Beginning with HABITAT

Focus Areas of Statewide Ecological Significance

Lower St. George River

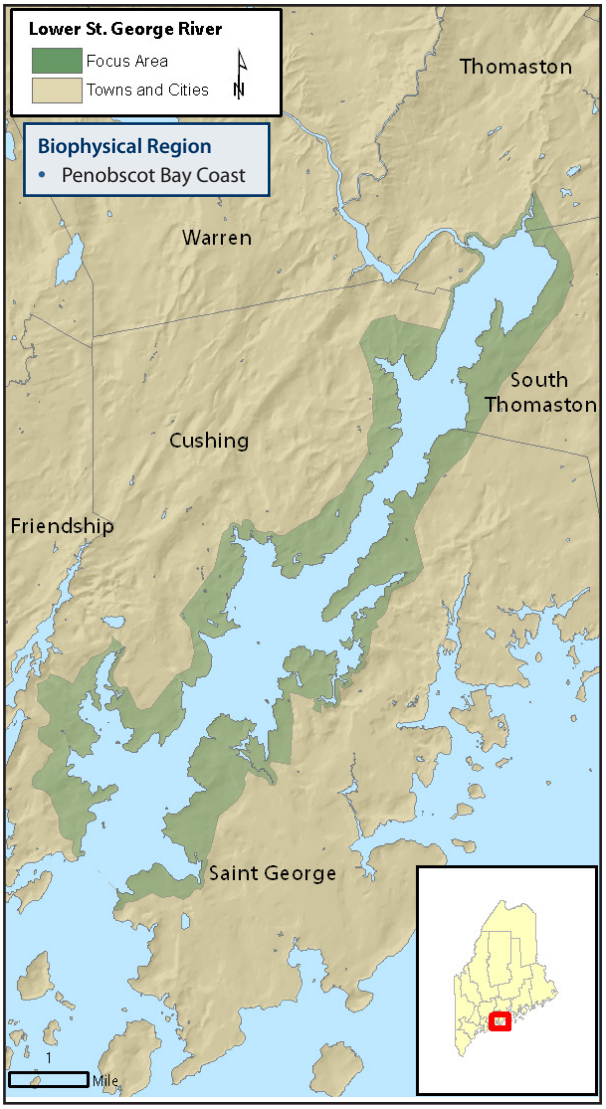
WHY IS THIS AREA SIGNIFICANT?

The Lower St. George River is of statewide significance for its concentration of coastal wildlife. The numerous coves and mudflats found here are influenced by freshwater discharged from the river, high-speed currents and tidal fluctuations and provide habitat for wading birds and waterfowl and migrating shorebirds as well as commercially significant resources including diadromous fish, marine worms and, most notably, shellfish.

OPPORTUNITIES FOR CONSERVATION

- Work with willing landowners to permanently protect undeveloped areas and significant features.
- Educate recreational users about the ecological and economic benefits provided by the focus area.
- Encourage landowners to maintain enhanced riparian buffers.
- Identify and restore tidal restrictions and undersized culverts.
- Protect sensitive natural features through careful management planning on conserved lands.

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



Public Access Opportunities
- Fort St. George, MBPL

Rare Animals
None documented

Rare Plants
None documented

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

Photo credits, top to bottom: Steve Walker , Jim Connolly, Jim Connolly, Georges River Land Trust (bottom 2 photos)

Georges River Land Trust

FOCUS AREA OVERVIEW

The Lower St. George River Focus Area extends from Route 1 in the village of Thomaston south to Pleasant Point in Cushing and Howard Point in St. George. The focus area includes the St. George River, numerous coves, and the adjacent shorelands. The St. George River has high-speed currents, and the shoreline consists of mudflats and ledge with banks of moderately steep terrain. The salinity gradient varies along the length of this riverine system, influenced by the volume of freshwater discharged from the river and the tidal fluctuations affecting the estuary.

CHARACTERISTIC SPECIES

Eelgrass beds are present from Maple Juice Cove and seaward. **Eelgrass** (*Zostera marina*) forms extensive underwater meadows in shallow bays and coves, tidal creeks, and estuaries. It is a flowering plant that reproduces by seed and by vegetative growth. Eelgrass beds are among the most productive plant communities in the world. They serve as a nursery, habitat, and feeding area for many fish, waterfowl, wading birds, invertebrates, and other wildlife, including commercially valuable fish and shellfish. Eelgrass reduces water pollution by absorbing nutrients, and it dampens wave energy and slows currents, which helps stabilize sediments and buffer shorelines. Because of its important ecological functions, loss of eelgrass beds can result in reduced fish and wildlife populations, degraded water quality, and increased shoreline erosion.

Intertidal mudflats, especially those in the Upper Bay, support sizeable populations of **marine worms** and other invertebrates. Marine worms in Maine include commercially harvestable bloodworms and sandworms. These worms live in muddy and sandy habitats along the coast that are also economically valuable for shellfish and ecologically critical as feeding grounds for migratory birds and other species. Although populations and landing numbers have fluctuated over the years, marine worm landings have declined overall since the 1950s.

Intertidal mudflats are important **Tidal Waterfowl and Wading Bird Habitat** and **Shorebird Areas** and make the Lower St. George River an area of statewide significance for its concentration of coastal wildlife. The mudflats in Thomaston and South Thomaston in the northern portions of the focus area and around Cutler Cove, Maple Juice Cove and Hyler Cove represent large areas of habitat for feeding and roosting shorebirds and tidal wading birds.

Diadromous fish, species that use both marine and freshwater habitats during their life cycle, utilize the St. George River,

allowing them free passage to the Sennebec Dam at the outlet of Sennebec Pond, well upstream of the focus area. As a result, the St. George has abundant runs of smelt, alewives, and eels. Shad and striped bass also frequent the river. The alewife run is one of the largest in the state, and North and South Ponds (upstream of the focus area) are important alewife spawning habitats.

The lower St. George River is known for its high quality **shellfish habitat**. Most of the productive mussel beds are located in the lower half of the focus area from Bradford Point seaward. Major clam beds include the Upper Bay between Thomaston and South Thomaston, the east side of the river from Hospital Point to Fort St. George, the west side of the river from Hyler Cove to Bradford Point, and the numerous coves located seaward (e.g. Broad Cove, Watts Cove, Otis Cove, Maple Juice Cove, and Turkey Cove). When taken as a whole, the lower St. George River boasts the largest number of shellfish landings in the state, and the tidal flats along the St. George Estuary are among the most productive soft-shell clam harvesting areas in midcoast Maine.

CONSERVATION CONSIDERATIONS

» The shoreline along the estuary is moderately developed and there are relatively few large sections of unfragmented shoreline. Clusters of seasonal and year-round residential development are located at Watts, Cutler, and Otis Coves. Very little shoreline land along the estuary is in conservation.

Ecological Services of the Focus Area

- Support eelgrass and associated eelgrass values.
- Provides feeding areas for shorebirds
- Protects the shoreline.
- Sediment/nutrient retention.

Economic Contributions of the Focus Area

- Attracts tourism for wildlife observation, paddling, hunting, and angling.
- Supports local marine resource industries
- Provides scenic vistas that raise property values.

» Excessive and unplanned shoreline development can have adverse impacts on estuarine habitat through increased nutrient loads, siltation, and loss of a habitat buffer.

» Seawalls and other shoreline stabilization techniques (e.g. riprap) can disrupt sediment inputs from natural erosion processes resulting in alterations to the sediment structure. This can adversely affect species composition and the productivity of mudflats.

» Physical barriers such as dams, culverts, and bridges can

Watts Cove Shorebird Area, Jim Connolly

Port Clyde, Georges River Land Trust

change tidal flows, alter salinity, modify drainage, prevent sediment movement, and impede animal movements.

» Eelgrass is sensitive to losses due to disease, storms, sediments, ice damage, dredging, shellfishing, propeller damage, pollution, nutrient enrichment, runoff, jet skis, and inboard and outboard motors. In 1931-1932, a wasting disease decimated 90% of the eelgrass in the North Atlantic. Mussel dragging can pose severe and long lasting threats to eelgrass beds; it takes an average of 11 years for eelgrass in dragged areas to grow to 95% cover in undisturbed beds. Eelgrass is a key indicator for assessing nitrogen loading as it will rapidly decline due to shading by algae overgrowth.

» Both permanent and temporary docks and piers can negatively impact shorebird habitats through direct habitat loss and disturbance related to activities associated with these structures. Docks and piers should be carefully designed and permitted. Contact MDIFW biologists for assistance and more information.

» Barriers to diadromous fish passage threaten productive fisheries and in turn may have impacts on other species like bald eagles that feed on them. Dam removal or the installation of man-made fishways can help to alleviate this threat.

» Marine worm landings have declined overall since the 1950s. In 1950, an average tide would yield 4,000 worms, but today that average is about 550 worms, often forcing diggers to take smaller worms that have not yet reproduced. Smaller worms should be left to mature and reproduce in order to rebuild or sustain the population. In addition, many of these smaller worms perish before they can be used for bait, and are unattractive to dealers. Marine worms are sensitive to losses from pollution and dredging, and diggers believe that intertidal mussel dragging is ruining worm habitat.

» Water quality changes such as changes in salinity, temperature, turbidity, or physical properties of the water can negatively affect habitat for species.

» Point and non-point sources of pollution can change faunal communities in tidal communities. Oil spills can destroy or significantly disrupt functioning systems.

» Direct alteration of habitat through filling, dredging, dragging, or other major human disturbances can alter floral and faunal communities and disrupt complex food webs.

» This area includes Significant Wildlife Habitat. Land managers should follow best management practices with respect to construction and forestry activities in and around wetlands, shoreland areas, and Significant Wildlife Habitat. Vegetation removal, soil disturbance and construction activities may require a permit under the Natural Resources Protection Act. Contact MDIFW for more information.

» 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.

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	none documented				
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.