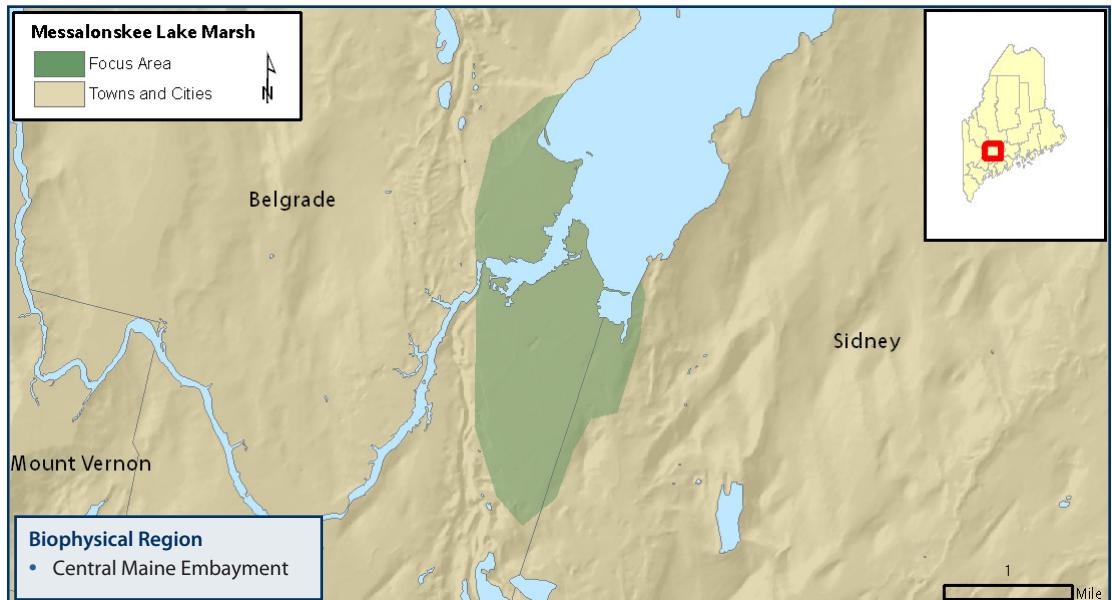
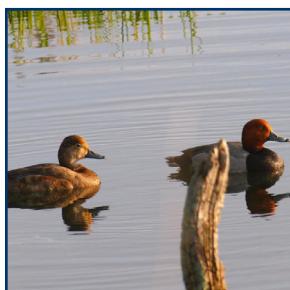
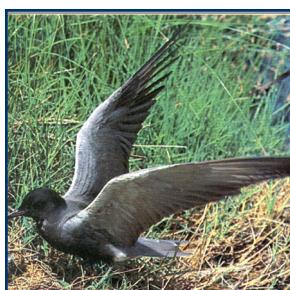


Messalonskee Lake Marsh



WHY IS THIS AREA SIGNIFICANT?

This large emergent wetland provides over 1,300 acres of significant habitat for wading birds and waterfowl as well as habitat for several rare species. Messalonskee Lake Marsh is best known as one of only a dozen and one of the largest nesting sites in Maine for the black tern. Other rare and uncommon species including least bittern, bald eagle and sandhill crane are known from the marsh as well.

OPPORTUNITIES FOR CONSERVATION

- » Monitor and remove invasive plant populations.
- » Educate recreational users about the ecological and economic benefits provided by the focus area.
- » Encourage landowners to maintain enhanced riparian buffers.
- » Work with willing landowners to permanently protect undeveloped areas and significant features.
- » Encourage best management practices for forestry, vegetation clearing, and soil disturbance activities near significant features.
- » Maintain stable water levels.

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

Photo credits, top to bottom: ME Natural Areas Program, ME Department of Inland Fisheries and Wildlife, ME Natural Areas Program, Paul Cyr, Paul Cyr

Rare Animals

Bald Eagle
Black Tern
Least Bittern

Rare Plants

None Documented

Rare and Exemplary Natural Communities

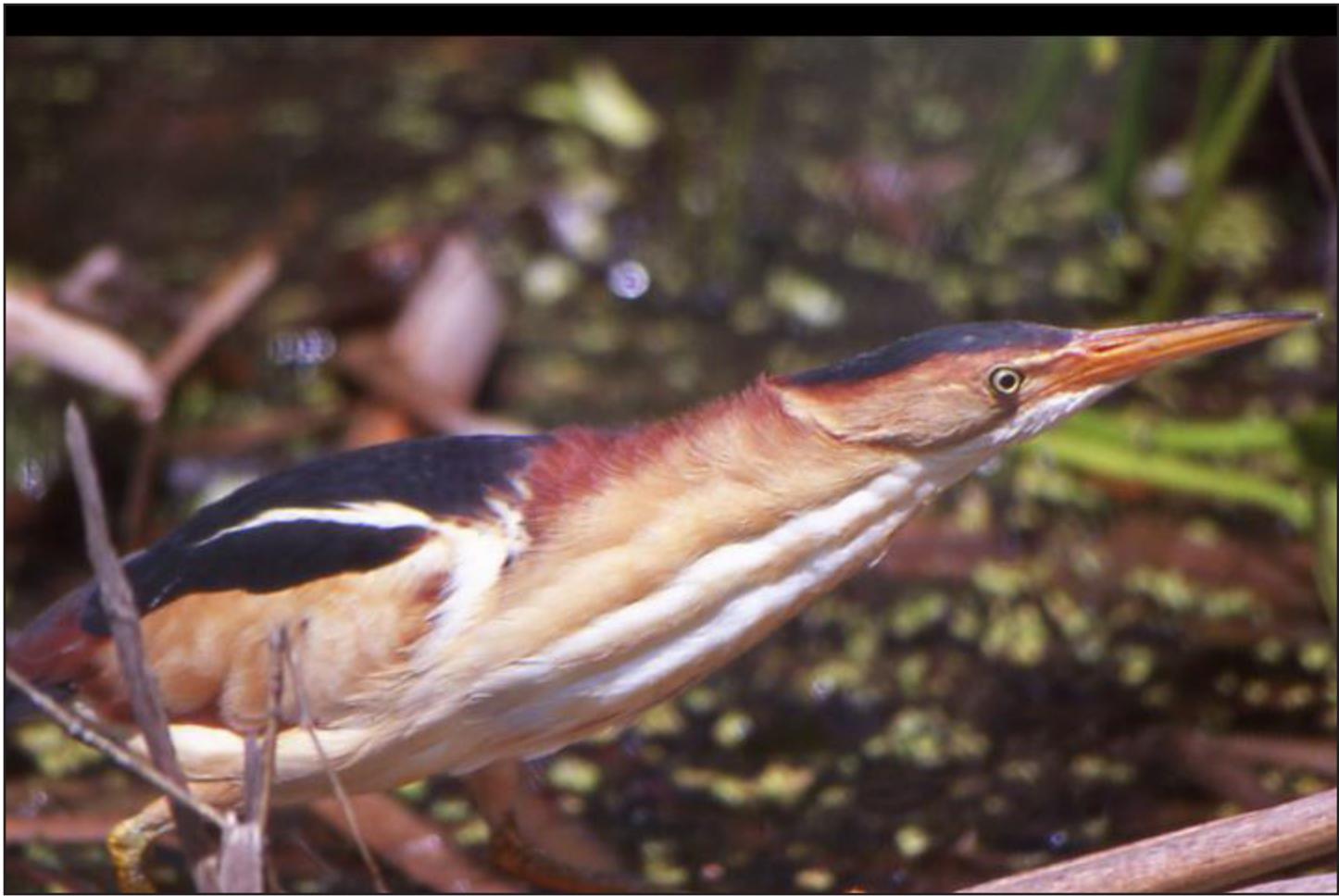
None Documented

Significant Wildlife Habitats

Inland Waterfowl and Wading Bird Habitat

Public Access Opportunities

- Gawler Wildlife Management Area, MDIFW



Least Bittern, Jeremiah Hayden

FOCUS AREA OVERVIEW

Messalonskee Lake Marsh is a large emergent wetland at the south end of Messalonskee Lake (Snow Pond), where Belgrade Stream flows into the lake. The marsh includes extensive cat-tail marsh vegetation, dominated by cat-tail, bluejoint grass, rushes, meadowsweet, and pickerelweed. The vegetation is patchy, with cat-tails prominent in some areas and shrubs, grasses, and sedges in other portions. Shrubby areas at the southern extremity of the marsh may be a different community type, but have not been investigated at this time. Despite its large size, the marsh is not considered an exemplary natural community in itself because it developed after the lake was dammed and the water level was raised many decades ago.

Nearly 1,300 acres of significant Inland Waterfowl and Wading bird habitat has been identified here and numerous species use this marsh for breeding, feeding and rearing their young. Least bittern, an Endangered species, has been documented nesting in the marsh and sand hill cranes have been recorded here as well.

Messalonskee Lake Marsh is best known as one of only a dozen nesting sites in Maine for the black tern. Terns have been documented here since 1946 (the first state record), making this a

very well established colony, as well as consistently one of the largest.

Bald eagles have been documented as nesting in the area since 1995, with two alternate nest sites. A small islet supported nesting eagles from 1995 – 1998, and an alternate site in woodlands along the lakeshore has been occupied since. The eagle habitat here is considered a moderate priority from a statewide perspective, but a higher priority from a regional perspective. The nearest known eagle nests are on the Kennebec River about 5 miles east and on Androscoggin Lake some 15 miles west.

The adjacent 3,510 acre Messalonskee Lake supports a popular recreational fishery including stocked brook trout, largemouth bass, chain pickerel, smallmouth bass, splake and white perch. Invasive fish species including black crappie and northern pike are, however, also present in this lake.

In addition, variable water-milfoil (*Myriophyllum heterophyllum*), an unwelcome find here (in Belgrade Stream and the boat channel from the landing to the open lake), has been documented. This aggressive aquatic plant has the potential to

spread vigorously and crowd out other native aquatic plants that contribute to the habitat diversity here. In fact, the former state boat launch on Messalonskee Lake was closed due to the presence of milfoil here.

CHARACTERISTIC SPECIES

Bald eagles (*Haliaeetus leucocephalus*) were nearly extirpated because of widespread use of environmental contaminants that caused eggshell thinning and impaired reproductive success. With bans on the use of these contaminants and habitat protection measures, bald eagles have made a tremendous recovery. In 2009 they were removed from the state Endangered Species list. They remain listed as Special Concern. Bald eagles and their nests are protected by the U.S. Fish and Wildlife Service under the Bald and Golden Eagle Protection Act.

Black terns (*Chlidonias niger*) nest exclusively in large (over 40 acres) shallow freshwater emergent marshes associated with lakes, impoundments, or slow moving streams. They construct their nests on floating mats of dead vegetation or small mudflats and, therefore, fluctuating water levels and nest and chick predation are significant threats to the species. Maintaining stable water levels in impoundments, using floating nest platforms and employing measures to deter predators may help sustain black tern populations.

The state Endangered **least bittern** (*Ixobrychus exilis*) is a member of the heron family. The very secretive least bittern inhabits large marshes with dense vegetation. Numbers of these birds have declined due to loss of habitat.

CONSERVATION CONSIDERATIONS

- » A primary conservation need is to maintain adequate wetland buffers. The adjacent uplands are in agricultural and light residential use. At a minimum, standard shoreland zoning provisions should be followed.
 - » The integrity of wetlands and the processes and life forms they support including rare plants and animals are dependent on the maintenance of the current hydrology and water quality of the site. Intensive timber harvesting, vegetation clearing, soil disturbance, new roads, and development on buffering uplands can result in greater runoff, sedimentation, and other non-point sources of pollution. Improperly sized crossing structures such as culverts can impede movement of fish and aquatic invertebrates effectively fragmenting local aquatic ecosystems and ultimately leading to local extirpation of some species. Future management activity should avoid additional impacts to the site's hydrology.
 - » Efforts in the Belgrade Lakes watershed to maintain water quality will be important to the future of this site. Messalonskee Lake is the furthest downstream of all of the Belgrade Lakes, and at least some of the lakes are in "priority watersheds", considered at risk for further water quality degradation.
- Ecological Services of the Focus Area**

 - Contributes to regional biodiversity by providing habitat for rare species
 - Retains sediments and nutrients protecting water quality
 - Retains floodwaters

Economic Contributions of the Focus Area

 - Recharges groundwater recharge
 - Attracts tourism for wildlife observation, paddling, hunting, and angling.
 - Serves as a valuable recreational resource for local residents.
- » Conservation easements and/or fee acquisition would be appropriate land protection vehicles here, but are probably secondary to efforts to maintain or improve the water quality within the watershed.
 - » 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 of appropriate techniques for removal. For more information on invasive plants visit: <http://www.maine.gov/doc/nrimc/mnap/features/invasives.htm>. The extent of the variable water-milfoil population should be monitored every 1-3 years. Clean boat-trailing at the boat launch site is very important to minimize the spread of this noxious species to other lakes; this will require outreach and perhaps on-site monitoring.
 - » Prior to land development or forest harvesting near black tern habitat, consult with a MDIFW biologist to assist with planning. Towns and landowners are encouraged to protect these areas with a 250 foot buffer that will preserve water quality, wetland functions and limit habitat disturbance.
 - » Monitoring recreational use will be an important component of conservation as well. Motorboat traffic should be discouraged near nesting sites for both bald eagles and black terns and no wake zones should be established around tern nesting areas.

RARE SPECIES AND EXEMPLARY NATURAL COMMUNITIES OF THE FOCUS AREA

	Common Name	Scientific Name	State Status*	State Rarity Rank	Global Rarity Rank
Animals	Bald Eagle	<i>Haliaeetus leucocephalus</i>	SC	S4B,S4N	G5
	Black Tern	<i>Chlidonias niger</i>	E	S2B	G4
	Least Bittern	<i>Ixobrychus exilis</i>	E		
Plants	None Documented				
Natural Communities	None Documented				

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.