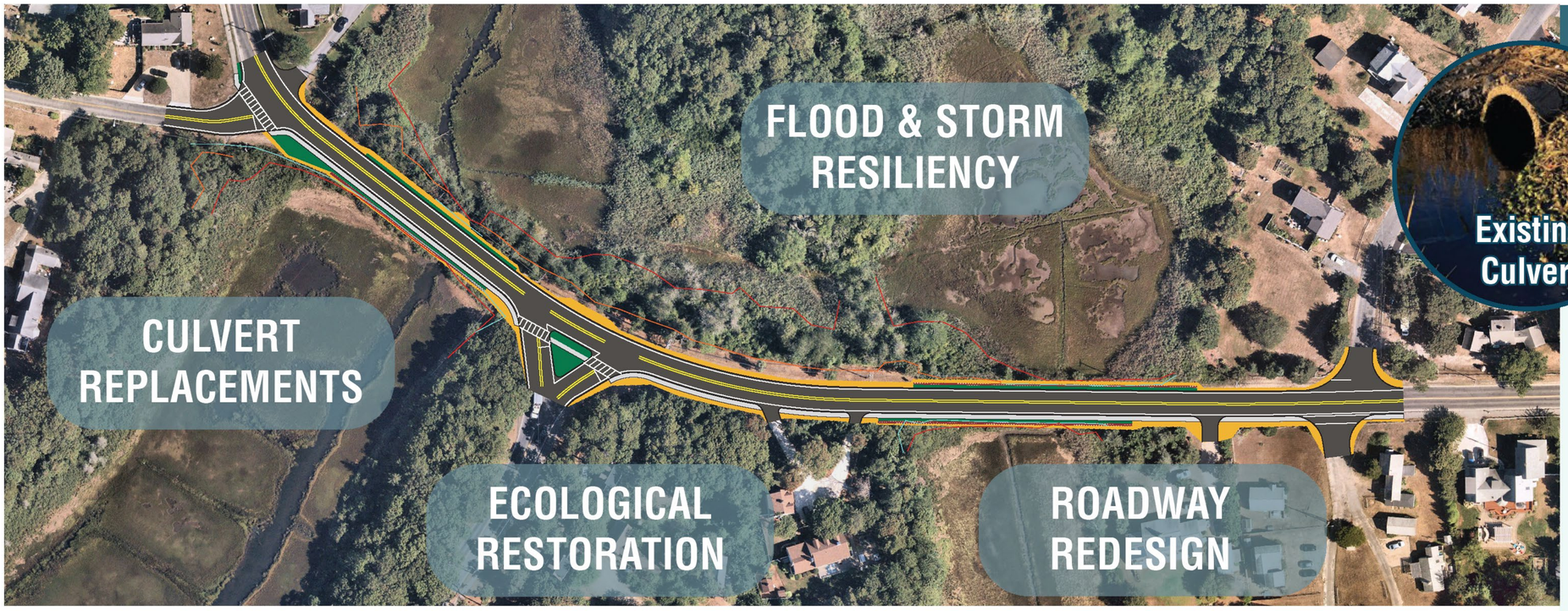
Weir Creek Salt Marsh Restoration & Culvert Replacements

South Dennis, MA

APCC Association to Preserve Cape Cod

Tighe&Bond



PROJECT COMPONENTS

- Tidal hydrology modeling
- Hydraulic modeling
- Salinity modeling
- Alternatives analysis
- Coastal resource delineation
- Geotechnical evaluation
- Vegetation monitoring
- Topographic & bathymetric surveys

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

RESTORING A CRITICAL HABITAT & STORM BUFFER

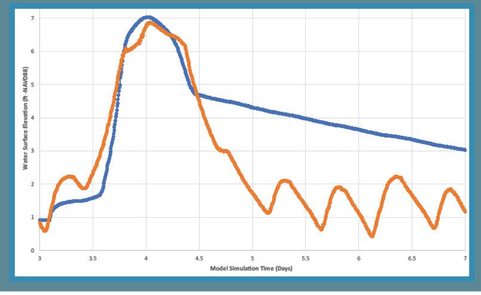
The Weir Creek marshes in South Dennis are partially restricted by two undersized culverts which impede tidal flow, and the marsh has reduced effectiveness as a buffer to flooding and storms.

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

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

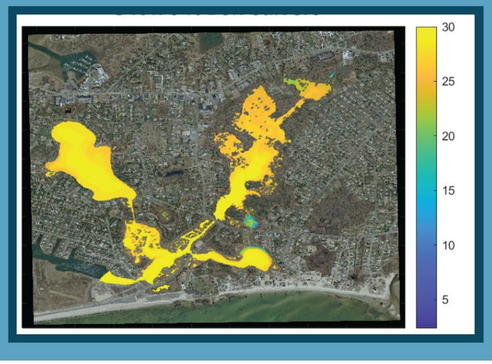
Flood Resiliency

The increased capacity of the proposed culverts **(in orange)** will restore natural tidal hydrology to the upgradient salt marsh more quickly than existing conditions **(in blue)**.



Salt Marsh Restoration

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



PROJECT PARTNERS

APCC Association to Preserve Cape Cod · Town of Dennis Massachusetts · Tighe&Bond · Woods Hole Group A CLS Company · friends of Bass River · The Dennis Conservation Land Trust · Cape Cod Commission · SNEP · Restore America's Estuaries · Cape Cod Conservation District · USDA NRCS United States Department of Agriculture Natural Resources Conservation Service