Coastal Wetlands: Assessment, Planning and Practice

CRMC COUNCIL MEETING
FEBRUARY 9, 2016
Importance of Coastal Wetlands

- Habitat Value
- Shoreline Resiliency
- Carbon Sequestration

Photo: RI Sea Grant
Future of RI Marshes

- Are there actions we can take to preserve interim functions and values?
- How can we facilitate marsh transgression as sea levels rise?
- Can restored or created marshes be used to enhance shoreline resiliency?
Monitoring—Establishing Baselines

Salt Marsh Condition / Functions & Values
- NBNERR Sentinel Sites Program
- US Fish and Wildlife Service Refuge Sites
- Project-specific monitoring
- RI Salt Marsh Monitoring Plan
  - 3 Tiered approach to statewide marsh monitoring

Marsh Migration
- COCA and Habitat Fund proposals (SHARP protocol and others)
A Salt Marsh Monitoring and Assessment Plan for the State of Rhode Island

<table>
<thead>
<tr>
<th>Tier</th>
<th>Description</th>
<th>Frequency</th>
<th>Spatial extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Landscape-scale marsh habitat mapping</td>
<td>3-5 years</td>
<td>Statewide</td>
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<tr>
<td>2</td>
<td>Salt marsh rapid assessments</td>
<td>3-5 years</td>
<td>30-40 marshes statewide</td>
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<tr>
<td>3</td>
<td>Intensive site monitoring</td>
<td>Annually and as needed for restoration/adaptation projects</td>
<td>6-8 marshes statewide and specific individual marshes</td>
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Modeling and Assessment

- **RI Salt Marsh Assessment (RISMA)**
  - Statewide condition assessment focused on sea level rise
  - Condition index to rate each marsh

- **CCVATCH**
  - Climate change vulnerability assessment

- **Sea Level Affecting Marshes Model**
  - Modeling of potential marsh migration with SLR
  - Additional work proposed through URI EDC

- **Aerial Photo acquisition for salt marsh mapping**
  - High-resolution vegetation community mapping
39 Marsh units assessed within 29 marshes
Results to be published in 2016
Aerial photo analysis to map coastal wetland vegetation communities (NBNERR)

Future funding through CRMC dredging account
Wetland Program Development

- Partnership with RIDEM and RI Natural History Survey
- EPA Funding for additional staff to work on freshwater and coastal wetland monitoring and assessment
- CRMC has helped to develop scope of work for program, will supervise position
Management Actions

- Preservation of low-lying uplands
- Removal of barriers to potential migration
  - Man-made barriers (shoreline structures, development)
  - Natural barriers (topography, vegetation)
- In-marsh Enhancement
  - Beneficial re-use of dredged materials for marsh restoration and creation
RIDEM
Seapowet Point Restoration

Reconfiguring land use to enhance habitat and allow for migration with sea level rise
Public Outreach and Education