



## Brackish Tidal Marsh

**Community Code:** CE2B300000

**State Rank:** S2



**Concept:** Mixed herbaceous marsh that is flooded by daily tides and occurs in brackish reach of coastal rivers. May also occur in smaller patches in upper zones of coastal salt marshes and salt ponds, usually near seepages or freshwater transition areas.

**Environmental Setting:** Brackish tidal marshes occur along free-flowing coastal rivers. Smaller patches often occur along the edges of salt marsh habitat, near stream inputs, seepages or other freshwater transition areas. Tidal amplitude ranges from 0 to 150 cm (comparable to freshwater tidal marshes), while average annual salinity is (0.5) - 5-18 ppt. The community is often structurally diverse, including high marsh and low marsh, with occasional occurrences along rocky shores, seepages, and ditches. The Brackish Tidal Marsh mud flat zone is rich in organic sediments and grades into adjacent less organic brackish mud flats, which are classified as Seagrass Communities.

**Vegetation Description:** Narrow-leaved cattail (*Typha angustifolia*) is typically dominant in the backmarsh, with frequent stands of common reed (*Phragmites australis*) and less frequent stands of North American reed (*P. australis* ssp. *americanus*). Freshwater cordgrass (*Spartina pectinata*) and saltmarsh bulrush (*Bolboschoenus robustus*) occur along the banks, associated with switchgrass (*Panicum virgatum*), seaside-goldenrod (*Solidago sempervirens*), rose-mallow (*Hibiscus moscheutos*), saltmarsh sedge (*Carex paleacea*), and bentgrass (*Agrostis stolonifera*), which frequently sprawls over the edge. Low marsh supports stands of saltmarsh cordgrass (*Spartina alterniflora*) and common three-square (*Schoenoplectus pungens*). Mudflats and shores support sparse low herbs such as saltmarsh-fleabane (*Pluchea odorata*), water pimpernel (*Samolus floribundus*), mud lily (*Lilaeopsis chinensis*), and creeping



spearwort (*Ranunculus reptans*). Plants of freshwater tidal marshes occasionally occur in the higher zones of brackish marshes.

**Differentiating Occurrences:** Brackish Tidal Marshes occur along free-flowing coastal rivers. Smaller patches often occur along the edges of salt marsh habitat, near stream inputs, seepages or other freshwater transition areas. Brackish Tidal Marshes are geographically limited to short stretches of tidal rivers where salinity is between fresh- and salt water levels and along the upper edges of Salt Marshes where freshwater enters from uplands. Saltmarsh bulrush and salt reedgrass occur in brackish conditions. In Salt Marshes, saltmarsh hay and saltmarsh cordgrass are dense and dominate in saline conditions. Salt Marshes have less diverse vascular plants than do Brackish Tidal Marshes. Freshwater Tidal Marshes are in coastal streams; the presence of sweet flag and wild rice indicate fresh water, not brackish or salt. Freshwater Tidal Marshes lack salt-tolerant plants. Long's bittercress, estuary arrowhead, and estuary beggar-ticks, although shared with Brackish Tidal Marshes, most commonly occur in freshwater situations. *Lilaeopsis*, Atlantic mudwort, water-pimpernel, Parker's pipewort, and Eaton's beggar-ticks grow in both Brackish and Freshwater Tidal Marshes, but are more likely in brackish marshes.

**Associated Fauna:** This community provides outstanding general wildlife habitat, with abundant food sources for migratory and wintering waterfowl, and is generally associated with river reaches with spawning habitat for anadromous fisheries. Amphibian and reptile diversity is lower than in freshwater tidal communities.

**Public Access:** West Newbury Conservation Area, West Newbury; Willow Brook Farm Preserve (Wildlands Trust), Pembroke; Stetson Meadows, Norwell; Mounces Meadow, Marshfield.

**Threats:** Invasive species appear to be the primary threat to this natural community. Brackish tidal marshes in several rivers are dominated by common reed (*Phragmites australis*). Rising sea levels.

**Management Needs:**

**USNVC/NatureServe:** Includes *Schoenoplectus pungens* Tidal Herbaceous Vegetation [CEGL004188]; *Spartina alterniflora* - *Lilaeopsis chinensis* Herbaceous Vegetation [CEGL004193]; *Spartina cynosuroides* Herbaceous Vegetation [CEGL004195]; *Typha angustifolia* - *Hibiscus moscheutos* Herbaceous Vegetation [CEGL004201]; *Schoenoplectus robustus*- *Spartina alterniflora* Herbaceous Vegetation [CEGL006416]; *Spartina patens* - *Agrostis stolonifera* Herbaceous Vegetation [CEGL006365]; *Spartina patens* - *Festuca rubra* - (*Spartina pectinata*) Herbaceous Vegetation [CEGL006368]; *Panicum virgatum* - *Spartina patens* - *Carex silicea* Herbaceous Vegetation [CEGL006150]; *Eleocharis rostellata* - *Spartina patens* Herbaceous Vegetation Spikerush Lawn Tidal Marsh [CEGL006611]; *Schoenoplectus americanus* - *Spartina patens* Herbaceous Vegetation [CEGL006612]; *Phragmites australis* Tidal Ruderal Herbaceous Vegetation [CEGL004187].