

Cobscook Bay

Dennysville, Edmunds, Lubec, Pembroke, Trescott Twp

Description:

The Cobscook Bay Focus Area includes all of the tidal estuaries and embayments of Denny’s Bay, Whiting Bay, Straight Bay, the Pennamaquan River, and East Bay, as well as the immediate terrestrial shoreline adjacent to them. It is a hydrologically and geologically complex estuary where very high levels of biodiversity and productivity are combined with comparatively little human impact. Cobscook Bay differs from most other estuaries along Maine’s coast because the amount of freshwater input is so small in relation to the salt water brought in by the tides.

Cobscook Bay’s tremendous tides circulate nutrient rich water from the deeper waters of the Gulf of Maine. Higher concentrations of nutrients in the tidal water stimulate increased plant growth, such as prolific blooms of phytoplankton, which in turn foster a variety of invertebrate species such as bottom dwelling shellfish, marine worms, and other important invertebrates. The abundance of marine animals leads to a high amount of biological waste production, which is then recycled into an added source of nutrients for plant growth. This internal process is a key part of what makes Cobscook Bay so productive.

Cobscook Bay is an outstanding resource for marine invertebrates and fish species, which contributes to its important role as habitat for a variety of bird species. Thousands of shorebirds visit Cobscook Bay for up to several weeks in the fall on their southerly migration from northern breeding sites, attracted by excellent foraging and roosting habitat. The irregular shoreline and strong tidal flow keeps the Bay relatively free of winter ice and makes it a very attractive area for waterfowl such as black ducks and Canada geese throughout the year. In certain years, as much as 25% of the state's wintering black duck population may be found in Cobscook Bay.

Finally, there is a higher concentration of nesting eagle pairs in Cobscook Bay than anywhere else in Maine. The high number of eagles in Cobscook Bay has played a key role in restoring eagle populations in Maine and throughout the northeast United States. In contrast to other parts of coastal Maine, alewives constitute a much higher percentage of the diet of bald eagles in Cobscook Bay. Alewives, once abundant, are increasingly being recognized for the key role they play in the ecology of the bay and efforts are underway to return of them to their former spawning grounds in the Pennamaquan River, the Little River, and Boyden Stream.

Rare species and Exemplary Natural Community Table for Cobscook Bay

Common Name	Latin Name	S-RANK	G-RANK	State Status
<i>Rare Animals</i>				
Bald eagle	<i>Haliaeetus leucocephalus</i>	S4	G4	T

Other Habitats Mapped by MDIFW:

- Bald Eagle Essential Habitat
- Tidal Waterfowl / Wading Bird Habitat
- Freshwater Waterfowl / Wading Bird Habitat
- Shorebird Feeding and Roosting Areas

Conservation Considerations:

- An increase in shoreline development can have adverse impacts on the habitat of the bay itself through runoff, siltation, and loss of habitat buffer.
- Loss of habitat, rockweed harvesting, the potential impacts of an oil spill, are concerns when considering the impact of human activities on the bay.
- Barriers to anadromous fish passage by dams and other sources threaten a productive fishery and in turn may have impacts on other species like bald eagles that feed on alewives and other species. Dam removal or the installation of man-made fishways can help to alleviate this threat.
- The population of the invasive green crab has exploded in recent years at Cobscook Bay and threatens the viability of some shellfish species like clams that are especially prone as juveniles to green crab predation.
- Significant alteration to the nutrient load in Cobscook Bay through agricultural runoff, shoreline development or aquaculture would likely disrupt the seemingly delicate and well-balanced nutrient cycling in the bay.

Protection Status:

Approximately 3,500 acres have been protected within the Focus Area. Among the larger protected parcels are part of the Moosehorn Wildlife Refuge (USFWS), Morong Point Wildlife Management Area (MDIFW), the Tide Mill Farm (MDIFW easement), and Cobscook Bay State Park (MDOC). The Nature Conservancy and Quoddy Regional Land Trust have also protected parcels within this Focus Area.