

## Eastern Brook Trout Joint Venture Completed Project Report Form

**Project Title: Restoring habitat connectivity in Machias and Saint Croix River tributary streams, ME: EBTJV&NFHAP; F14AC00403**

- **Sponsor:** Downeast Lakes Land Trust
- **Partners involved:** Natural Resources Conservation Service, US Fish and Wildlife Service Maine Fisheries Resources Office and Gulf of Maine Coastal Program, Project SHARE, Wagner Forest Management, GLS Woodlands LLC.
- **Project costs:**
  1. Total cost: \$83,200.00
  2. Non federal amount: \$41,700.00
  3. Federal amount: \$41,500.00
- **Funding Sources:**

Downeast Lake Land Trust, Grand Lake Stream Plantation, GLS Woodlands, Wagner Forest Management, US Fish and Wildlife Service Maine Fisheries Resources Office and Gulf of Maine Coastal Program.

**Action strategy implemented in the project (according to EBTJV range wide, regional, or state level habitat strategies).**

This project addresses Regional Habitat Objectives: 1 – Maintain the status of 477 Northern subwatersheds classified as Healthy; 2 – Strengthen brook trout populations in 20 Northern subwatersheds classified as Healthy.

This project addresses Maine State Habitat Objectives: 2.1.2 – Identify degraded stream habitats and prioritize for restoration efforts – Identify barriers to fish passage and re-establish habitat connectivity where possible; 2.4.1 – Restore degraded habitats, establish collaborative partnerships with State, Federal, Tribal, and private entities to implement stream restoration projects. 2.4.2 Restore degraded habitats, monitor efficacy of implemented projects for ecological responses and indicators of success.

- **Priority score of the sub-watershed where the project took place.**

Protection of a 1.63 “best of the best” subwatershed (230467).
- **Describe any additional species of greatest concern or the state wildlife action plan listed habitat conservation goal (s) supported by the project.**

American eel has been petitioned to be listed under the Endangered Species Act and is found within the project area.
- **Description: project objective(s):**

Through this project, Downeast Lakes Land Trust (DLLT) continued its work with partners to restore brook trout habitat on priority streams within its 55,678-acre Downeast Lakes Community Forest by removing passage barriers. Of the four sites included in the original proposal (Billy Brown Brook/Shaw St., Amazon Brook/Amazon Rd., Grand Lake Brook/Fourth Lake Rd., and Fourth Lake Trib./Belden Brook Rd), two were completed using NRCS funding received after the initial proposal was submitted to USFWS. As a result, Eastern Brook Trout Joint Venture funding was used to restore fish passage at two additional sites at South Branch/Little River Rd and Towers Brook/Little River Rd. DLLT hired a local contractor and coordinated a partnership between the Natural Resources Conservation Service and U.S Fish and Wildlife Service Maine Fisheries Resource Office.

- **Methods used:**

DLLT and partners removed six culverts that were acting as fish passage barriers and replaced them with bankfull-spanning open bottom structures. The structures included three steel arches (12', 18', and 20'), one concrete arch (8'), and two concrete-decked bridges

- **Project outcomes: Describe outcomes and whether or not the objectives were met. If not why? What lessons were learned?**

The project was successfully implemented and habitat restoration goals as originally proposed were met.

NRCS funding received after the EBTJV grant award was sufficient to fully fund restoration at the two sites with bottomless arch culverts installed. This allowed for two sites on tributaries of the Little River to be restored. Costs at these sites were reduced further by constructing concrete-decked bridges rather than steel or concrete arches. As a result, 6 sites were restored using this EBTJV grant rather than the 4 originally anticipated.

- **What is the Brook trout population response to the project outcome?**

Population response has not been measured and likely will develop over a period of years.

- **If applicable, what is the number of stream miles and or acres of brook trout habitat?:**

A. Protected: N/A

B. Restored/Enhanced: Approximately 11.6 miles of stream habitat from all six sites.

**If applicable what is the number of stream miles and or lake/pond acres of brook trout habitat gained access to as a result of removing a fish barrier. Include the # of fish barriers removed?**

Approximately 11.6 miles of stream habitat from all six sites.

- **If applicable, what is the number of stream miles and or lake or pond acres of brook trout habitat with sediment, phosphorous, or nitrogen inputs that were rehabilitated to within 25% of natural or other desired levels such as numeric state water quality criteria?**  
Unknown or not applicable.

\*\*\*\*\*Please include before and after photos of the project.\*\*\*\*\*



Billy Brown Brook at Shaw Street crossing prior to arch culvert installation in 2014.



Outlet at Billy Brown Brook – Shaw Street crossing.



Billy Brown Brook at Shaw Street crossing after arch culvert installation in 2014.



South Branch of Little River before restoration:  
downstream.



Deadwater upstream of South Branch crossing.



Concrete-decked bridge installed at South Branch crossing.



Downstream of Towers Brook crossing.



Deadwater upstream of Towers Brook crossing.



Concrete-decked bridge installed at Towers Brook crossing.



Outlet at Fourth Lake Trib.



Fourth Lake Trib. after arch culvert installation during 2016 drought.





Outlet of Grand Lake Brook crossing (before).



Paddling a canoe through Grand Lake Brook 20' arch culvert (after).



Grand Lake Brook (after)