

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

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## PROJECT GOALS

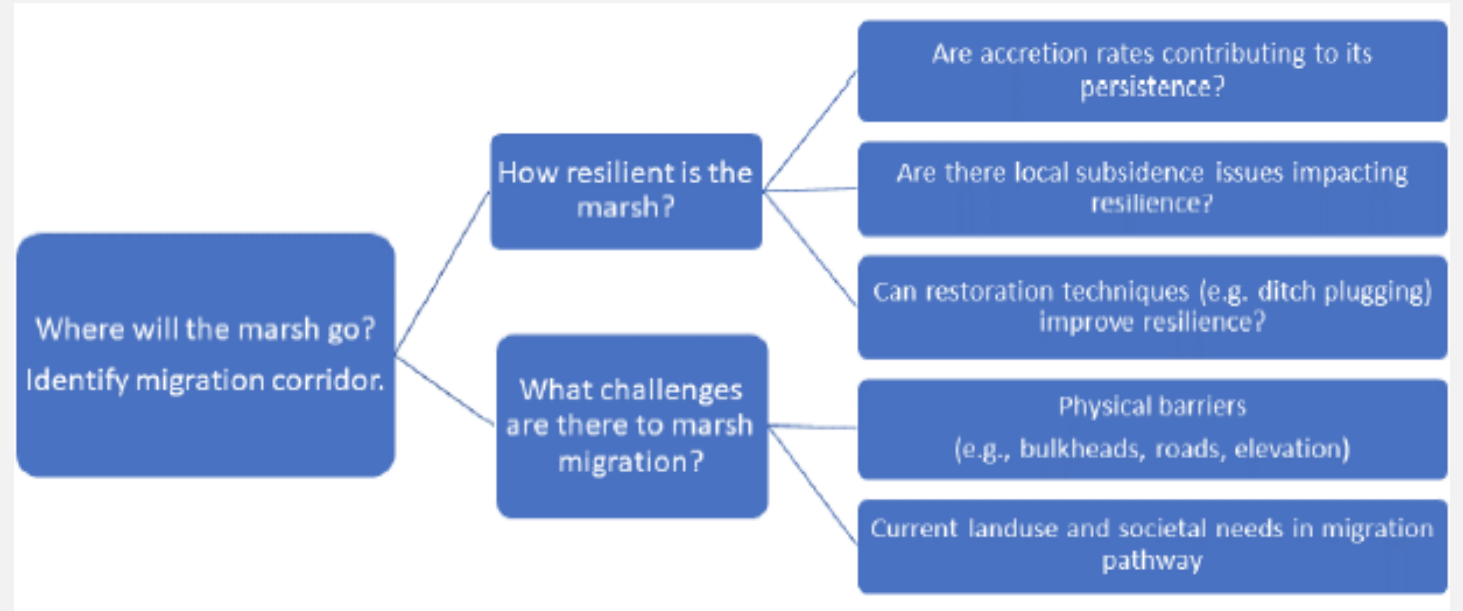
1. Compile existing information about SLR inundation under forecasted climate change, topography of bay shorelines, shoreline condition (e.g., erosion rates, hardening, existing natural resources), existing wetland area and potential migration corridors, and other relevant data from Chesapeake Bay Program (CBP) partners and other organizations
  - a. inventory relevant information available for the Chesapeake Bay region
2. Develop a methodology that synthesizes the information in a format that can be used to assist with marsh conservation and restoration decisions under multiple sea level rise scenarios
  - a. targeting a study area; look at existing marsh migration model runs; assess strengths and weaknesses of the different methods

## TYPES OF DATA

- Sea level rise forecasts for multiple stations throughout the Chesapeake Bay
- Subsidence rates throughout the Chesapeake Bay
- Topographic and topobathymetric surfaces and bank heights
- Shoreline erosion rates and soil types
- Type and extent of shoreline alterations (e.g., bulkheads, revetments)
- Locations of living shorelines
- Distribution of natural resources (e.g., marshes, beaches, dunes)
- Assessments of marsh resilience (e.g., accretion rates, migration rates)
- Marsh plant community types and Phragmites invasion
- Projected marsh migration patterns
- Landuse/landcover (current and projected)
- Conserved lands
- Groundwater flow information
- Suspended sediment concentrations
- Locations of irrigation ditches that cross wetlands
- Economic and social community characteristics

# DATA SYNTHESIS METHODOLOGIES

1. the difficulty of preserving lands in the migration corridor
2. opportunities for improving marsh resilience (such as ditch plugging)
3. physical characteristics (such as elevation and subsidence rates)



What else should be considered?

## TIMELINE

- Sept 2021 -- Data sources mostly collected, literature review drafted
- Dec 2021 – Feb 2022 – Stakeholder meetings and methodology development
- Aug 2022 – Final report

QUESTIONS? THOUGHTS? IDEAS?

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