



Project Title: Assessing Sea Level Rise Impact and Recommending Comprehensive Strategies for Marsh Management and Migration in Southern Dorchester County (Blackwater NWR).

Headline Title (2-5 words): Dorchester County SLR Assessment and Strategy

Brief Summary (Abstract): A collaborative project to assess and develop strategies to ensure the long term persistence of tidal marsh habitat in Dorchester County, Maryland together with its full assemblage of associated bird species and wildlife.

Project Location: Southern Dorchester County, Maryland

Partners: This project is collaboration among five primary partners, The Conservation Fund, Audubon Maryland-DC, U. S. Fish and Wildlife Service, Maryland Department of Natural Resources, and the Chesapeake Conservancy. Additional partners and members of Advisory Committees include U. S. Geological Survey, U.S. Army Corp of Engineers, University of Maryland, U.S. Department of Agriculture, Natural Resources Conservation Service, Friends of Blackwater, Dorchester County Tourism, City of Cambridge, Nanticoke Watershed Alliance, Pickering Creek Audubon Center, Hazel Outdoor Discovery Center, The Nature Conservancy, and additional staff from Blackwater National Wildlife Refuge (NWR). The principle funder for the project was The Town Creek Foundation.

Background: In the Mid-Atlantic States the average temperature has increased by 2°F since 1970 bringing about observed changes that include: more days each year reaching more than 90°F, more severe storms bringing heavy precipitation as rain instead of snow, earlier spring snowmelt leading to peak river flows earlier in the year, and rising sea levels. Projections call for another rise in temperatures of 2 to 4°F by mid-century. Maryland is particularly vulnerable to this sea level rise because of its geography and geology. The state has 3,000 miles of coastline of which 31% is known to be affected by shore erosion resulting in documented losses of 580 acres/yr. The effects of sea level rise, compounded by land subsidence and accompanying storm surge include shoreline erosion, coastal flooding, salt water intrusion of freshwater resources, loss of coastal forests, and inundation of some coastal areas. These forces are having a dramatic effect on the tidal marshes in Dorchester County, Maryland and the Blackwater NWR.

Project Goals: The goal of the project is to ensure the long term persistence of tidal marsh habitat in Dorchester County, MD together with its full assemblage of associated bird species and other wildlife. The strategy is intended to accomplish adaptation at Blackwater NWR and surrounding lands by changing management of marshes both to enhance them, enabling them to persist longer in place while also setting the stage for successful migration to new locations.



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CLIMATE ADAPTATION STRATEGY

Strategy Goals Implemented: : Goal 2, Strategy 2.2, Action 2.2.1 Use vulnerability assessments to design and implement management actions at species to ecosystem scales.

Goal 2, Strategy 2.1, Action 2.1.3 Identify species and habitats particularly vulnerable to transition under climate change

Climate Impacts Addressed: Sea Level Rise and their impacts on marsh obligate species and their habitats.

Status of Project Implementation (Timeline, Milestones, Next Steps): The Assessment and Strategy development phases of the project are complete. Blackwater NWR Staff are utilizing this tool for implementation on refuge lands. The communications portion of the project is pending.

Project Outcomes: Dorchester County Climate Adaptation Project includes two primary components; first, the Strategic Assessment, utilizing a modified SLAMM (Sea Level Affecting Marshes Model), identifies and maps area of marsh habitat of highest priority to salt marsh birds, areas most suitable for restoration activities, potential marsh migration corridors, potential barriers to marsh migration, and habitats of threatened and endangered species and other habitats of high conservation priority to assess likely impacts of sea level rise and potential management conflicts with conversion to tidal marsh. The second component involves the development of a strategy document to set out a plan for adapting the marshes and adjacent uplands to the effects of climate change – the primary impact being sea level rise. Additionally there is a goal of developing a public communication component to the project. The attached document will help with community outreach to help engage the local community to help address these changing environments.

Funding Sources: The Town Creek Foundation, U.S. Fish and Wildlife Service, Wildlife Conservation Society.

Attachments:

“Blackwater 2100: A Strategy for Salt Marsh Persistence In An Era Of Climate Change”

Credits: Audubon Maryland-DC, The Conservation Fund