

PORTSMOUTH NAVAL SHIPYARD ECOLOGICAL CHARACTERIZATION AND RESTORATION PLANNING

Client: U.S. Navy LANTDIV and Tetra Tech NUS

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The Portsmouth Naval Shipyard (PNS) was built on Seavey Island near the confluence of the Piscataqua River and Spruce Creek at the mouth of Portsmouth Harbor. An area in the northeast portion of the PNS known as Jamaica Island was filled and some areas were historically used as a landfill. As part of a remediation and restoration effort at the site, Woodlot was retained to assist Tetra Tech and the Navy in documenting flora and fauna adjacent to the site, evaluate impacts, finalize restoration plans, and produce permit documentation for the restoration phase.

At the Navy's request, Woodlot evaluated state DEP permit requirements as well as Coastal Zone Management issues for the project, and coordinated discussions with DEP staff regarding the required data collection and ecological characterization efforts. Woodlot was also responsible for advising the client on permit requirements, developing a program plan for completing a field characterization that met state DEP quantitative assessment guidelines, and performing all field work within the client's defined timeline.

As an initial step, Woodlot surveyed and documented intertidal zone flora



Landfill site along the Piscataqua River



Woodlot conducted flora and fauna surveys and sampling at Jamaica Cove as part of a quantitative assessment of the intertidal zone.

and fauna in two coves adjacent to the landfill. Woodlot developed a workplan to state requirements, conducted wetland evaluations, and completed detailed function value assessments of shoreline and intertidal zone habitats using DEP quantitative protocols. Work also included air photo interpretation, macro-invertebrate and plant material sampling, taxonomic identification, evaluation of coastal natural communities, observation of wildlife including migratory birds, wading bird and waterfowl habitats, and marine habitat characterizations.

Fauna and flora field surveys were completed within each habitat zone (i.e., lower, middle, and upper intertidal). Habitat characteristics for each site were mapped through photo interpretation of a true color, scaled aerial photograph. Habitat mapping was completed based on site observations and field sketches. The habitat features were delineated

with some habitat type names modified to correspond to each site's unique features. The draft habitat map was digitized into an AutoCAD file for area calculations and presentation.

Deliverables included GIS-based maps of natural resource data and documentation of resources in a format that could be included in the overall permit application prepared by the client.

Woodlot conducted all research and field work using existing company staff, directed field activities, coordinated interaction and collaboration with state and federal natural resource agencies, and scheduled field activities on the site following Navy security and safety protocols.