

Kettlehole Wet Meadow

State Rank: S3 - Vulnerable



Kettlehole Wet Meadow in a basin with dense woolgrass. Photo: Patricia Swain, NHESP.

Description: The Kettlehole Wet Meadow community is a variation of both Wet Meadow and Shallow Emergent Marsh communities. It occurs in depression basins (kettleholes in glacial sediments) that are seasonally inundated by local runoff and ground water fluctuations, and often have no stream inlet or outlet. In the winters of most years they may be shallow ponds that dry down to mucky peaty sediments through the summer; emergent, usually graminoid, vegetation, becomes dense as the growing season progresses. Deep peat does not develop due to the seasonal drawdown of water. A series of plant associations occur along a gradient from the higher, drier margins to the lower, wetter centers.

Kettlehole Wet Meadows are treeless graminoid communities in small (<5 acres) depressions in stratified glacial deposits. For most of the year they look like shallow ponds but, by late summer dense graminoid vegetation covers the peaty sediments.

Characteristic Species: Kettlehole Wet Meadows are typically fringed with shrubs, such as leatherleaf, high bush blueberry, buttonbush, and water willow, and trees including tupelo, swamp white oak, and red maple, often with sphagnum moss under them. By the end of the summer, with water lowered, the basin is covered by dense growth of narrow-leaved emergents (graminoids) often in zones or patches of single species. Wool grass can be close to a monoculture when present. Other species present may include different bulrushes (such as dusky wool-grass, red-stemmed bulrush, and Torrey's bulrush); sedges including tussock-sedge; rushes (such as marsh rush, bayonet rush, and pondshore rush); and grasses (including panic grasses, creeping bent grass, and manna grasses); and other herbaceous plants including marsh fern and beggar's ticks.



Torrey's bulrush, sometimes part of the dense marsh vegetation of Kettlehole Wet Meadows. Photo: Donald Cameron.

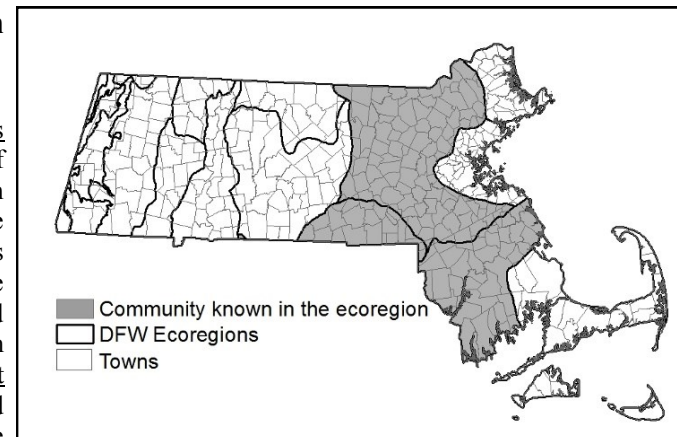
Differentiating from Related

Communities:

Kettlehole Wet Meadows are a specialized type of Shallow Emergent Marsh in small basins that have dense graminoid marshes on mucky peat. They are temporarily inundated after storms as well from high groundwater. Wet Meadows, also graminoid communities, are in lake basins, backwaters, and sloughs along rivers. Shallow Emergent Marshes are graminoid wetlands in broad, flat areas bordering rivers or along pond margins and are seasonally flooded. Coastal Plain Pondshore Communities and Coastal Plain Pondshore Communities - Inland Variant are generally on sand around ponds in closed basins that intersect groundwater that affect pond levels. The seasonally fluctuating water table typically leaves an exposed shoreline by late summer that supports herbaceous species. Sediments are sandy or mucky, but not peaty, and late summer vegetation is not dominated by tall dense graminoids.

Habitat for Associated Fauna:

Generally being small, Kettlehole Wet Meadows are parts of the habitat of wide ranging species, including wetland nesting birds. Kettlehole Wet Meadows often function as vernal pools: with standing water in the winter and spring, and drawdown to the sediments in most



summers, the areas provide important breeding habitat for amphibians that live in surrounding forests during the rest of the year.

Examples with Public Access:

Douglas SF, Douglas; Minuteman National Park, Concord; Demarest Lloyd SP, Dartmouth.



Kettlehole Wet Meadow that functions as a vernal pool. Photo: Megan Garretson, Lloyd Center.

