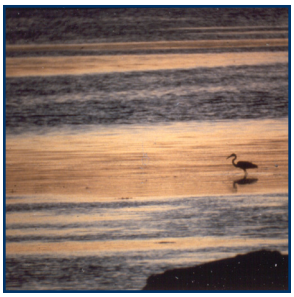
Beginning with HABITAT

Focus Areas of Statewide Ecological Significance

Weskeag Creek



WHY IS THIS AREA SIGNIFICANT?

The Weskeag Creek tidal wetland complex provides valuable habitat for a variety of coastal birds. This focus area supports some of the highest diversity of species of any marsh in Midcoast and Penobscot Bay Regions. The mudflats and emergent wetlands provide important habitat for tidal wading birds and waterfowl as well as shorebirds. The marsh also supports both Nelson's and saltmarsh sharp-tail sparrows, two species recognized by Partners in Flight as the highest priority birds for conservation in northeastern coastal habitats.

Rare Animals
Saltmarsh Sharp-tailed Sparrow

Rare and Exemplary Natural Communities
Brackish Tidal Marsh
Tidal Marsh Estuary Ecosystem

Significant Wildlife Habitats
Inland Wading Bird and Waterfowl
Tidal Wading Bird and Waterfowl
Shorebird Area
Deer Wintering Area

OPPORTUNITIES FOR CONSERVATION

» Educate recreational users about the ecological and economic benefits provided by the focus area.
» Encourage best management practices for forestry, vegetation clearing, and soil disturbance activities near significant features.
» Maintain intact forested buffers along water bodies and wetlands.
» Identify and restore tidal restrictions and undersized culverts.
» Monitor and remove invasive plant populations.
» Work with willing landowners to permanently protect undeveloped areas and significant features.

For more conservation opportunities, visit the Beginning with Habitat Online Toolbox: www.beginningwithhabitat.org/toolbox/about_toolbox.html.

Public Access Opportunities
• R. Waldo Tyler Wildlife Management Area, MDIFW

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Weskeag Creek, Janet McMahon

FOCUS AREA OVERVIEW

This tidal wetland complex is a good example of wetland vegetation across a salinity gradient. At the upper end of the marsh (toward Thomaston Street), the vegetation is a freshwater cattail/shrub swamp, dominated by speckled alder, broad-leaved cattail, blue-joint grass, and sweet gale. Other indicators of freshwater conditions in this portion of the marsh include sensitive fern and marsh fern.

Further downstream the marsh becomes open and brackish, with vegetation occurring in almost uniform patches characteristic of tidal marshes. Frequent species indicative of brackish (but not salt) conditions include soft-stem bulrush, three-square bulrush, and narrow-leaved cattail. Less frequent species indicative of brackish conditions include wire rush, creeping bent-grass, twig rush, and sweet grass. One of the more interesting features of this brackish marsh is the presence of pannes (small tidally flooded pools) with the sedge *Carex viridula*, which occurs in brackish marshes as well as inland calcareous wetlands. Also noteworthy was a large patch of foxtail barley, an uncommon (but not rare) native grass.

Toward the Buttermilk Road bridge and further downstream, the marsh becomes a more typical salt marsh, with salt hay dominant. Other characteristic salt marsh species in this area include saltmarsh cordgrass, black grass, arrow-grass, seaside plantain, sea lavender, samphire, and saltmarsh bulrush. Open water pannes are numerous in this section.

Weskeag Creek is notable for its diversity of coastal birds. In surveys of 23 coastal marshes conducted in 1997, Maine Department of Inland Fisheries and Wildlife (MDIFW) biologists noted 31 species at the Waldo Tyler Management Area -- the largest number of species of any marsh in the Mid-Coast and Penobscot Bay regions.

RARE AND EXEMPLARY NATURAL COMMUNITIES

A **tidal marsh estuary ecosystem** consists of intertidal portions of bays and rivers, from the head of tide to the coastline. Salinity can vary greatly depending on season, weather, and other factors, but generally increases downriver, with portions near the head of tide almost completely freshwater. Saltmarshes are restricted to the higher salinity areas. The brackish tidal marsh natural community is representative of this ecosystem and focus area.

Brackish tidal marshes contain both freshwater and brackish

water species, often in bands corresponding to tidal exposure. Tall rushes and bulrushes often predominate over extensive mid-elevation flats. At the lower elevations, rosette-forming herbs, such as lilaeopsis and tidal arrowhead, may be common on the mudflats. Near the high tide line, there may be a fairly narrow zone of muddy gravel or rock shore sparsely vegetated with low herbs, including some rare species such as Long's bitter-cress or water-pimpernel. Sweetgale and poison ivy are often present at the upper fringes of the marsh, at or above the tidal reach.

Tidal marshes are valuable wildlife habitat and have received considerable conservation attention. Many occur on or adjacent to public lands or private conservation lands. With development of the uplands that border these marshes, maintenance of appropriate wetland buffers can help reduce degradation that could result from adjacent land uses. The prospect of sea level rise may also put these systems at greater risk.

Brackish marshes are important nesting habitat for several sparrows: Nelson's sharp-tailed sparrow and two uncommon species, the saltmarsh sharp-tailed sparrow and the seaside sparrow. These wetlands also provide foraging habitat for a large number of wading birds including rare species such as the great egret and glossy Ibis. The New England siltsnail inhabits coastal marshes and small tidal rivers where the water ranges from fresh to upper brackish. The spartina Borer Moth, whose historic range was along the immediate coast throughout New England, likely inhabited tidal marshes with sizeable populations of freshwater cordgrass, its larval host plant.

CHARACTERISTIC SPECIES

The marshes of Weskeag Creek provide breeding habitat for a number of migratory bird species, including the rare saltmarsh sharp-tailed sparrow. The **saltmarsh sharp-tailed sparrow** (*Ammodramus caudacutus*) is a secretive species with very narrow habitat requirements found only in coastal saltmarshes of the eastern United States. They breed from southern Maine to the Delmarva Peninsula and winter in coastal areas from Massachusetts to Florida. Nesting occurs from mid-May to early August. Flooding is the most common cause of nest failure. Predators include northern harrier, short-eared owls, crows, rats, red fox, raccoon, and occasionally snakes. Widespread loss, degradation, and fragmentation of coastal saltmarshes along the eastern seaboard are the biggest threats to this species. Habitat preservation and restoration are the most important factors for conserving the saltmarsh sharp-tailed sparrow.

The emergent wetlands and mudflats have been mapped as important **Tidal Wading Bird and Waterfowl Habitats** and provide undisturbed and uncontaminated feeding and breeding habitat for numerous tidal bird species. Much of the focus area has also been identified as an important **Shorebird Area**. Shorebird Areas provide feeding and resting habitat to myriad shorebird species and are essential for fueling these species on their long migrations.

Ecological Services of the Focus Area

- Provides high quality habitat for waterfowl and wading birds
- Nutrient export
- Contributes to regional biodiversity

Economic Contributions of the Focus Area

- Contributes to recreational value of the area, including nearby coastal areas, by protecting water quality, fisheries, and wildlife habitat
- Provides scenic vistas that raise property values

CONSERVATION CONSIDERATIONS

» The marshes have been irregularly ditched in the past, but these ditches are beginning to fill in. Many of these drainage ditches have been plugged in the last several decades by various methods. Currently ditches are being plugged to retain tidal "sheet flow" of water through a cooperative effort of the Maine Department of Inland Fisheries and Wildlife and the U.S. Fish and Wildlife Service.

» The marshes are surrounded by upland mixed woods and scattered agricultural and residential lands. Heavy industry is close by but not directly abutting the marsh. Some of the bird species may be susceptible to changes in adjacent land use, including expansion of a nearby industrial park.

» The marshes have not been altered by invasive species such as purple loosestrife or common reed, but these species may be future threats. Invasive plants and aquatic organisms have become an increasing problem in Maine and a threat to the state's natural communities. Disturbances to soils and natural vegetation and introductions of non-native species to terrestrial and aquatic habitats can create opportunities for colonization. Landowners and local conservation groups should be made aware of the potential threat of invasive species, of methods to limit establishment, and/or of appropriate techniques for removal. For more information on invasive plants visit: http://www.maine.gov/doc/nrimc/mnap/features/invasives.htm.

» Improperly sized culverts and other stream crossing structures can impede movement of fish and aquatic invertebrates effectively fragmenting local aquatic ecosystems and ultimately leading to local extirpation of some species. Future management should maintain or restore the site's

natural hydrology.

» The Buttermilk Lane crossing was modified in October and November of 2003 by the Maine Department of Transportation to increase tidal flow. A short span bridge had been present at this crossing in the 1930's. The bridge was replaced by twin 48 inch culverts that were not properly installed and failed to maintain adequate flow and adequate fish passage. This lead to the formation of scour pools above and below the Buttermilk Lane road crossing. The removal of the concrete culverts and the installation of an arched culvert by MDOT has eliminated the problem. At the same time MDOT closed out a poorly placed parking area at the crossing and installed a new parking area out of the shoreland zone.

» While different species seem to have unique buffering requirements, wider buffers generally provide better protection for riparian and wetland-dependant species.

» Current projections suggest sea level will rise at least 2 feet in the next century due to changing climate and warming temperatures. As sea levels rise, coastal habitats will begin to migrate inland. In areas where this inland migration is blocked by development these habitats will be lost. Conservation of low-lying, undeveloped uplands where coastal marshes, beaches, and other intertidal natural communities can migrate inland with sea level rise should be promoted.

» This area includes Significant Wildlife Habitat. Land managers should follow best management practices with respect to forestry and development activities in and around wetlands, shoreland areas, and Significant Wildlife Habitat. Contact MDIFW for more information.

Weskeag Creek, Janet McMahon

For more information about Focus Areas of Statewide Ecological Significance, including a list of Focus Areas and an explanation of selection criteria, visit **www.beginningwithhabitat.org**

RARE SPECIES AND EXEMPLARY NATURAL COMMUNITIES OF THE FOCUS AREA

	Common Name	Scientific Name	State Status*	State Rarity Rank	Global Rarity Rank
Animals	Saltmarsh Sharp-tailed Sparrow	*Ammodramus caudacutus*	SC	S3B	G4
Natural Communities	Brackish Tidal Marsh	Brackish tidal marsh		S3	GNR
	Tidal Marsh Estuary Ecosystem	Tidal marsh estuary ecosystem		S3	GNR

State Status*

- E — Endangered: Rare and in danger of being lost from the state in the foreseeable future, or federally listed as Endangered.
- T — Threatened: Rare and, with further decline, could become endangered; or federally listed as Threatened.
- SC — Special Concern: Rare in Maine, based on available information, but not sufficiently rare to be Threatened or Endangered.

**State status rankings are not assigned to natural communities.*

State Rarity Rank

- S1 — Critically imperiled in Maine because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres).
- S2 — Imperiled in Maine because of rarity (6–20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- S3 — Rare in Maine (on the order of 20–100 occurrences).
- S4 — Apparently secure in Maine.
- S5 — Demonstrably secure in Maine.

Global Rarity Rank

- G1 — Critically imperiled globally because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because some aspect of its biology makes it especially vulnerable to extirpation.
- G2 — Globally imperiled because of rarity (6–20 occurrences or few remaining individuals or acres) or because of other factors making it vulnerable to further decline.
- G3 — Globally rare (on the order of 20–100 occurrences).
- G4 — Apparently secure globally.
- G5 — Demonstrably secure globally.