Deep Emergent Marsh

State Rank: S4 - Secure

Deep Emergent Marsh with cat-tails and aquatic plants. Photo: Matthew R. Burne, NHESP.

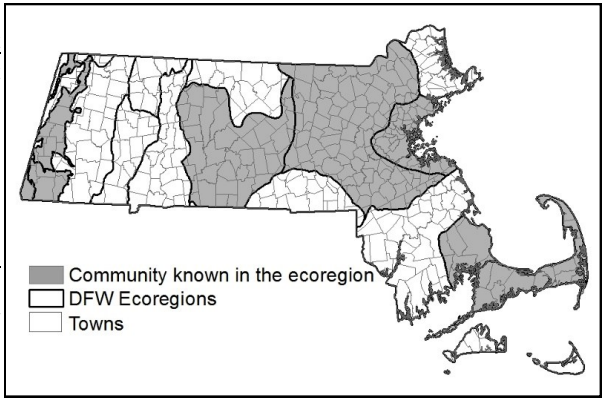
Description: Deep Emergent Marshes (DEM) occur along rivers and streams, lakes, artificial impoundments and other waterbodies. DEMs are generally flooded with half a foot to 3 feet of water, though water depth may change seasonally. Vegetation is primarily herbaceous and graminoid. DEMs may be patches in intergrading complexes of forested and shrub swamps and open water. Areas of open water may have aquatic plants. Soils typically have a layer of well decomposed organic muck at the surface overlying mineral soil. The movement of wind and ice can disturb vegetation and sediments within marshes, particularly adjacent to open water.

Characteristic Species: Tall graminoids, like broad-leaved cat-tail and phragmites, often form extensive dense stands in Deep Emergent Marshes. Narrow-leaved cat-tail occurs in more alkaline sites or in saline areas along roads. Other characteristic graminoids include wool-grass, common threesquare, Canada bluejoint, and reed canary-grass. Herbaceous associates include arrow-leaf tearthumb, bulblet water-hemlock, swamp-candles, beggar-ticks, bedstraw, common arrowhead, slender-leaved goldenrod and marsh-fern. Nutrient-rich sites in Berkshire County typically have cat-tails mixed with soft-stemmed bulrush, hard-stemmed bulrush, river-horsetail, marsh-cinquefoil, and giant bur-reed among others. Short shrubs including sweet-gale, meadowsweet, and hardhack may be scattered among tall graminoids. Tall shrubs such as speckled and smooth alders, and highbush blueberry are generally sparse, totaling <25% cover. Invasive species include purple loosestrife and phragmites.

Deep Emergent Marshes are tall graminoid wetlands with deep water (up to 3 ft.). They generally form in broad, flat areas along slow rivers or ponds; they often grade into Shrub Swamps.

River Bulrush, a species of DEMs. Photo: Donald Cameron.

Differentiating from Related Communities: The physical and biological characteristics of emergent marsh, shrub swamp, wet meadow, and shoreline communities overlap and intergrade. Deep Emergent Marshes are tall graminoid wetlands in half foot to 3 ft. of water. Shallow Emergent Marshes (SEM) are short graminoid/herbaceous wetlands that usually have shallow (<6" deep) surface water. Cat-tails, phragmites, and wool-grass (the dominants of DEM) occur but do not dominate SEM. Wet Meadows are subtypes of emergent marshes, typically with a single sedge or grass species dominating. Standing water is not present throughout the growing season as in emergent marshes. Kettlehole Wet Meadows occur in small basins with mucky peat substrates. Coastal Plain Pondshore Communities and Coastal Plain Pondshores – Inland Variant are generally on sand around ponds in closed basins that intersect groundwater. The exposed shoreline supports mixed herbaceous species but are not generally dominated by dense graminoids. Acidic Pondshores/Lakeshores are broadly defined, variable shorelines around open water not explicitly included in calcareous or coastal plain pondshores. The shorelines often merge into marsh or other wetlands. Bogs and Fens are peatlands and have peat instead of mucky mineral soil, however gradations do exist. Shrub Swamps have >25% cover of tall shrubs.



Habitat for Associated Fauna: Many animals, vertebrates and invertebrates, common and rare, use Deep Emergent Marshes for feeding, nesting, roosting, cover, and movement corridors. The sedges, bulrushes and grasses provide a food resource for a variety of marsh birds. Inconspicuous ("secretive") water birds, such as rails and bitterns, nest in marshes that lack human disturbance. Deep Emergent Marsh habitat supports many amphibian species; some vernal pool obligate species, such as wood frogs and spotted salamanders, may use fish free areas of Deep Emergent Marshes for egg-laying.

Examples with Public Access: Hop Brook WMA, Tyringham; Quaboag River WMA, East Brookfield, Brookfield, West Brookfield; Pantry Brook WMA, Sudbury.

Deep Emergent Marsh with dense mixed cat-tails and rushes. Photo: Michael Batcher.

From: *Classification of Natural Communities of Massachusetts* http://www.mass.gov/nhesp/
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