

ESSENTIAL FISH HABITAT STUDIES

Essential Fish Habitat (EFH) evaluations are required of many projects that impact rivers, wetlands and coastal environments. Recent amendments to the Magnuson Stevens Fisheries Conservation Management Act establish new provisions that direct National Marine Fisheries Service (NMFS) to identify and describe essential fish habitat in federal Fishery Management Plans and require federal agencies such as the U.S. Army Corps of Engineers to consult with NMFS on activities that may adversely affect EFH.



Woodlot has been closely following the development and implementation of Essential Fish Habitat rules and regulations for the past several years. In particular we have been monitoring the development of procedures used to determine activities that may have an adverse effect on EFH. Woodlot has kept abreast of EFH program development through correspondence and meetings with the National Marine Fisheries Service, US Environmental Protection Agency, and US Fish and Wildlife Service.

Woodlot has recent project experience evaluating Essential Fish Habitat and invertebrate communities in nearshore, subtidal and intertidal zones. We have six certified SCUBA divers and all the necessary equipment, including three boats, to perform on-site EFH evaluations in any season.

Selected Essential Fish Habitat Projects:

Belfast Harbor Dive Surveys – MBNA America. Woodlot was retained to assess feasibility and site location of a corporate waterfront docking facility along 800 feet of Belfast Bay. Woodlot evaluated the ecological resources found in the project area, including wetlands, and assessed the anticipated environmental impact of the proposed pier system. Intertidal and subtidal field surveys were conducted to describe the substrate, hydrology, plant communities, and animal communities found within the project area. Woodlot scuba divers collected benthic fauna and flora samples and took still and video photographs to support final assessments and recommendations for siting.

Bucksport EFH and Endangered Species Studies – International Paper Co. Woodlot conducted Essential Fish Habitat studies in tidal sections of the Penobscot River as part of a wastewater discharge license process. In addition to conducting research and review of fish habitat and water quality issues, field studies included substrate characterization and sampling along transects, underwater video surveys, natural community mapping, macroinvertebrate studies, and evaluations of potential impacts on endangered species including Atlantic salmon and shortnosed sturgeon.

Casco Bay Habitat Surveys – Central Maine Power Co. Utilizing near-shore sampling and snorkel methods, Woodlot staff performed subtidal and inter-tidal habitat surveys in Casco Bay, including eel grass bed mapping and faunal surveys of benthic macro invertebrates and macrofauna.

Mack Point Surveys, Belfast, Maine – In areas near a proposed cargo port, Woodlot performed dive and snorkel surveys of the near shore environment to identify extent of mussel and eel grass beds, soft bottom and hard bottom. Underwater photos were collected to document characteristics of each community. Fish and macro-invertebrate surveys were also performed.

Selected Essential Fish Habitat Projects (continued):

Atlantic Salmon Surveys – Canadian Wildlife Service. Woodlot staff performed fisheries surveys and conducted fish tagging for Atlantic salmon in New Brunswick.

Bigelow Marine Research Center – Bigelow Laboratory. Woodlot recently conducted natural resource mapping at a proposed coastal site to assess feasibility of constructing a 50,000-square-foot marine research center and research ship docking facility. This work has involved detailed soil and wetland mapping, vegetation surveys, shoreline community evaluations, and intertidal and subtidal zone characterizations.



Little John Island Habitat Surveys – Town of Cumberland. Woodlot conducted dive surveys to evaluate sub- and inter-tidal habitats, map eel grass beds, and survey benthic macro invertebrates and macrofauna.

Brook Trout Surveys – Loring Air Force Base. In connection with stream restoration and monitoring efforts, Woodlot staff conducted trout surveys on East Branch of Greenlaw Brook.

Fish Surveys, Housatonic River – USEPA. Using electrofishing methods, Woodlot teamed with U.S. Fish & Wildlife personnel to perform fisheries surveys and collect samples for analysis at this Superfund site. Woodlot analyzed data from the study to produce fish biomass estimates as part of an ecological risk assessment process.

Lobster Pound Habitat Surveys – Inland Seafoods. Woodlot biologists conducted underwater dive surveys to evaluate sub- and inter-tidal habitats, map eel grass beds, and survey benthic macro invertebrates and macrofauna.

Tidal River and Salt Marsh Monitoring – Town of Wells. Woodlot has been monitoring changes in stream channel morphology and mapping the extent of salt marsh habitats within the Webhannet River estuary system in Wells since 1998. For this work, Woodlot scientists have mapped vegetation and community types, identified tide channel and habitat fluctuations, produced maps and cross sections of the project area using state-of-the-art laser rangefinder and GPS technology, and produced GIS maps and data files for the U.S. Army Corps of Engineers and other regulatory agencies. The purpose of these tasks has been to assess the effects of dredging on the estuarine and marsh habitats.

Coastal Wetland Methodology Review – Maine DEP. Woodlot staff served as Peer Reviewers in the development of methodologies for performing Coastal Wetland Function Value Assessments.

Bowdoin Coastal Studies Center – Bowdoin College. Woodlot led a detailed site assessment of a large coastal property for development of a Coastal Studies Center. Woodlot provided Bowdoin with a detailed resource inventory, maps, GIS data, and recommended paths forward for siting including permitting constraints. The intensive terrestrial resource mapping effort included preparing a topographic base map for the entire property, mapping soils, conducting an ecological assessment, delineating wetlands, performing vegetative cover-type mapping, rare plant and animal surveys, and wildlife habitat assessments. In the marine environment, Woodlot biologists conducted underwater dive surveys to evaluate sub- and inter-tidal habitats, map eel grass beds, and survey benthic macro-invertebrates and macrofauna.