



PROJECT HIGHLIGHT

PRECISION EXCAVATION AND GRADING TRANSFORMS A FRESHWATER MARSH INTO A SALTWATER WETLAND

The conversion of an approximately 55-acre freshwater marsh, overgrown with invasive vegetation, into a thriving saltwater wetland environment was complicated by access issues, endangered plants, and the need for precision grading and excavation.

LOCATION: New Jersey

PROJECT: Bass River Mitigation Bank

SERVICE: Excavation, Loadout, Transport, and Disposal

PROJECT OVERVIEW

Evergreen, LLC contracted with Cascade to execute on the precision excavation, loadout, transport, and disposal of approximately 90,000 cubic yards of non-hazardous soils, the precise gradual sloping of about 55 acres, and the construction of three alignments (tidal channels) to establish a wetland environment.

Prior to excavation, the site was cleared of several acres of invasive vegetation, including phragmites, oak trees, and brush, within the limits of disturbance (LOD). To avoid two areas containing endangered plants, the team established a 200-foot visual buffer.

The 55-acre site was excavated using three long reach excavators, each with 60-ft sticks and TopCon GPS positioning systems installed for precision excavation. To allow heavy machinery access over deep mud, the team laid out over 1,800 linear feet of three-ply wooden plank road mats. Excavated soil was loaded into an R14-Terramac end dump equipped with 360° cab rotation to avoid establishing turnaround egress points within the marsh. Approximately 6,000 tri-axle dump trucks were required to transport these soils off-site to a specified recycling facility.

The Cascade teams excavated three tidal channels and connected them to a Bass River tributary. This enabled brackish tidal waters to access and flood the excavated areas.

RESULTS

Cascade was able to successfully establish an active wetlands environment. Egrets and herons were documented actively hunting saltwater prey (saltwater minnows and crabs), proving the area was transformed from a freshwater march to a saltwater wetland.



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