



## Seagrass Community

**Community Code:** CE2D00000A

**State Rank:** S3



**Concept:** Estuarine or marine sparsely to densely vegetated communities, completely submerged at high tide and dominated by eelgrass, with a strong invertebrate component.

**Environmental Setting:** Permanently submerged, saline to brackish, subtidal to intertidal sand/mud flats that support vascular plant beds, in open ocean or near shore in, usually, less than 2m of water. Includes beds of tidal creeks draining salt marshes and river mouths. The salinity of the water changes with the tides and flow of rivers or streams. Actual species present at any place depend on salinity, water temperature, depth, and substrate type. Inter- and subtidal flats are regularly disturbed by currents and tides, storms, and winter ice moving and redepositing sediments, and changing areas inhabited by flora and fauna.

**Vegetation Description:** Sparsely to densely vegetated communities dominated by eelgrass (*Zostera marina*) and widgeon grass (*Ruppia maritima*), which may be in dense beds. Waterweed (*Elodea nuttallii*), coontail (*Ceratophyllum demersum*), sago pondweed (*Stuckenia pectinata*), and horned pondweed (*Zannichellia palustris*) may be mixed in or form locally dense beds, particularly in areas with fresh water. Algae, in the form of diatoms, may form mats on the surface. Macroalgae [seaweeds], including sea lettuce (*Ulva* spp.) and red algae (*Polysiphonia* spp.), can be locally dense; their occurrences are related to nutrient levels. Flowering plants in shallow waters include those typical of freshwater wetlands, such as wild rice (*Zizania aquatica*) as well as several species more restricted to brackish waters. River arrowhead (*Sagittaria subulata*), Parker's pipewort (*Eriocaulon parkeri*), and Long's bitter-cress (*Cardamine longii*) grow in fresh/brackish tidal flats. Where waters are more saline,



species such as quillwort (*Isoetes riparia*) and saltpond spike-rush (*Eleocharis parvula*) become more common. Invertebrates vary with substrate and depth, and may control the vegetation.

**Differentiating Occurrences:** All seagrass beds are included in this community type. Estuarine and marine sand/mud flats often support eelgrass beds. Submerged rocky habitats are often dominated by kelp and other algae. Occurrences in Coastal Salt Ponds are included with that community type. Inter- and sub-tidal flats occur all along the Atlantic coast and have many variants. A national classification of marine and estuarine communities is in the early stages of development.

**Associated Fauna:** Submerged vegetation provides winter feeding sites for waterfowl, including Brant (*Branta bernicla*), American Black Duck (*Anas rubripes*), and sea birds. Vascular plant beds are key nursery habitat for larval and juvenile fishes; the plants also provide surfaces for attachment of invertebrates including shellfish. Fish such as alewife (*Alosa pseudoharengus*), American shad (*Alosa sapidissima*), and striped bass (*Morone saxatilis*) are characteristic of estuarine subtidal habitats which also provide habitat for horseshoe crabs (*Limulus polyphemus*). Marine subtidal flats are spawning areas for winter flounder (*Pseudopleuronectes americanus*) and other fish.

**Public Access:** Billingsgate Shoals Wildlife Sanctuary, Wellfleet; Joppa Flats, Newbury.

**Threats:** Coastal pollution. Overfishing, benthic alteration by fishing gear, coastal pollution, dock and pier construction, and dredging all change and degrade the character of seagrass beds.

**Management Needs:**

**USNVC/NatureServe:** NatureServe system: CES203.246 Northern Atlantic Coastal Plain Seagrass Bed  
Membership: *Ruppia maritima* Acadian/Virginian Zone Temperate Herbaceous Vegetation (CEGL006167, GNR); *Zostera marina* Herbaceous Vegetation (CEGL004336, G4G5). Or NVC Group 383 Widgeongrass; *Ruppia maritima* Permanently Flooded - Tidal Temperate Herbaceous Alliance.