

MONITORING OVERVIEW

Casco Bay Monitoring Network Meeting
4/15/2021

Matt Craig, CBEP



2020 Monitoring Activities

- Limited by pandemic – no intern
- Pre-project assessment for tidal restoration project at Small Point Road / Route 216 in Phippsburg
- Living shorelines pilot projects

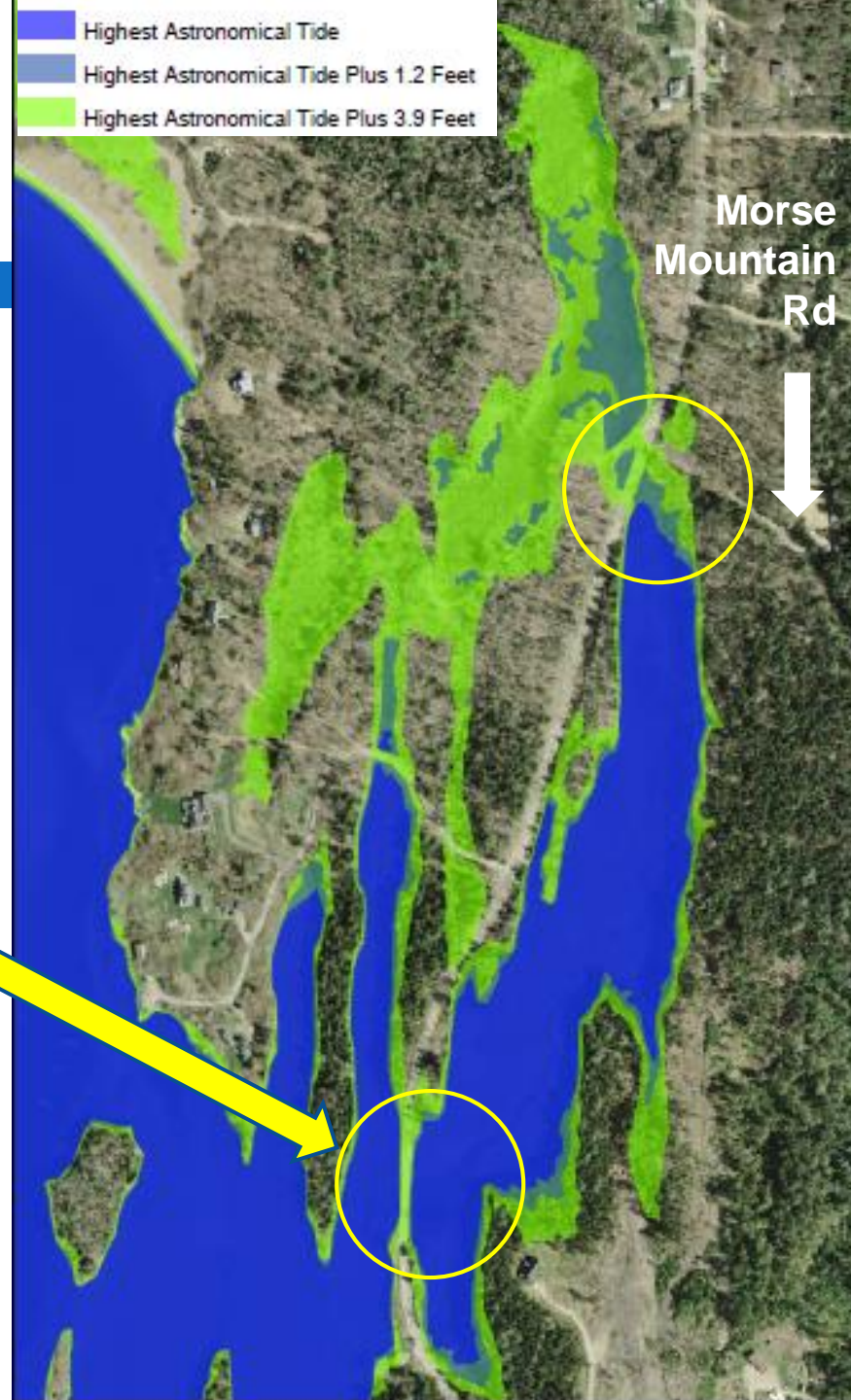


Wharton Point, Brunswick

Small Point Marsh

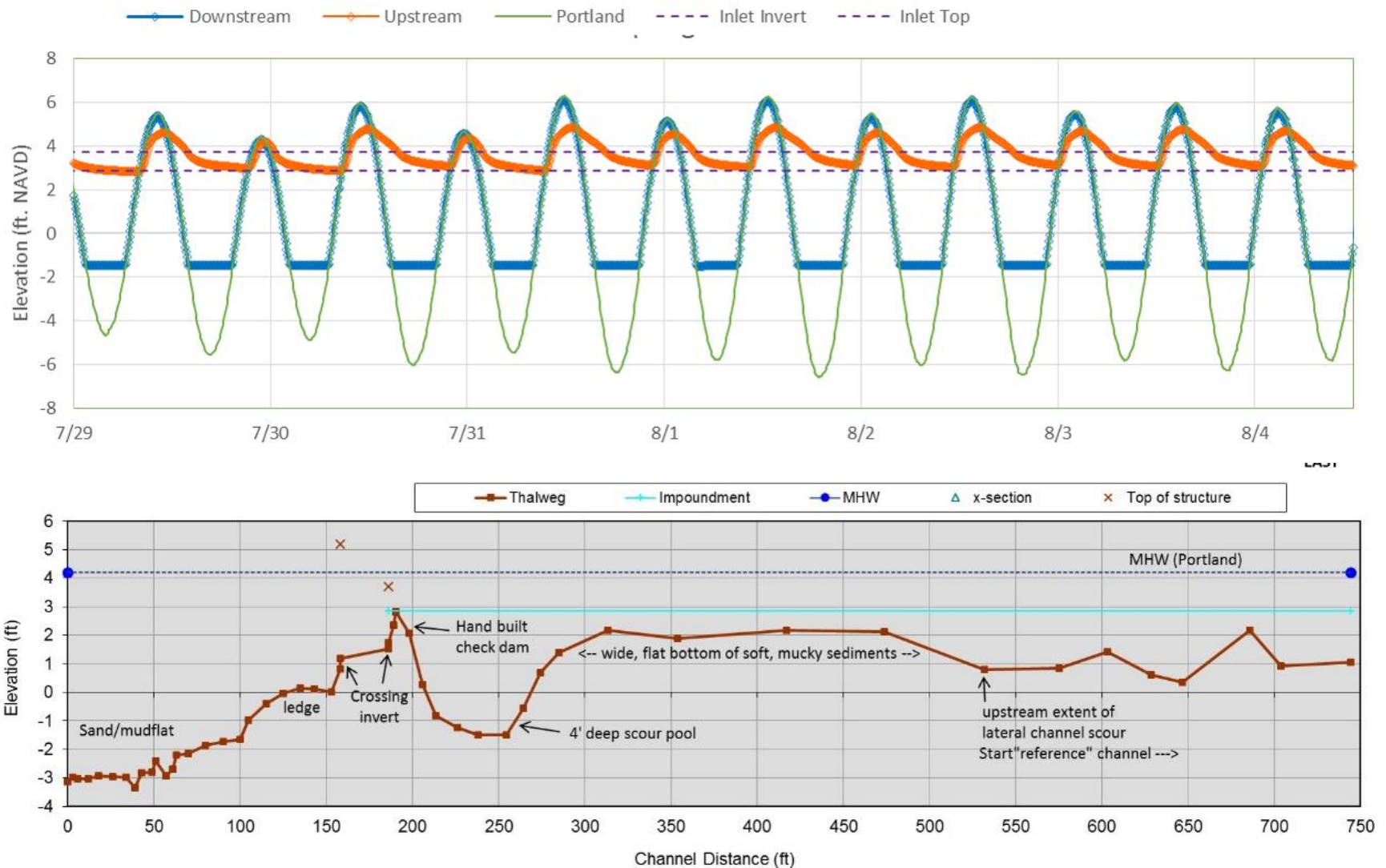
Phippsburg

Route 216 / Small Point Road



MGS Sea Level Rise/Storm Surge Viewer

Small Point Marsh



Living Shorelines Pilots - 2020

Lanes Island, Yarmouth



MBCL,
Brunswick



Wharton Point, Brunswick



Bagging shell

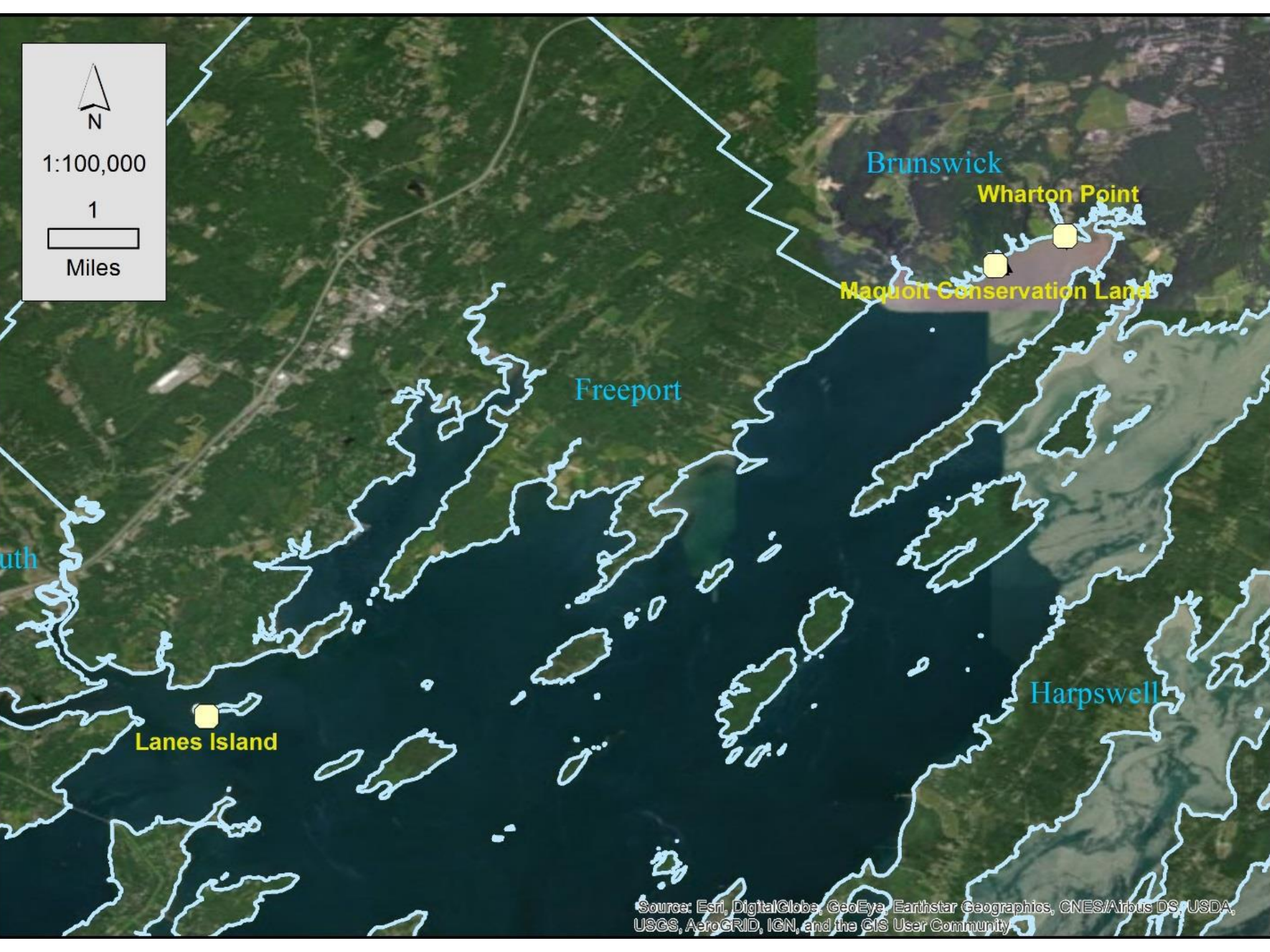


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Miles



Living shorelines

Maquoit Bay Conservation Lands, Brunswick

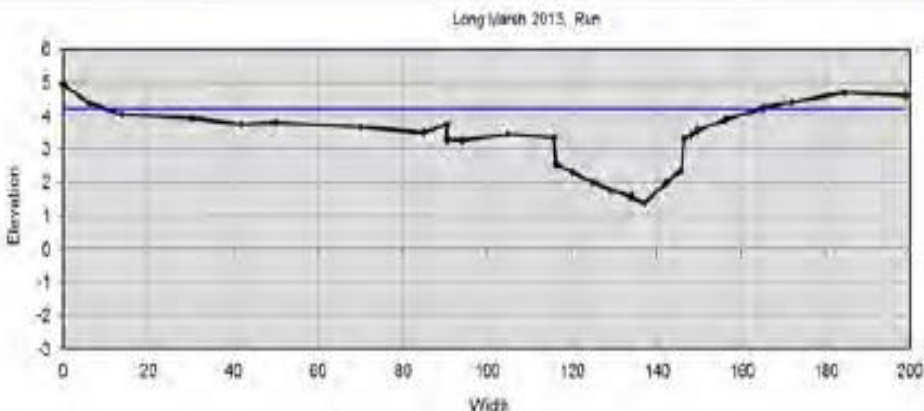
- New England pilot projects
- CBEP: 5 years post-monitoring (QAPP)
- Data collection
 - Elevations, position – Total station sediment erosion pins, scour, deposition)
 - Erosive forces (wave energy, storms, ice, runoff)
 - Biota & habitat (species composition, invasive spp.)
 - Structural integrity (integrity, erosion, location)
- Photo stations



Restoration site monitoring

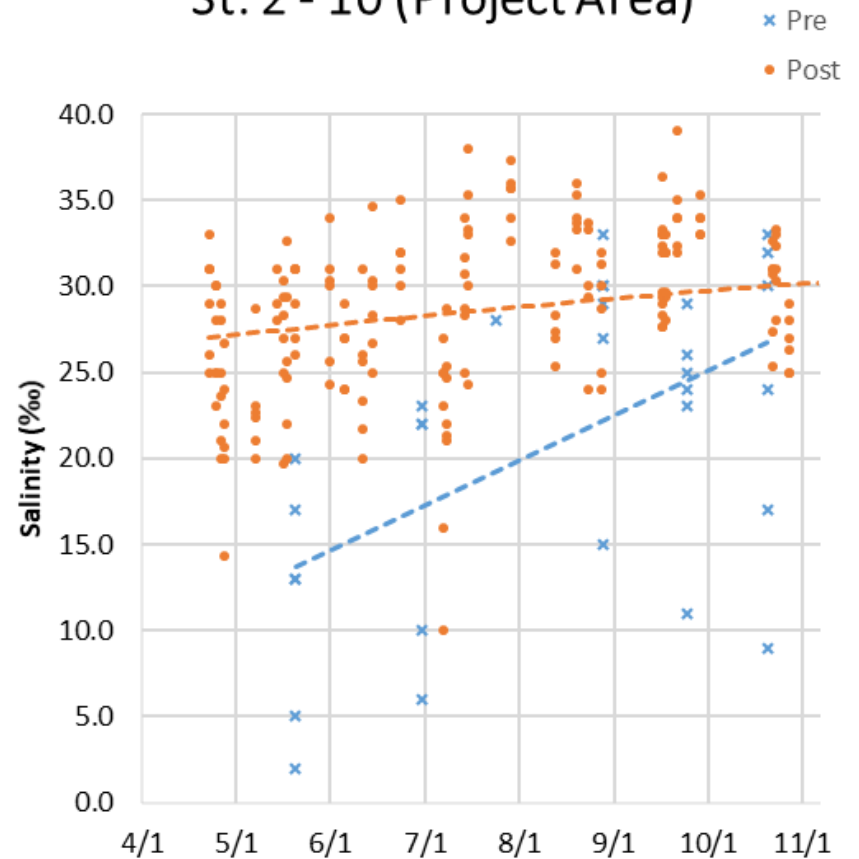
- 10+ years of data
- Vegetation
- Channel morphology
- Tidal hydrology
- Pore water salinity
- Invasive vegetation
- Biota (incidental)

Channel cross section Long Marsh, Harpswell

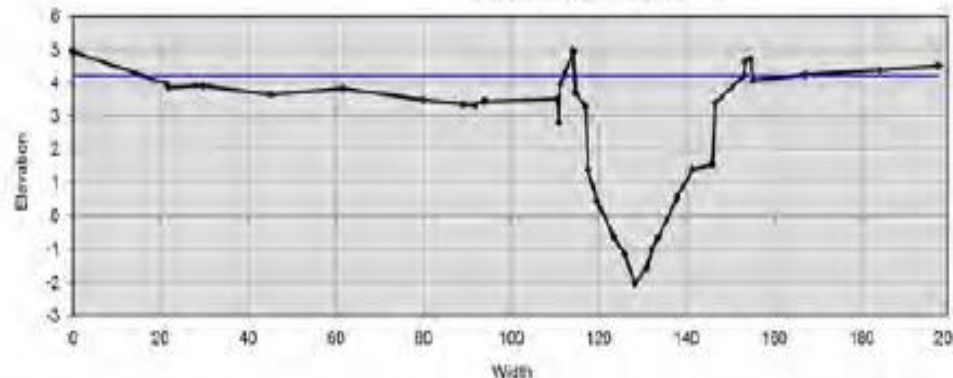


Pore water salinity Long Marsh, Harpswell

St. 2 - 10 (Project Area)



Long Marsh / Doughty Cove 2018, Run



Thomas Bay Marsh
Adams Rd, Brunswick
Data: 2009 – 2016
Project: 2011
\$ - NOAA, Brunswick, NMWP

Long Marsh
Long Reach Lane, Harpswell
Baxter State Park Authority
Data: 2011 – 2016, thru 2018
Project: 2014
DOT (Martin's Point Bridge)

Appletree Marsh
Wallace Shore Road, Harpswell
Data: 2012 – 2016, thru 2018
Project: 2014
MNRCP

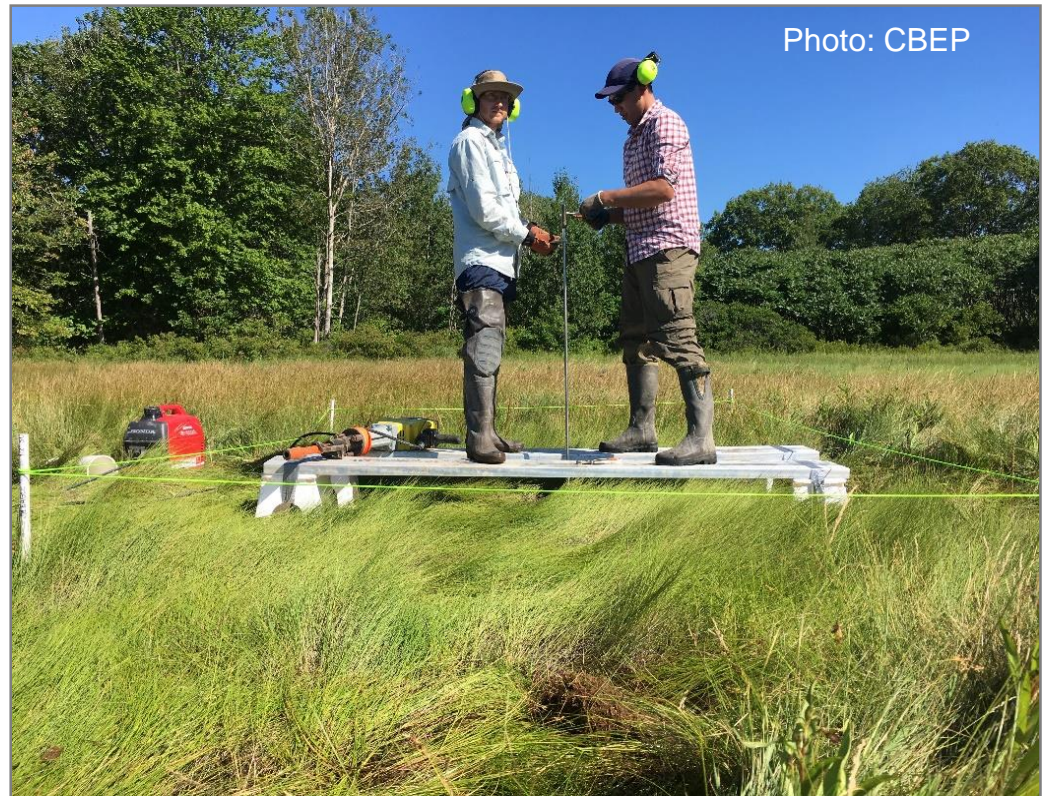
Head of Mill Cove
High Head Road, Harpswell
Data: 2014 – 2016
Project: 2016
\$ - none (private)



Tidal Marsh Sentinel Sites

- Transition toward tracking long-term changes at restoration sites
- Identify reference systems & initiate monitoring
- Align methods with regional framework

rSET installation, Gamble Marsh, Brunswick



Etc...

- Collaboration with Dr. Bev Johnson, Bates College, research on Blue Carbon
- Equipment
 - ▣ Leica Total Station
 - ▣ 6 Onset HOBO water level loggers
 - ▣ 4 Onset Conductivity loggers

