

Freshwater Mud Flat Community

State Rank: S4 - Secure



FW Mud Flat along the Housatonic River. Photo: Michael Batchner.

Description: Freshwater (FW) Mud Flat Communities develop over the summer as water levels go down and sediments are exposed in low-gradient and abandoned stream channels, backwaters, and beaver, oxbow, and other ponds that are usually flooded during winters or other times of high water. The mucky, silty mineral soils are poorly drained and may remain saturated even when the surface is exposed. Succession to other communities occurs at all sites when flooding is removed, particularly notable in abandoned beaver ponds.

Characteristic Species: Often sparsely vegetated, Freshwater Mud Flat Communities are typically dominated by annuals or herbaceous perennials such as water-purslane, smartweeds, rice cut-grass, swamp-candles, ditch-stonecrop, or little spike-rush. Mudflat spike-rush is restricted to calcareous or circumneutral mudflats. In oxbows in floodplain forests, trees such as silver maple or American elm may overhang these communities providing partial cover. In ponded situations FW Mud Flat Communities

Freshwater Mud Flat Communities have low, sparse annual herbaceous vegetation on recently exposed muddy sediments in ponds and streams. Species, size, and boundaries change seasonally and annually.

may include aquatic plants stranded when the water receded such plants include yellow water-lily, duckweeds, rushes and bladderworts.

Differentiating from Related Communities: Freshwater Mud Flat Communities have low, sparse annual herbaceous vegetation on recently exposed muddy (fine mixed organic and mineral materials) sediments in rivers and ponds where they may include stranded aquatic vegetation. Low-energy Riverbank Communities are on slopes of river banks composed of a mix of relatively fine mineral materials (clay, silt, or sand). The stream bottoms of Low-energy Riverbanks can merge into FW Mud Flats; separation depends on patch

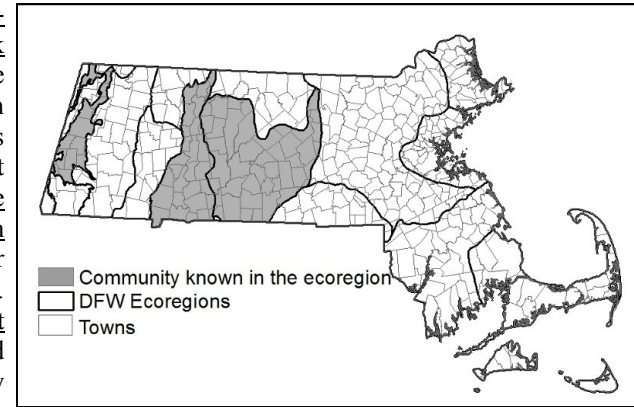


A Freshwater Mud Flat with stranded aquatic plants. Photo: Melissa Dow Cullina, NHESP.

size and connectedness. High-energy Riverbank Communities occur along the shores of fast flowing, high energy rivers with sparse plants growing in sediment caught between rock cobbles. Riverine Pointbar and Beach Communities are along higher energy rivers on sand or gravel. Deep and Shallow Emergent Marshes have dense graminoid emergent plants on mucky sediments, often with standing water at the base of the plants. In tidal areas mud flats are considered to be parts of adjacent Freshwater or Brackish Tidal Marshes. Mud flats in coastal plain ponds are treated as parts of the Coastal Plain Pondshore Community. Mud flats that emerge after human mediated water lowering of lakes or rivers are usually temporary and would develop River and Lake Drawdown Communities that could be extensions of naturally occurring mud flats.



Oily water in footprints in the mucky sediments of a FW Mud Flat. Photo: Chloe Stuart, NHESP.



Habitat for Associated Fauna: Many wide ranging animals include Freshwater Mud Flats as part of their habitats. Shore birds such as Spotted and Solitary Sandpipers forage on Freshwater Mud Flats throughout their breeding season and those and additional shorebirds such as Greater Yellowlegs stop at Mud Flats during migration.

Examples with Public Access: Hop Brook WMA, Lee.



Killdeer on mucky sediments of a FW Mud Flat. Photo: Bill Byrne, MassWildlife.

