

Migrating Shorelines: Opportunities for Coastal Adaptation

Land and Water Summit March 2019

SAVE THE BAY®

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COASTAL RESOURCES MANAGEMENT COUNCIL



Adaptation Strategies

- Regrade banks to create less erosive slopes
- Install non-structural shoreline protection such as coconut fiber “burritos” or logs
- Remove eroding or flood prone roads and install stormwater treatment; limit vehicular access
- Remove low lying infrastructure (utility poles, bulkheads, abandoned structures)
- Protect low lying uplands to create migration corridors
- Restore coastal buffer; restore or create dune
- Modify activities that prevent migration of coastal habitat i.e. mowing



Allins Cove, Barrington: bank stabilization



Bank stabilization using coir envelopes



Barrington Beach: parking lot removal and stormwater infiltration



Asphalt being removed



Dune grass planting in former parking area



Parking lot carve back area after 2 growing seasons

stormwater infiltration areas



Erosion of western parking area



Erosion from parking lot runoff

Parking lot edge moved inland along entire length of parking lot

2017



Proposed stormwater infiltration area

267 ft

Maintenance and adaptation



Grinnell's Beach, Tiverton: Buffer Restoration and Infrastructure Removal

Creating small sand berm/dune planted with dune grass between beach and relocated parking area

Relocated Parking area

Former gas station removed

Coastal buffer planting





End of road retrofits and filter strip installation: Clark Rd, Warren



Mill Cove Road, Warwick: end of road removal and public access enhancement





Midgely Avenue, Warwick: vehicle access limited; plan to treat stormwater and restore marsh in road area



Vehicle access limitation



Remove some pavement and promote stormwater infiltration

Limit vehicular access in area of road that regularly floods, remain open for pedestrian access



Seapowet Point, Tiverton: limited vehicle access to beach and moved parking lot inland (2016-17)



1: Eroding bluff along former parking area



2: Vehicular access limited while maintaining public access



3: Former potato field planted with warm season grasses



Parking area being moved inland closer to Seapowet Road



Hazard's Beach dune restoration

2018



Planting: April 2014

October 2015

Narrow River, Narragansett: moving mow line inland



City Park Beach, Warwick: shoreline regrading

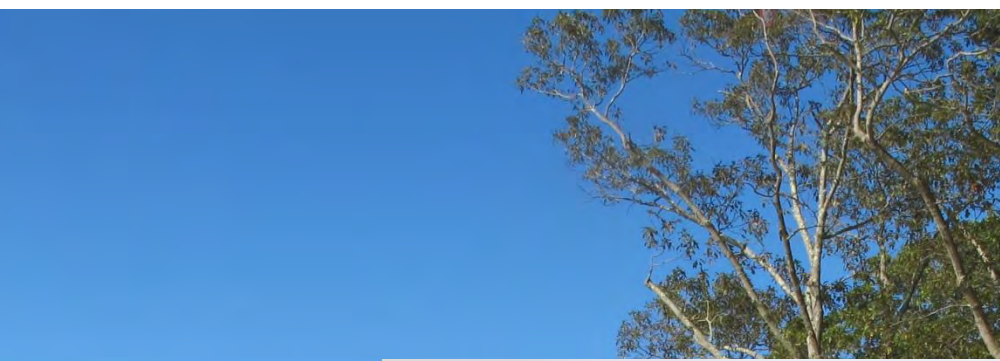


Photo taken 6.10

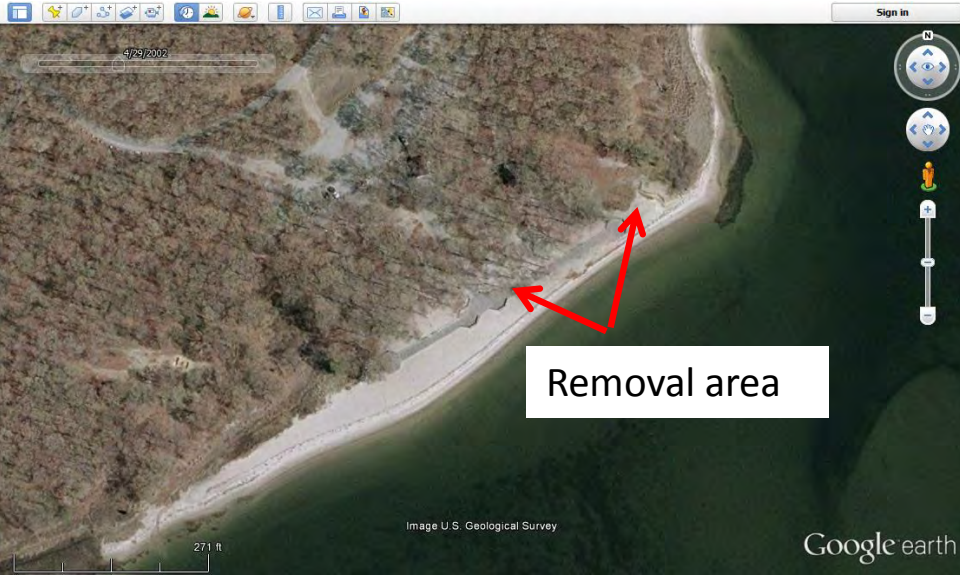


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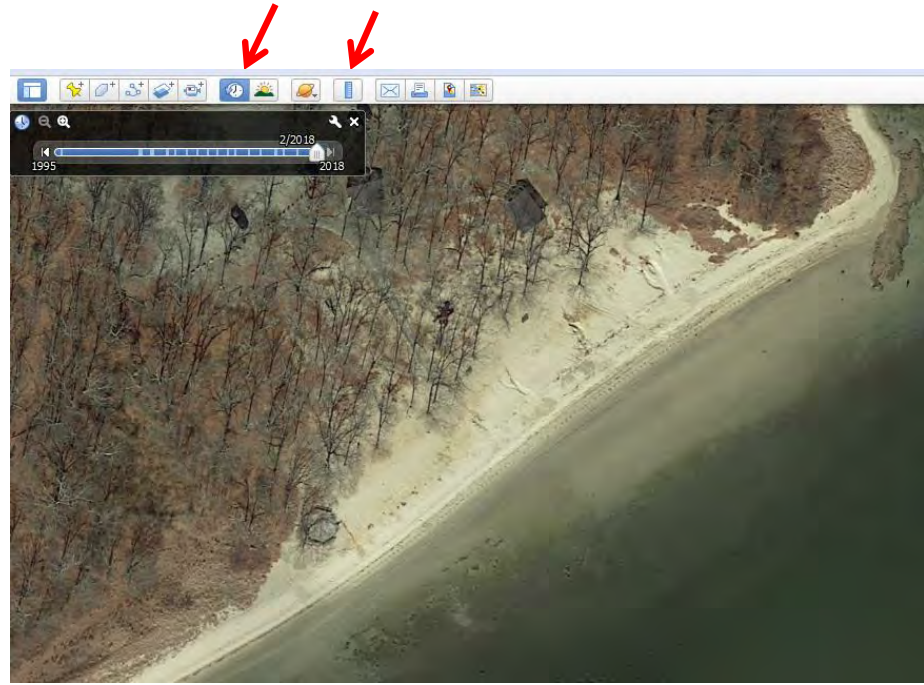
Photo taken 9.12

Photo taken 4.17

2002 Google Earth Image



2018 Google Earth Image



2010 Google Earth Image







Stillhouse Cove, Cranston: bank regrading using coir envelopes and native grasses



2014



2018



2018



King Park, Newport

Aerial image 4.2013



Coir envelope installation area 2014

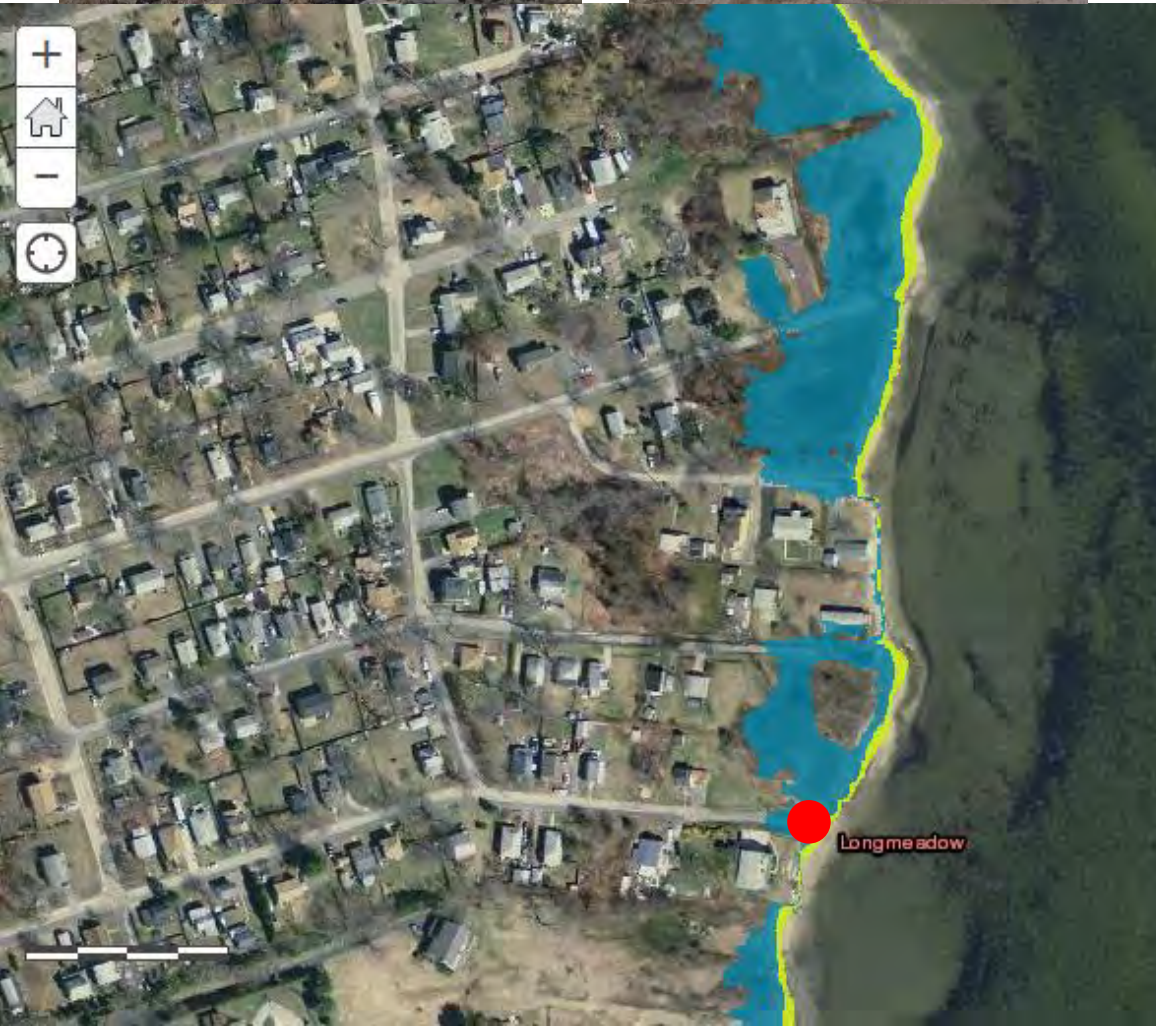
Erosion along boat ramp



2018: post March Nor'easters



Grove Avenue, Warwick: pavement removal and filter strip installation



9.30.15: 5.97' tide observed (Newport)



Pettee Avenue, North Kingstown: road removal

Pre carve back



2019



Post carve back



Latham Park adaptation

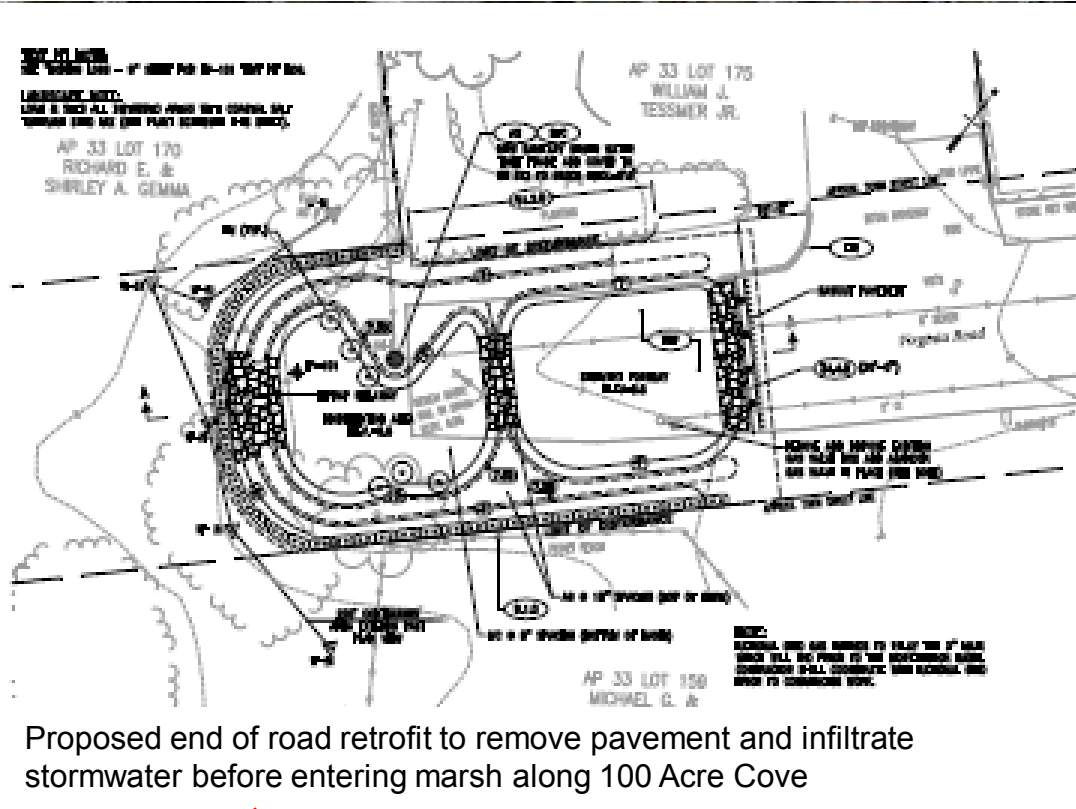
Runoff redirected to bioinfiltration area placed in former parking area



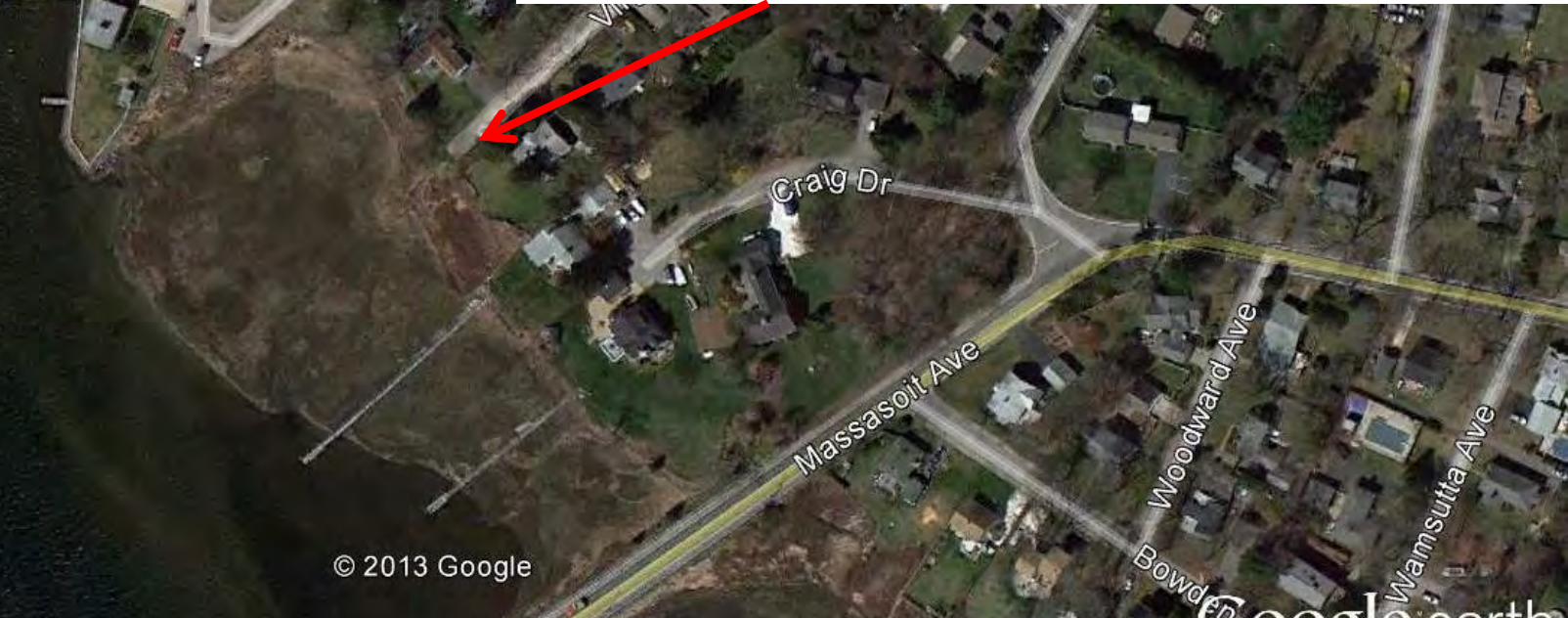
Thank You



End of Road Retrofits:



Proposed end of road retrofit to remove pavement and infiltrate stormwater before entering marsh along 100 Acre Cove



Virginia Road, Barrington: end of road retrofit; installed as a stormwater mitigation for White Church Bridge project



Colt State Park, Bristol: adaptation

2: Move walking path inland to allow marsh migration; stop mowing marsh vegetation



1: Create bike lane on road and remove asphalt path



3: Remove lower parking areas to reduce runoff and to prevent expansion of *Phragmites*



Legend

