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EYE-OPENING OUTCOMES THROUGH THE POWER OF MODELING IN THE HOLLY POND WATERSHED

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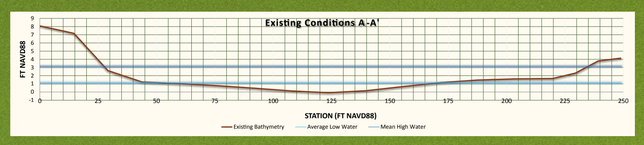
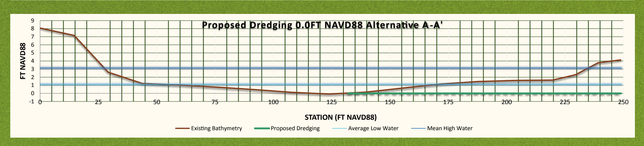
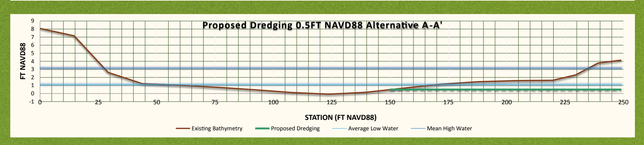
Holly Pond is a shallow estuarine embayment at the mouth of the Noroton River in Stamford and Darien Connecticut with a tidal dam at its confluence with Long Island Sound. Two large shoals have formed near each other in the pond near the mouth of the River that are exposed above the water level at low tide.

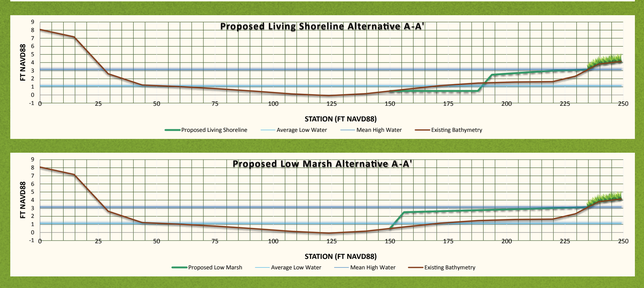
Louis Berger evaluated existing and recently collected data and developed a hydrodynamic and watershed model to evaluate restorations alternatives for Holly Pond and the Noroton River eroding streambanks. The modeling results served surprising outcomes revealing information about the Holly Pond Shoal and sediment transport through the watershed.

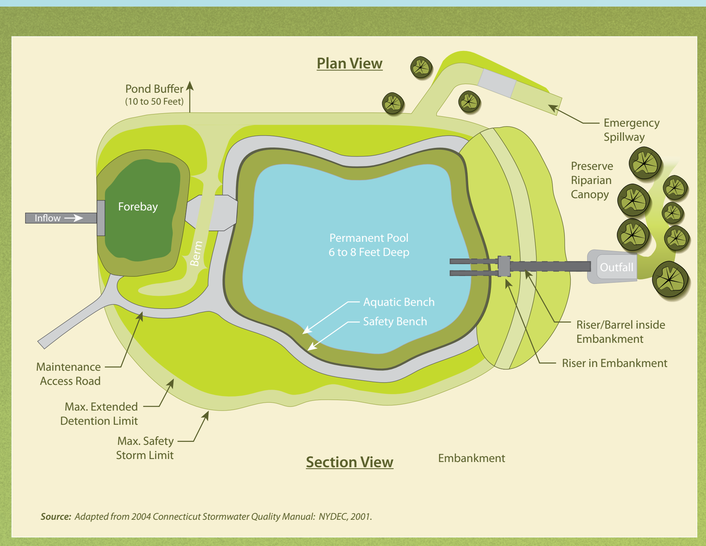
ESTUARINE RESTORATION AND SHOAL REMOVAL ALTERNATIVES







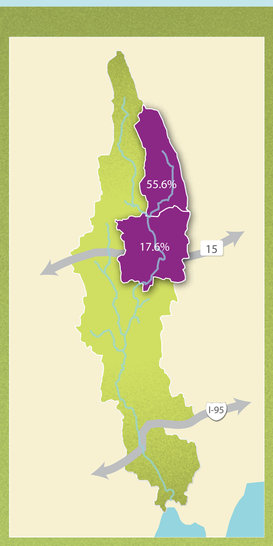


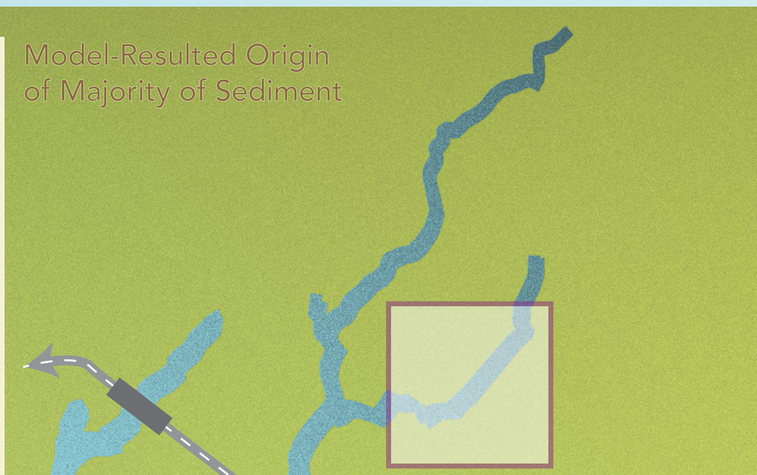


Source: Adapted from 2004 Connecticut Stormwater Quality Manual: NYDEC, 2001.

Extended Wet Detention Pond

Out of the total 12.7 square miles of the watershed, a subbasin of merely 3 square miles contributes 80% of the sediment load into the estuarine embayment.

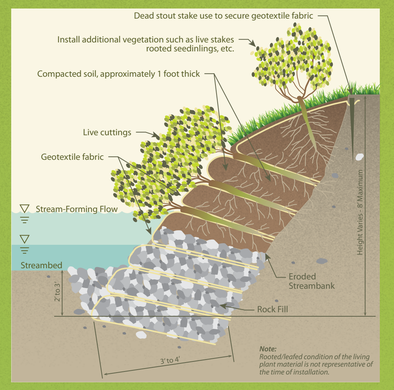




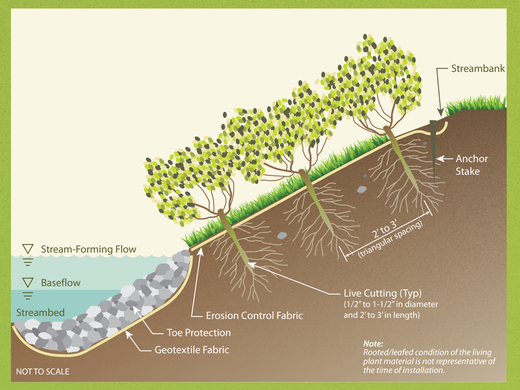
UPPER WATERSHED BEST MANAGEMENT PRACTICES

STABILIZATION OF NOROTON RIVER ERODING STREAMBANKS

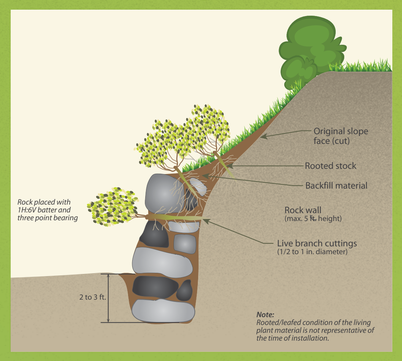
Vegetated Geogrid



Bank Restoration and Shaping with Toe Protection



Hard Armoring



Boulder and Rootwad Revetment