

Acres of Submerged Aquatic Vegetation

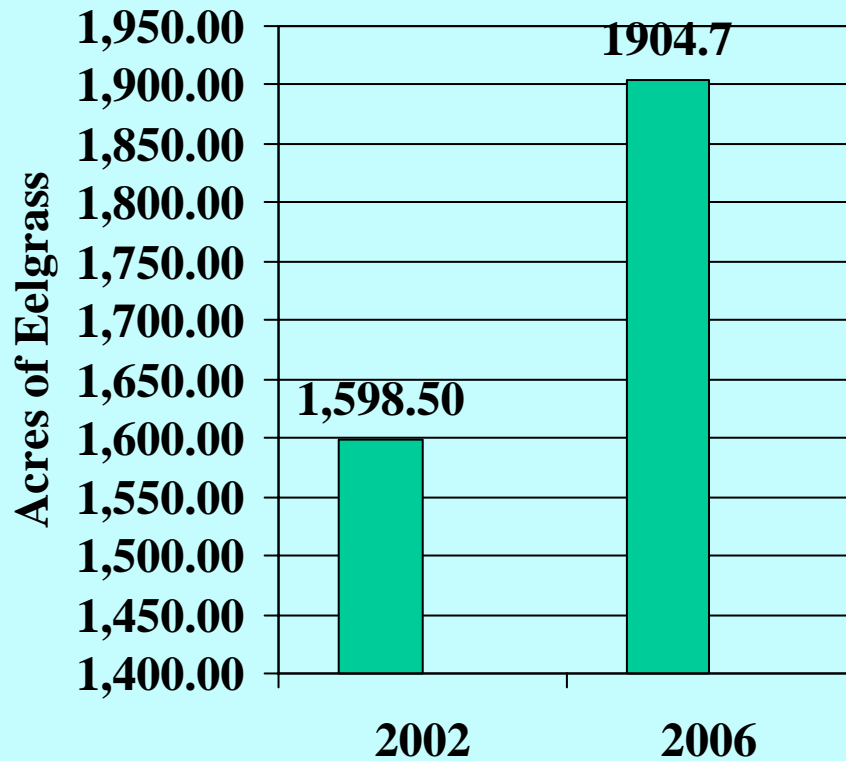
Submerged aquatic vegetation beds are comprised of rooted plants like eelgrass and widgeon grass that grow on shallow muddy and sandy bay bottoms below the spring low tide mark. Eelgrass is ecologically important because it serves as vital nursery habitat for many desirable fish and shellfish species. Historical information indicates that eelgrass was once “common” along the entire coastline of the Sound and in sheltered bays, harbors, rivers, and creeks.

Beginning in 1931, there was a massive die-off of eelgrass all along the Atlantic Ocean in both Europe and North America. Both sides of the Atlantic were believed to have lost at least 90% of existing eelgrass populations. Eelgrass beds in central and western Long Island Sound declined by two-thirds of their original extent.

Studies conducted in other estuaries have shown degradation of water quality to be the single most significant cause of eelgrass declines. Poor water quality not only degrades or destroys healthy beds, but also prevents the reestablishment of beds at historical locations.



CURRENT STATUS



LIS Eelgrass Survey 2002, U.S. Fish & Wildlife Service

The extent of eelgrass in LIS has been mapped in 2002 and 2006. Using aerial photography and field surveys, the 2006 survey located and mapped 1,905 acres of eelgrass beds. Seven sub-basins had more than 100 acres: Quiambog Cove (428), Little Narragansett Bay (283), Niantic Bay (269), Fishers Island (201), Goshen Cove (152), Mystic Harbor (111) and Rocky Neck State Park (111). Mumford Cove experienced the largest loss of acreage (11 acres from 86.2 in 2002 to 75.2 acres in 2006), probably due to sedimentation. However, eelgrass acreage at Mumford Cove had previously increased from by 48 acres from 1987 to 2002 after the CT DEP removed a sewage treatment plant discharging effluent containing nitrogen.

Historical Eelgrass Distribution in Long Island Sound



Eelgrass distribution in the early 1930s

Eelgrass, *Zostera marina*, is the dominant submerged, rooted, vascular plant in Long Island Sound. Eelgrass once grew throughout the shallow waters of the Sound, but dramatically declined between 1931 and 1932. While eelgrass recovered in the eastern Sound, it currently remains absent in the central and western Sound.

Current Eelgrass Distribution in Long Island Sound



LIS Eelgrass Survey 2006, U.S. Fish & Wildlife Service

Eelgrass, *Zostera marina*, is the dominant submerged, rooted, vascular plant in the Sound. Eelgrass once grew throughout the shallow waters of the Sound, but dramatically declined between 1931 and 1932. While eelgrass recovered in the eastern Sound, it remains absent in the central and western Sound.

Indicator Type: Impact-ecological

LISS Indicators: Habitat Protection (4.3)