

Ninigret Marsh Restoration and Beneficial Reuse Project

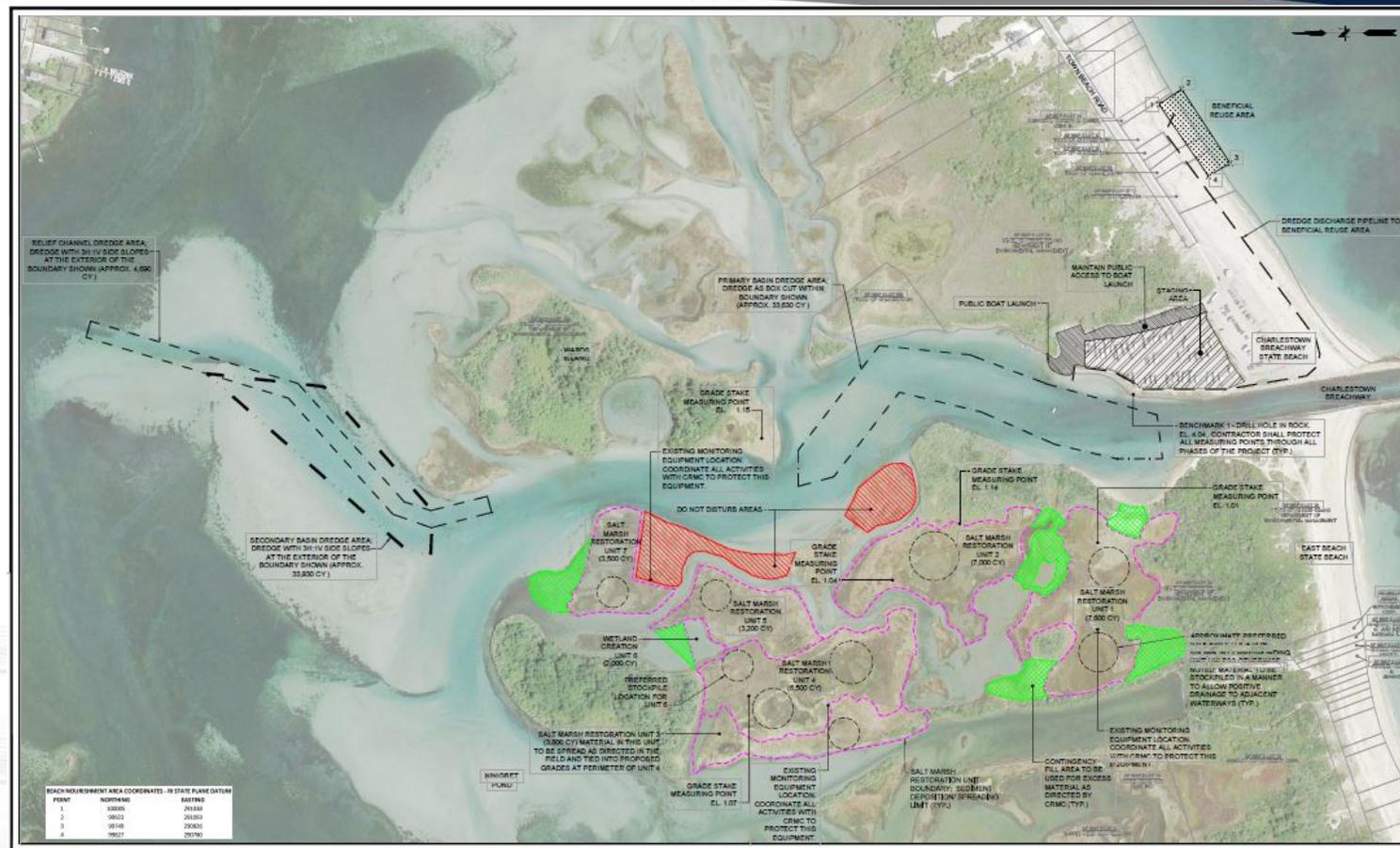
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PROJECT OVERVIEW

- Dredge Material
 - Sediment Basin
 - Access Channel
- Place Material
 - On Marsh
 - On Beach





CONSTRUCTION DESIGN

- Production Dredging with 1' over dredge allowance
- November 15 dredging Start
- Dredging Materials to be pumped to stockpiles
- Stock Piles to be spread to grade
- Material Placement to minimize disturbance
- Low Ground Pressure Equipment
- Open specifications
- April 30 2017 Completion



CONSTRUCTION

- Dredging straight forward, uniform sand
- Dredging for sediment basin and channel relief
- Provided daily reports
- Material placed in required location hydraulically
- Amphibious Excavator used and Low Pressure Dozer
- Limited bulk material movement
- Final grading



PROJECT STATISTICS

- 74,000 cubic yards of material removed/moved
- Crews operated on a 24 hour/ 6 day a week schedule
- Completed in less then 3 months
- Maximized Funding



CHALLENGES ENCOUNTERED

- Winter weather in Rhode Island
- Strong wind during the project
- A strong current and tidal changes
- Shallow areas on the project site that required attention
- Active recreational public access location
- Material didn't flow



ECONOMIC BENEFITS

- \$75 million in commercial fishing in Rhode Island and \$150 million in recreational fishing.
 - Acre = \$6,471/year 22-Acre Project = \$142,362/year
- \$5 billion in property in Rhode Island
 - Acre = \$2,930/year for coastal protection 22 Acre Project= \$64,460/ year in coastal protection.

Above is sourced from MNSA.info, R.I. CRMC and Save the Bay

- Tourism Value



ENVIRONMENTAL BENEFITS

- Healthy marshes
 - filter nutrients that would otherwise pollute waterways.
 - absorb carbon, which contributes to climate change.
- 70% of the commercial fish in Rhode Island depend on salt marshes including 63 fish species.
- Increased water depth in the breach-way
- Bird and fish habitats and ecosystem stability are benefited
- Restored marsh reduces stagnate pools and channels



PUBLIC SUPPORT



- It also contributes to making locals and visitors aware of the changing climate, rising water conditions and how it will affect them and their children. “we’re all in this together, and thank goodness, because this is critical. We know that the sea levels are rising, all across the world, but in Rhode Island, it has a huge impact on us,” said US Senator Jack Reed, (D-RI). “It has an impact



LESSONS LEARNED

- The lesson learned: having good supporting data, historic information, inventory allowed CRMC to prove storm damage and allowed them to go after Hurricane Sandy restoration / resilience funding.
- Having all the other dredge permits, public land and multiple benefits also helped focus on this area. Don't get the money and build a project. Work with partners and stake holders and develop a plan CMRC worked with USFWS about similar projects in the mid-Atlantic and had been testing marsh elevation methods for New England
- Project provided both a marsh restoration project and navigation benefits This is where pre-planning is key. Which came first the dredging disposal or the marsh restoration.



Construction





Thank You

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