



Town of Warren 'Stream Smart' Culvert Replacement Initiative

"The Town of Warren has had concerns for many years of the fish migration from the Atlantic throughout the St. George Water shed. Many species of fish were on the endanger list such as the Atlantic Salmon, Blueback Herring, alewife with less than 5% of prime spawning grounds for these anadromous fish remains accessible in Maine due to barriers such as the blocked culverts. The town realized that 3 culverts under our public roads have been blocked over the years that had stopped the migration through the St. George Watershed."



Bill Lawrence, Town Manager 2016

PARTNERS

The Nature Conservancy and Maine Department of Marine Resources

PROJECT DESCRIPTION (completed November 2016)

The Town of Warren below US Route 1 and a major culvert between North Pond and White Oak Pond that leads to Union's Seven Tree Pond are blocked. Grant funds were utilized for Warren to retain an engineer to study on the best way to reopen these culverts that would encourage fish migration

These damaged culverts lie within the St George River watershed, which is the home of a recovering Alewife population and noted as the Atlantic Salmon Critical Habitat. The design of the Stream Smart replacement culverts will allow safe passage for fish and other wildlife. Construction funds will be sought separately through the other grants (Maine DEP Culvert Bond) and town road improvement budgets.

THE CHALLENGE & APPROACH TAKEN

The challenge was to establish a culverts that would allow maximum fish passage that will be easy to maintain. The approach included the following steps: Develop Request for Proposal for Engineering Services, Advertise for RFP, Interview Engineer, Award Notification. Signed Grant agreement, Field work (Identify the culverts that should be replaced), Public Meeting and Submit Permits.

THE RESULTS

Design of three important culverts replacements that cross three public roads in Warren that will foster the fish migration throughout the St. George Water Shed.

The Engineering firm Gartley & Dorskey was retained to conduct field investigations, undertake a wetland delineation and topographic survey, take soil borings, conduct a site visit regarding permitting with Maine DEP and the Army Corps of Engineer (ACOE) prepare preliminary and final engineering plans and cost estimates, a bid package of specifications and submit permit applications to the ACOE and Maine DMR.

Preliminary cost estimate for each culvert dated June 2016:

- Culvert # 0591 Back River Bridge Culvert on the Sandy Shores Road \$281,000
- Culvert # 4369 on Depot Road \$139,000
- Culvert # 4479 on the Old Augusta Road \$247,000

NEXT STEPS AND OPPORTUNITIES

Apply for Grants (MDEP Culvert Upgrades Grants) and budget any matchings funds needed for the construction phase of the Stream Smart Culverts.

LESSONS LEARNED

The Town of Warren transitioned through two Town Managers with an Interim Town Manger in between during the CCG grant period. The project was successfully wrapped up by Town Manager Bill Lawrence. This case study includes his observations on lessons learned as:

- Gain a better understanding of how the Stream Smart Culverts benefit the fish migration and increase our endanger species.
- Develop better communication with DOT, Public Works, Engineers, Municipal and State officials to ensure the project's success.
- The project would benefit from a better plan on obtaining finances early on.
- Make sure elected officials understand the purpose of the project

APPLICABILITY TO OTHER MUNICIPALITIES

Municipalities located around the Maine Coast will be able to utilize our resources, steps and experience of what worked well vs what did not work to encourage more fish migration up the waterways of the Maine Coast.

RECOMMENDATION

We encourage other towns who share this same interest to do their research on this project and put a plan together and take action.

FOR MORE INFORMATION

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