

## Pequabuck River Habitat Enhancement Project

**Location:** Rockwell Park, Bristol  
Public Property

**Implemented:** July 2002

**Partners:**

CT DEP Inland Fisheries Division  
City of Bristol Parks Department  
Farmington Valley Chapter, Trout Unlimited  
Pequabuck River Watershed Association

**Cost:** \$8,000

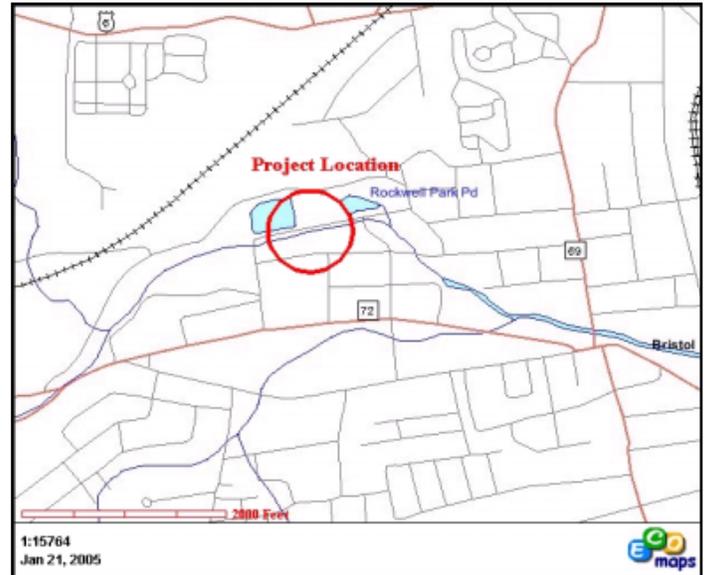
**Engineering and Design:**

CT DEP Inland Fisheries Division

**Project Manager/Contact Information:**

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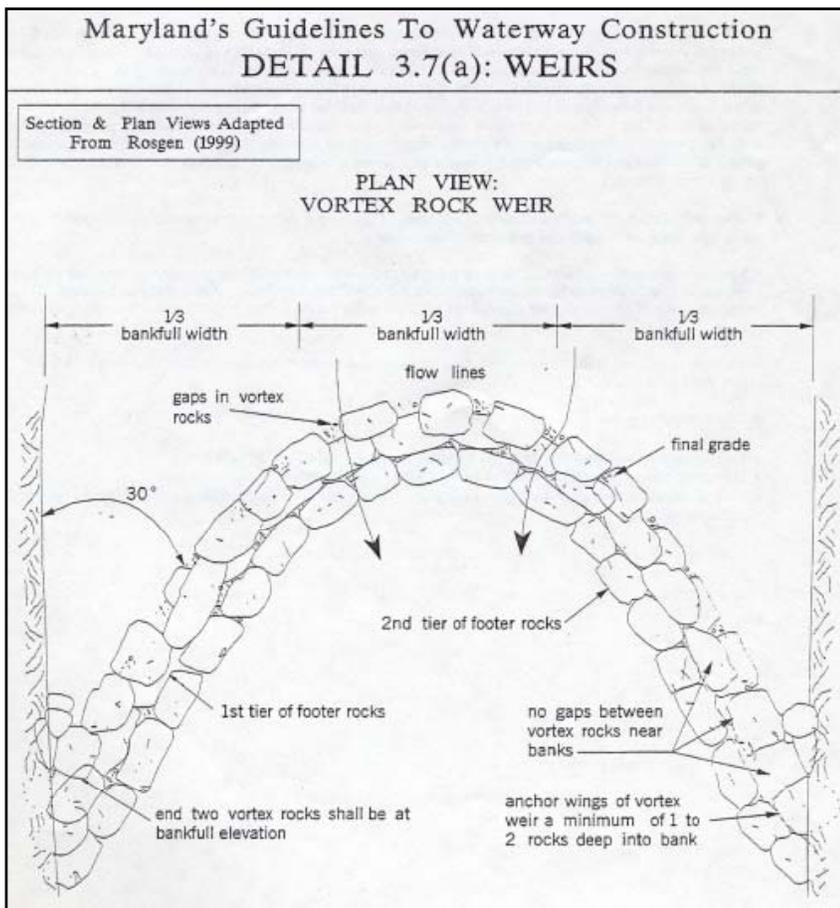
**Problem/Need**

The Pequabuck River had been one of Connecticut's most polluted rivers. Due to the elimination or upgrade of wastewater effluent, river water quality has improved to a condition allowing for the reestablishment of trout and Atlantic salmon juveniles. Habitat impairment resulting from physical alteration, bank erosion, or sediment deposition remains a concern. The nearly one-mile length of the Pequabuck River within Rockwell Park exhibits such impairment that has resulted from increased watershed development. Increased runoff from an increasingly developed watershed has caused the channel to widen and become shallow. Deep pool habitat has decreased due either to channel widening or from sediment deposition. Deep pools are an important habitat feature that is critical for fish survival either during summer low flow periods or during severe winters when ice may encapsulate shallow pools or riffles.

**Restoration Actions**

Two vortex (cross vane) rock weirs were constructed to promote pool development. A vortex weir is horseshoe-shaped with the apex of the structure pointing upstream. The arms of the structure are angled to the riverbanks so that flows are directed away from the banks and deeper pool areas are created downstream of the weir. The rocks near the central portion of the structure are positioned to create spaces or vortices that cause water velocities to maintain pool habitat by scour. A rock overhang was installed adjacent to one of the weirs to provide shoreline cover for fish.

**Typical reach of the Pequabuck River through Rockwell Park with limited deep pool habitat.**



**Design of vortex (cross vane) rock weir plan taken from Maryland Guide to Waterways Construction.**

**Vortex rock weir #1.**



**Vortex rock weir #2.**