

## **NARRATIVE REPORT**

### **Dredge Material Disposal Site Sachuest Point National Wildlife Refuge Sachuest Point Landfill Remediation and Saltmarsh Restoration Project (Revised 11/7/03)**

#### **Introduction**

The applicant proposes to dredge material (approximately 61,000 cubic yards) from the Greenwich Bay Marina (and two others), transport by barge the material to the vicinity of Third Beach, Newport County, Town of Middletown, Rhode Island, and off-load for use in a Landfill Remediation/Saltmarsh Restoration project being completed by the Fish and Wildlife Service (figure 1). All dredge materials will be certified clean prior to loading.

The material will be used to aide in capping an approved landfill Remediation project, and will also be used in contouring the substrate in the lowfill area to create approximately 6 acres of new saltmarsh. Dredge material is required in the saltmarsh restoration since removal of waste material from the site will result in excavating the area to depths to low to create saltmarsh conditions.

Advantages of using dredge material in this project include recycling this material which may otherwise be deposited in a landfill or offshore, reducing costs to the federal taxpayer, and allowing expansion of saltmarsh restoration activities.

#### **Schedule**

Applicant proposes to begin work by November 15, 2003 and complete operations by January 30, 2004. Dredging will only occur during approved periods.

#### **Proposed Activity**

During the approved dredging window, approximately 1,000 cubic yards of material will be transported per day to the project site using a 55' x 160' barge propelled by a tugboat.

At Third beach, a temporary off-loading facility will be constructed which includes:

- a) Beaching (sinking) a 40' x 200' barge at the mean low water line for use as an off-loading ramp;
- b) Construction of a temporary (40' x 200') ramp from the sunken barge to the Third Beach Parking lot. The ramp would be comprised of clean sand held in place by a series of 30' x 30" x 5' interlocking cement blocks.
- c) An 18'x40' metal ramp extending from the beached barge to the transport barge.

Figures 2 depicts the location of docking facilities

During docking and off-loading activities, the transport barge will be held in place with the aide of two spudwells.

By the end of the project, all materials will be removed from the site, existing contours re-formed, and any clean-up activities performed.

### **Description of the site**

Proposed work will be located in the lower Sakonnet River, a Class SA water. Third Beach receives concentrated use as a bathing beach during the summer months. Parasailing, use of sailboards, and other small craft use occurs in the area, and Third Beach contains a concrete boat launch. A mooring field administered by the Town of Middletown for private vessels occurs just offshore of the parking lot.

Aerial photography (RGIS 1999 orthophotograph) suggests the area below the boat launch has been dredged previously.

Water quality is high, although just upstream problems with high bacteria loading coming from the Maidford River have resulted in intermittent closure of area beaches to swimming.

Recent field investigations conducted by the RI Division of Fish and Wildlife (Powell, pers. comm. to Refuge Manager) indicates the offshore substrate within and adjacent to the project area contains clean sandy substrates and an abundance of eelgrass, generally within three to four feet of water at low tide. Mapping products for the eelgrass distribution are being collected by the Division. Currently, the estimated eelgrass distribution shown on the figures in this report are based on Mr. Powell's description of where the bed lies.

The area is renowned for fishing, and a wide variety of waterfowl and shorebirds use the site year round.

### **Measures to Reduce Impacts on Water Quality.**

Figure 3 details water quality protection strategies in the temporary docking facility site.

#### *Transport barge*

The barge will have 4' high sides and loading procedures will insure dredge material is placed so that any chance of spillover will not occur during transport or from offload procedures.

#### *Ramp from sunken barge to transport barge.*

The ramp will have a filter screen on each side to help prevent spillover of materials during use. The ramp will be cleaned of any excess material before the transport barge is dis-connected from it to help prevent spillage.

### *Sunken (beached) barge*

There is a probability that the barge will at least peripherally have to be sunk on part of an eelgrass bed. Efforts will be made to sink the barge away from any eelgrass bed.

Should the eelgrass bed be impacted from the grounding of the barge, the US Fish and Wildlife Service will take responsibility for restoring the bed.

The sunken barge will have 4' sides to insure materials do not spill over the sides. No hazardous materials or heavy equipment will be stored on the barge, including oils, greases, fuel, and similar materials.

### *Temporary offloading ramp*

Concrete, interlocking blocks will be placed along each side of the concrete boat ramp and down to the sunken barge (see figure 4). The blocks will be placed to a height exceeding 4' of the surface of the fill material placed within the concrete blocks.

Clean sand will be placed within the enclosure created by the concrete blocks to create the offloading ramp. When work is completed, any contaminated (with dredge material) sand will be removed and placed in the parking lot area. Clean sand will be placed on the beach to re-contour the site.

### *Third Beach parking lot*

Silt fence will enclose the parking lot. The temporary storage site is located on the parking lot. De-watering is not anticipated as a need, based on the composition of the material being transported. Jersey barriers will be installed on the SE and SW sides of the temporary storage site. Silt screen will be placed inside the Jersey barriers to prevent leakage towards the shoreline.

The site is capable of storing 2,500 cubic yards, roughly 2.5 barge loads. Dredge materials will be placed no higher than 1' below the Jersey barrier lip. Material will be stockpiled no more than 8' high. Slopes will not exceed 2:1.

### **Impacts to Water Quality.**

Some spillage of dredge material is likely to occur despite implementation of Best Management Practices. However, spillage should be minimal and should not have a lasting impact on the site.

Grounding of the barge, and the use of spudwells to hold the transport barge in place during offloading will impact the bottom substrate, and potentially adversely effect a portion of the eelgrass beds present in the area. The eelgrass bed will be restored by the US Fish and Wildlife Service in consultation with the Division of Fish and Wildlife.

Specifically, a 100' x 500' area encompassing the sunken barge, ramp, transport barge location, and tugboat will be surveyed in November, 2003 to determine pre-project distribution and abundance of eelgrass. Following cessation of dredge handling activities (post project), the area will be re-surveyed to assess changes in eelgrass abundance and distribution. Based on these findings, a restoration strategy will be developed and implemented to restore the eelgrass bed. Additional surveys will be completed to insure restoration was successful.

Turbulence caused by tugboat propulsion is not anticipated to have major effects on the substrate. The loaded barge will require 7' of free draft. The boat operator will be requested to minimize surges to the extent feasible.

Activities will occur outside of the primary use season by the public.

No persistent water quality changes are likely to occur as a result of the project.

Figure 1. Vicinity Map, Proposed Third Beach Dredge Material Landing Site, Sachuest Point Saltmarsh Restoration/ Landfill Remediation Project.

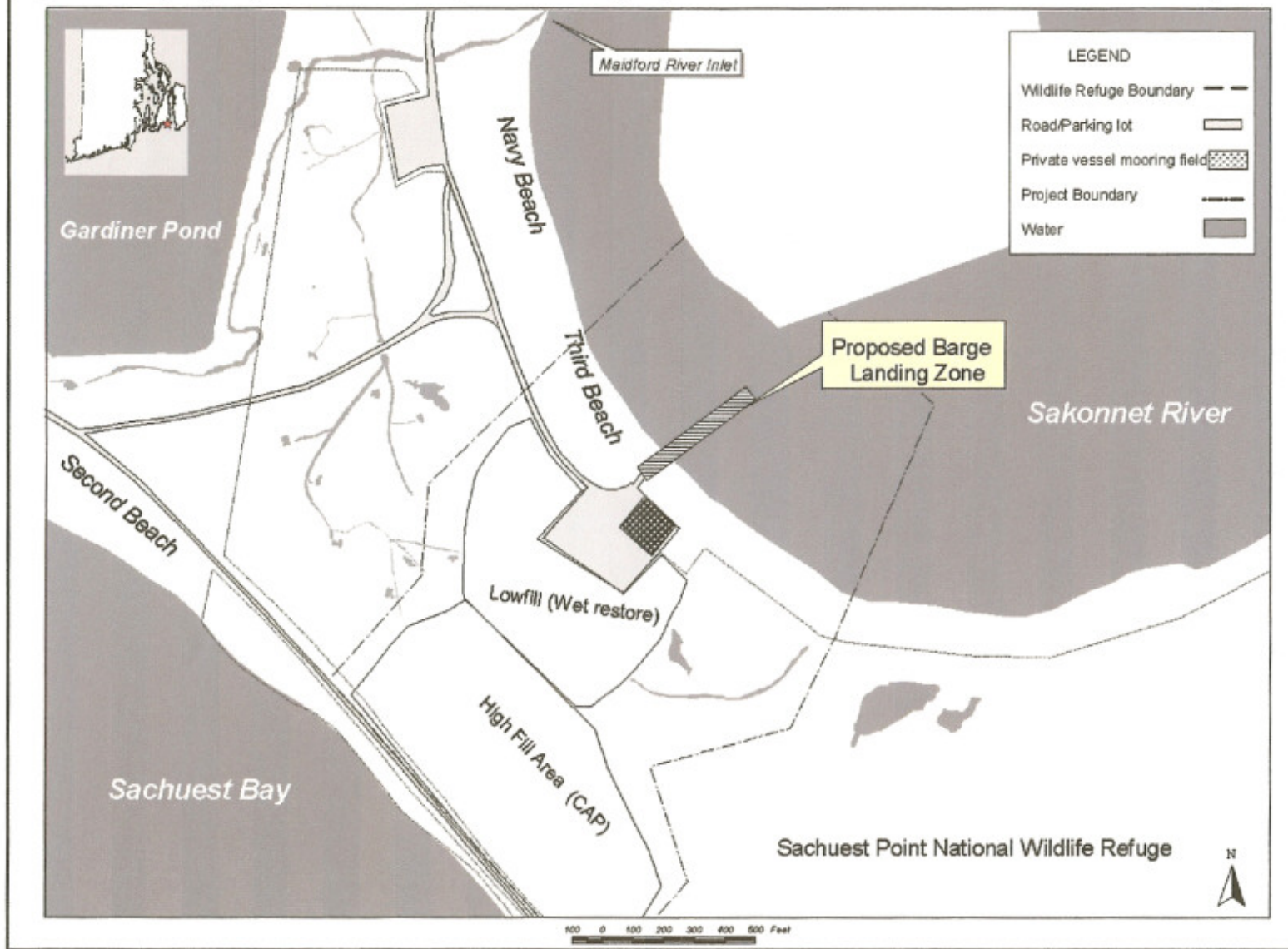


Figure 2. General Site Map, Proposed Sachuest Point Saltmarsh Restoration /Landfill Remediation Project, Dredge Material Receiving Site.

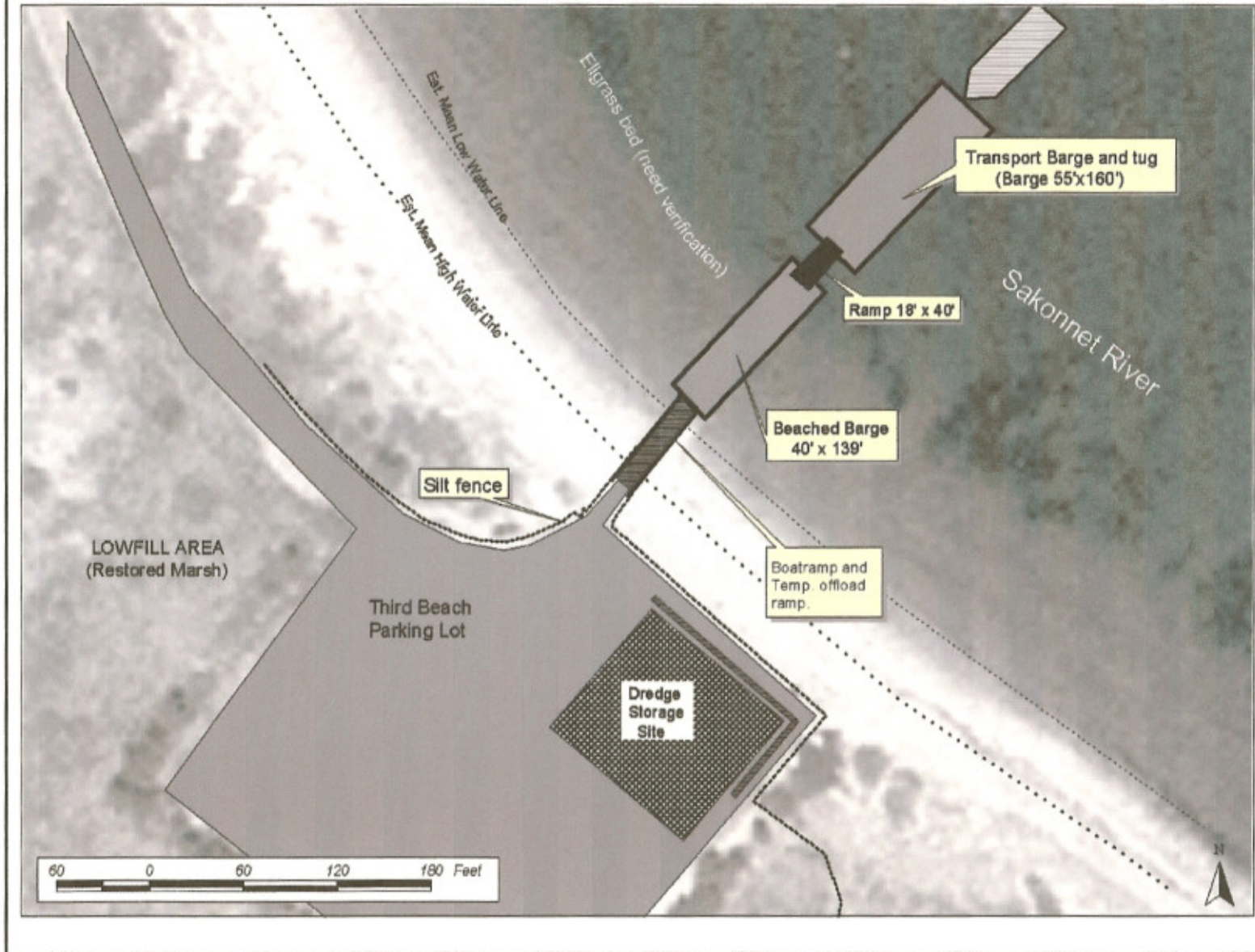


Figure 3. Landing Site Detail, Dredge Material Delivery Area, Sachuest Point Saltmarsh/Landfill Remediation Project.

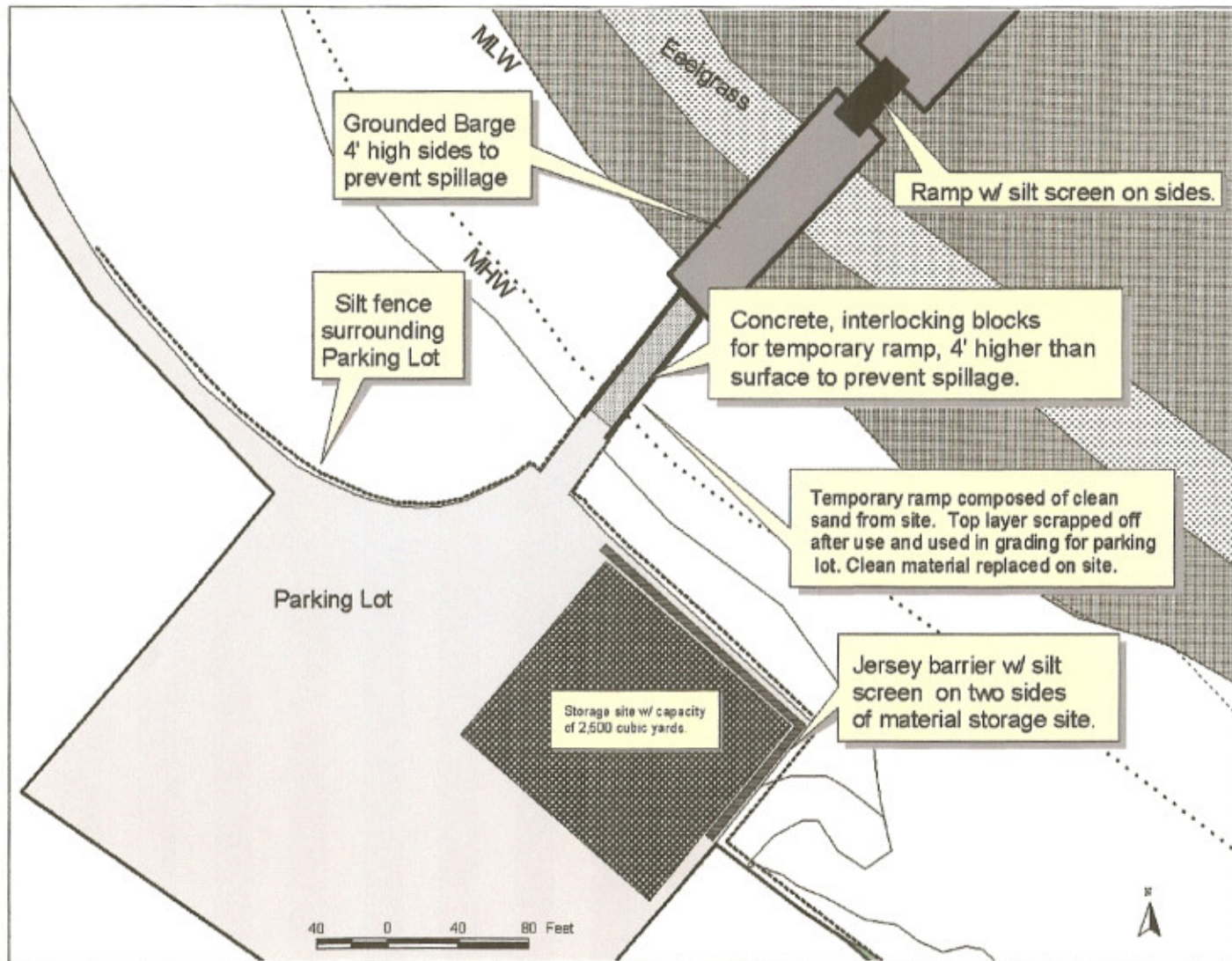


FIGURE 4.

