# SYNTHESIS OF SHORELINE, SEA LEVEL RISE, AND MARSH MIGRATION DATA FOR WETLAND RESTORATION TARGETING

Lead: Habitat GIT (Wetland Workgroup)
Collaboration with: Climate Resiliency Workgroup, Fish Habitat Action Team

# OUTCOMES

**Data synthesis:** Compilation of metadata of available studies/data related to sea level rise, topography, shoreline condition, wetland area, and migration corridors (demographic, economic).

**Pilot project:** Apply synthesized information to wetland restoration and conservation targeting at a fine-scale, directly influencing decision-making in an area of interest.

# WHY IS THIS WORK IMPORTANT?

Chesapeake Bay's tidal shoreline is vulnerable to sea level rise, and wetlands face barriers to migration.

Lots of existing data related to marsh migration and sea level rise, but often from different institutions & not gathered in one place.

Will work across CBP partners to compile list of data in a format suitable for use by decision-makers and develop climate resilience and marsh migration analysis.

# ADDRESSING CBP OUTCOMES

- Wetlands Outcome (Habitat GIT)
- Climate Adaptation Outcome & Climate Monitoring and Assessment Outcome (STAR)
- Benefit Fish Habitat, Forage, Black Duck, SAV, and Local Leadership Outcomes
- Build on prior investments—Climate Resiliency Workgroup's "Development of Climate Change Indicators and Metrics for the Chesapeake Bay Program"

# ADDRESSING WORK PLAN ACTIONS AND SCIENCE NEEDS

## Wetland Workgroup Logic and Action Plan:

- assessing risks to coastal habitats by forecasting vulnerability and resiliency of coastal systems to future change
- identifying areas where wetland restoration would greatly benefit water quality and habitat
- coordinating with Black Duck and Fish Habitat Action Teams to identify wetland areas that are suitable black duck and fish habitat and would be ideal for restoration.

## Climate Resiliency Workgroup science needs:

- a better understanding of sea level rise and subsidence impacts in changing climatic conditions
- a better understanding of changing climate conditions and their impacts on wetlands

# PROJECT COMPONENTS

A list of data sources and “metadata factsheets” summarizing basic information about each data source

Selection of a pilot location depending on available data

Gather data relevant for pilot location; Draft concept for synthesis product (e.g., user guide, GIS analysis to prioritize areas for conservation/restoration)

Meeting with end users (local officials/staff, wetland practitioners, resilience experts) to finalize concept for synthesis product

Final deliverable & report

# EXPANDED ACTIONS

- The list of available data sources and the final report on the analysis from the pilot location can serve as a guide for other local communities who want to complete a similar analysis and targeting of wetland restoration.
- Future projects could focus on an alignment of areas of high suitability for conservation/restoration with areas of high need for resiliency based on factors related to social vulnerability and diversity, equity, inclusion, and justice.