

A FIVE-YEAR ASSESSMENT OF VEGETATION RECOVERY FOLLOWING INTEGRATED MARSH MANAGEMENT ON THE LOWER CT RIVER

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ABSTRACT

In 2001, the Connecticut Department of Environmental Protection, Wildlife Division, Wetlands Habitat and Mosquito Management (WHAMM) Program completed an Integrated Marsh Management (IMM) project on the Lower Connecticut River on three hundred acres of grid ditched, Phragmites-dominated tidal wetlands. Because of the strong, freshwater influence of the CT River, salinities throughout the area ranged from oligohaline to polyhaline, resulting in conditions that favored tidal freshwater vegetation at the north end and salt marsh vegetation closer to Long Island Sound. Phragmites dominated the sites where salinities were less than eighteen parts per thousand. The project included ditch plugging, creation of several pools or ponds, new tidal channels, and Phragmites control via herbiciding and mowing. The work was completed using the WHAMM Program's low ground pressure equipment and contractors that perform Phragmites control. Following completion, a program was initiated to monitor thirty-three plots established over seven sites. Plots were monitored for water table height, water quality, vegetation recovery and bird use. In 2006, the fifth year, vegetation data was again collected on the seven areas. After year three, it was determined that ditch plugging that resulted in a higher water table did not reduce Phragmites cover. As a result, herbiciding and mowing was implemented to reduce the Phragmites. The data indicate that the response on the seven sites following IMM resulted in vegetation that is more typical of brackish marsh vegetation varying with differences in salinity regimes found in other areas of the lower Connecticut River.