

CULVERT REPLACEMENTS

RESTORING A CRITICAL HABITAT & STORM BUFFER

The Weir Creek marshes in South Dennis are partially impaired by two undersized culverts which impede tidal flow, and the marsh has reduced effectiveness as a buffer to flooding and storms.

This project will replace the existing, undersized culverts with new precast box structures, raising the roadway elevation and restoring tidal flow.

The primary goals of this project are to restore the ecological health of approximately 120 acres of salt marsh, promote upstream drainage, and improve resiliency against climate change and storm events.

PROJECT PARTNERS









Weir Creek Salt Marsh Restoration & Culvert Replacements South Dennis, MA

FLOOD & STORM RESILIENCY

ECOLOGICAL RESTORATION

Tighe&Bond







WOODS HOLE



EXISTIN CUN



Flood Resiliency

Compared to existing conditions (in orange), the increased capacity of the proposed culverts (in blue) will improve drainage of the system following storm events.



The proposed culverts would increase tidal flow, significantly raising maximum salinity levels (below, in PSU) and contributing to restoration of the salt marsh habitat.

Tighe& Bond

PROJECT COMPONENTS

 Topographic & Bathymetric Survey Coastal Resource Area Delineation Geotechnical Investigations Hydrologic and Hydraulic Modeling Tidal Influence Modeling Salinity Modeling Alternatives Analysis 30% and 60% Culvert & Roadway Design

The conceptual design includes replacing two undersized culverts with 8-foot box culverts and raising the roadway up to 2.5 feet.

Salt Marsh Restoration

