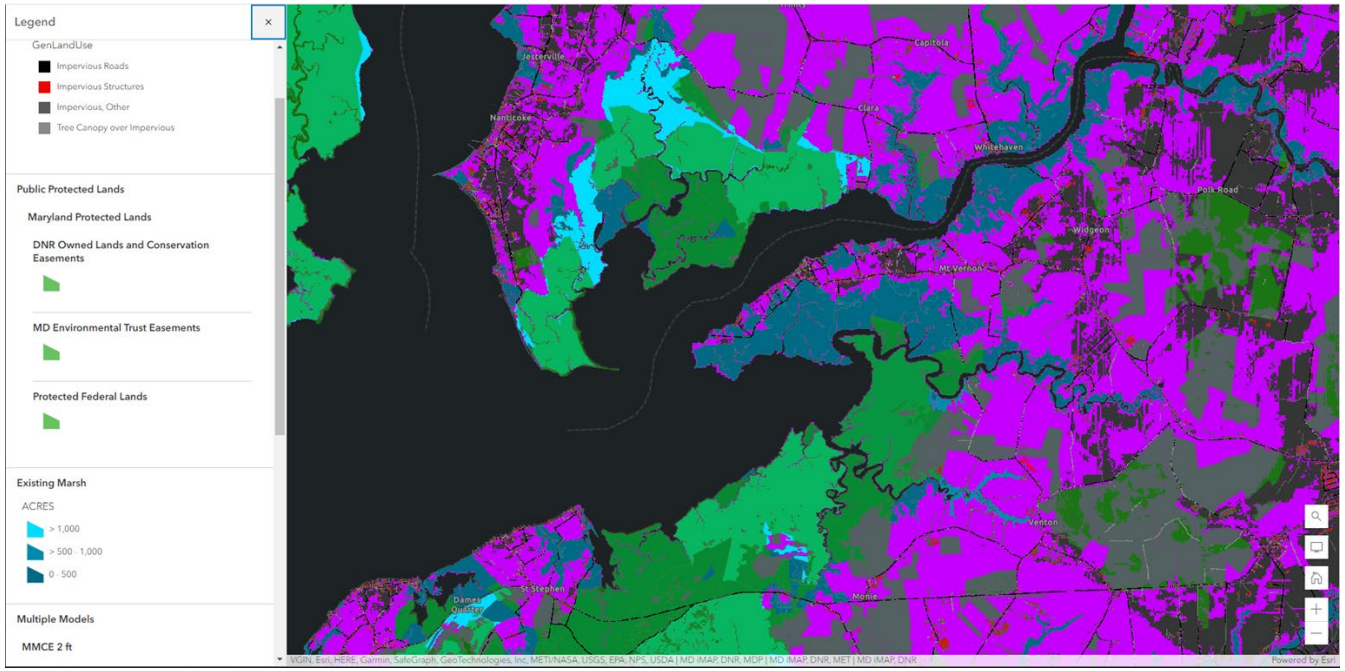
Identified Marsh Adaptation Project Focus Areas

Bold: Selected for more in-depth workshop discussions

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)
7. Chickahominy River, VA



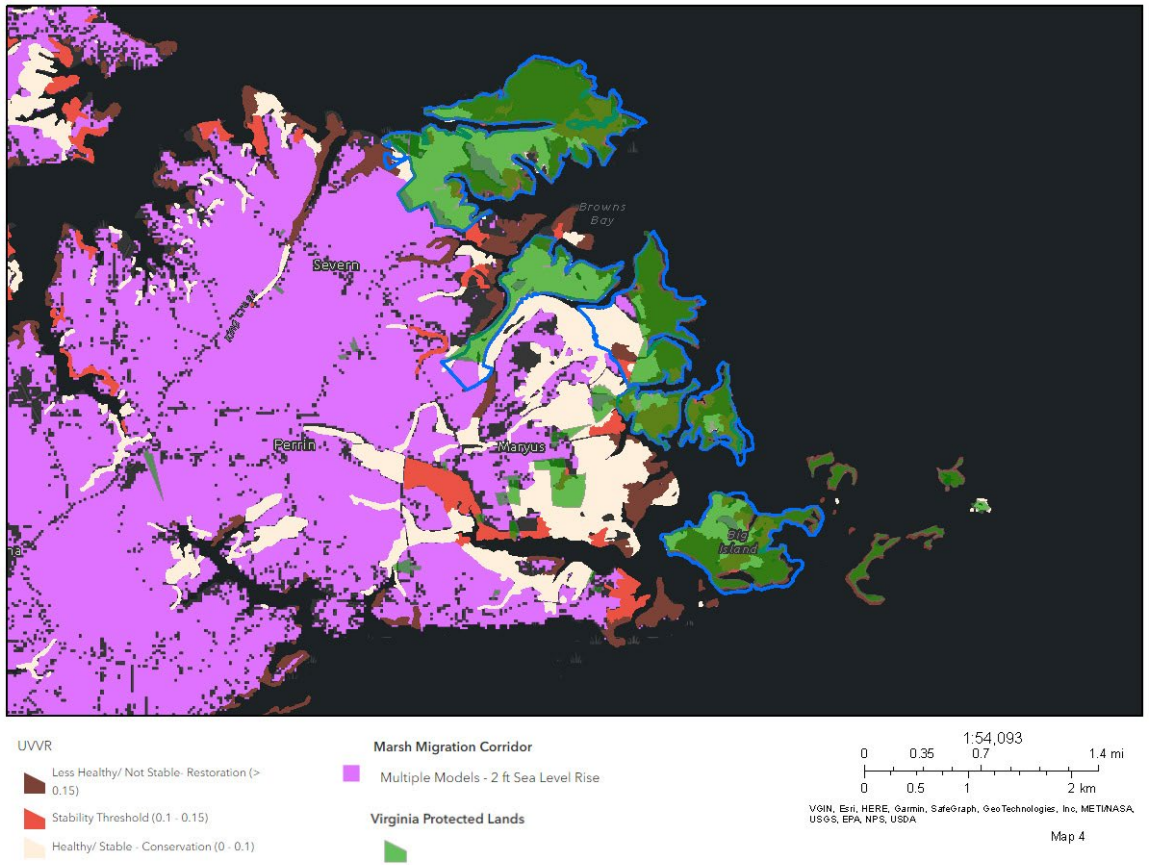
Wicomico River-Monie Bay, MD



- High level of existing partner activity (dredging Lower Wicomico and beneficial placement for wetland restoration at Deal Island Wildlife Management Area)
- Extensive protected lands adjacent to potential marsh migration areas
- Significant SLR projections indicate value of marsh migration inland toward population centers

Middle Peninsula, VA

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



- High level of partner activity; wetland action plan recently released
- Small to medium scale marshes
- Extensive protected lands and state targeted conservation areas
- Includes extensive Department of Defense land and active REPI projects focusing on protection

Marsh Adaptation Scenario Examples

Protection Scenario

Use data to identify *healthy marshes* that are susceptible to SLR and have the potential to migrate.

- Good Existing Marsh Condition
- High Climate Change Risk
- High Adaptive Capacity

Restoration and/or Enhancement Scenario

Use data to identify *degraded marshes* that are susceptible to SLR and have the potential to migrate.

- Degraded Existing Marsh Condition
- High Climate Change Risk
- High Adaptive Capacity

Next Steps

- December 2023:
  - Steering Committee Meeting & Save the Date (COMPLETE)
  - Finalize Invitee List & Workshop Agenda (IN PROGRES)
  - Finalize Tier 2 data layers and Marsh Adaptation Mapper (IN PROGRESS)
  - Distribute Workshop Registration (by Dec 14th)
- January 2024:
  - Virtual Partnership-building workshop to support marsh adaptation (January 19th)
- April 2024:
  - Final Project Report
- Ongoing:
  - Work with the Chesapeake Bay GIS Team to incorporate the mapper into the CBP Targeting Tool.
  - Work with Climate Resiliency Workgroup to seek funding to support the other regional focus areas.