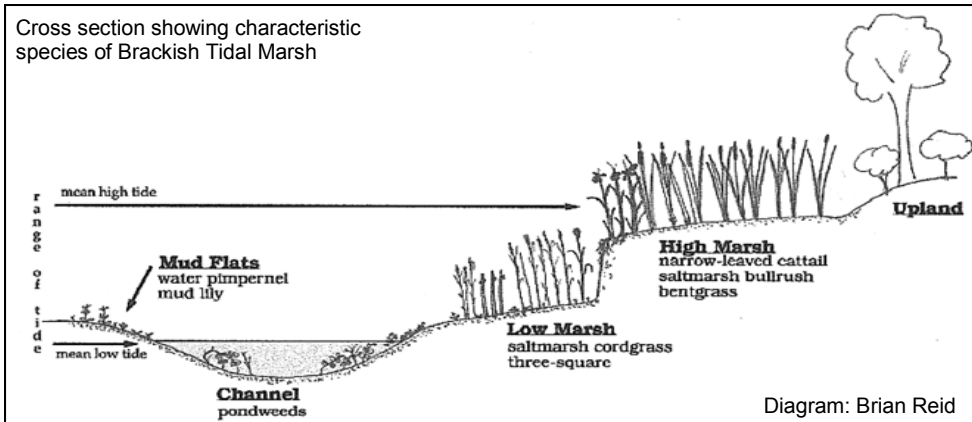


Brackish Tidal Marsh

State Rank: S2 - Imperiled

Cross section showing characteristic species of Brackish Tidal Marsh



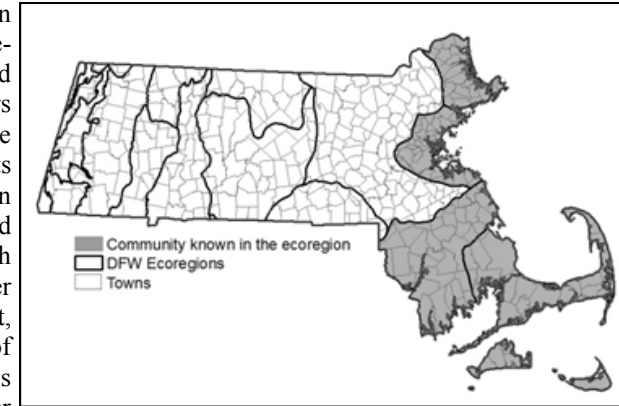
Description: Brackish Tidal Marshes occur the middle of a salinity gradient along stretches of free-flowing coastal rivers where salt and freshwater mix. Although flooded twice daily by incoming tides, freshwater from the river dilutes saltwater carried upstream by the tides. Smaller patches also occur along the edges of salt marshes near freshwater transition areas. Tidal amplitude ranges up to 150 cm (comparable to freshwater tidal marshes), while average annual salinity is 0.5-18 ppt. Brackish Tidal Marshes are structurally diverse with high marsh, low marsh, mud flats, rocky shores, and the river channel. Lower zones are inundated longer with saltier water in each tidal cycle. High marsh is dominated by grasses and sedges. It begins with an abrupt bank of peat 1-3 feet above mean low water. High marsh is generally more developed along lower gradient rivers. Low marsh is usually limited to small stands below the bank of the high marsh on muddy or rocky sloping shores that result from deposition and scouring. Mud flats have sparse low-growing plants.

The brackish marsh mud flat zone is rich in organic sediments and grades into adjacent less organic brackish mud flats that may support eelgrass and be classified as Seagrass Communities. Rocky shores of Brackish Tidal Marshes are sparsely vegetated with low growing annuals on small patches of shallow soils subject to erosive forces from the river. Higher gradient or larger rivers best support this habitat type.

Characteristic Species: Brackish Tidal Marshes are characterized by mixed herbaceous somewhat salt tolerant plants. Narrow-leaved cattail typically dominates the high marsh, with frequent stands of invasive common reed and less frequent stands of native North American reed. Freshwater cordgrass and saltmarsh bullrush occur along the banks, associated

The Brackish Tidal Marsh community is often found in stretches of coastal rivers where salt and freshwater mix, and consists of mixed herbaceous vegetation that is flooded by daily tides.

with switchgrass, common bulrush, seaside-goldenrod, rose-mallow, saltmarsh sedge, and bentgrass. Salt reedgrass occurs in small stands at the edge of the high marsh. Low marsh supports saltmarsh cordgrass and common three-square. Mudflats and shores support sparse herbs such as saltmarsh-fleabane, water pimpernel, Atlantic mudwort, and creeping spearwort. Plants of freshwater tidal marshes occasionally occur in the higher zones of brackish marshes.



Differentiating from Related Communities:

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. 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 situation. 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.

Habitat for 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.

Examples with Public Access:

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



Brackish Tidal Marsh. Photo: Bruce Sorrie, NHESP.

