Eastern Brook Trout Joint Venture
Completed Project Report Form

Project Title: EBTJV/NFHAP Carloe Brook ME Fish Passage Restoration

- **Location:** T27ED BPP Washington County, Maine

- **Lat / Long Coordinates:**

-67.68 45.07

- **Sponsor:** Maine Forest Service

- **Completion Date:** August 12, 2011

- **Partners involved:** Wagner Forest Management, US Fish and Wildlife Service Maine Fisheries Resources Office and Gulf of Maine Coastal Program.

- **Project costs:**

1. Total cost: $42,000
2. Non federal amount: $18,200
3. Federal amount: $23,800

- **Final Funding:**
  NFHAP Funding Through EBTJV: $21,000
  Total Federal Contributions: $23,800
  Total Non-Federal Contributions: $18,200

- **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; 7 – Validate the predictive status model by contributing toward the assessment of 700 Northern predicted status subwatersheds.

- **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 petioned to be listed under the Endangered Species Act and are found within the project area.

- **Description: project objective(s):**

The project replaced an undersized and failing stream crossing on Carloe Brook a major tributary to Clifford Lake that has wild brook trout. This stream crossing currently limits passage for trout and other aquatic organisms. The current crossing is also a significant sediment source do to improper construction and overtopping. The crossing will be replaced with a 1.2 bankfull open bottom arch culvert (15ft wide) designed to allow passage at all flows.

- **Methods used:**
  New crossing was designed using stream simulation techniques to ensure proper sizing and placement of the new structure. A 1.2 x bankfull width open bottom arch culvert replaced 5 undersized and damaged round culverts.

- **Project outcomes: Describe outcomes and whether or not the objectives were met. If not why? What lessons were learned?**
  Project restored natural stream function at a highly degraded stream-road crossing.

- **What is the Brook trout population response to the project outcome?**
  All aquatic organisms now have unhindered access upstream and downstream.

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

This project opened 3 miles of stream habitat.

- **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?**
  One stream-road crossing

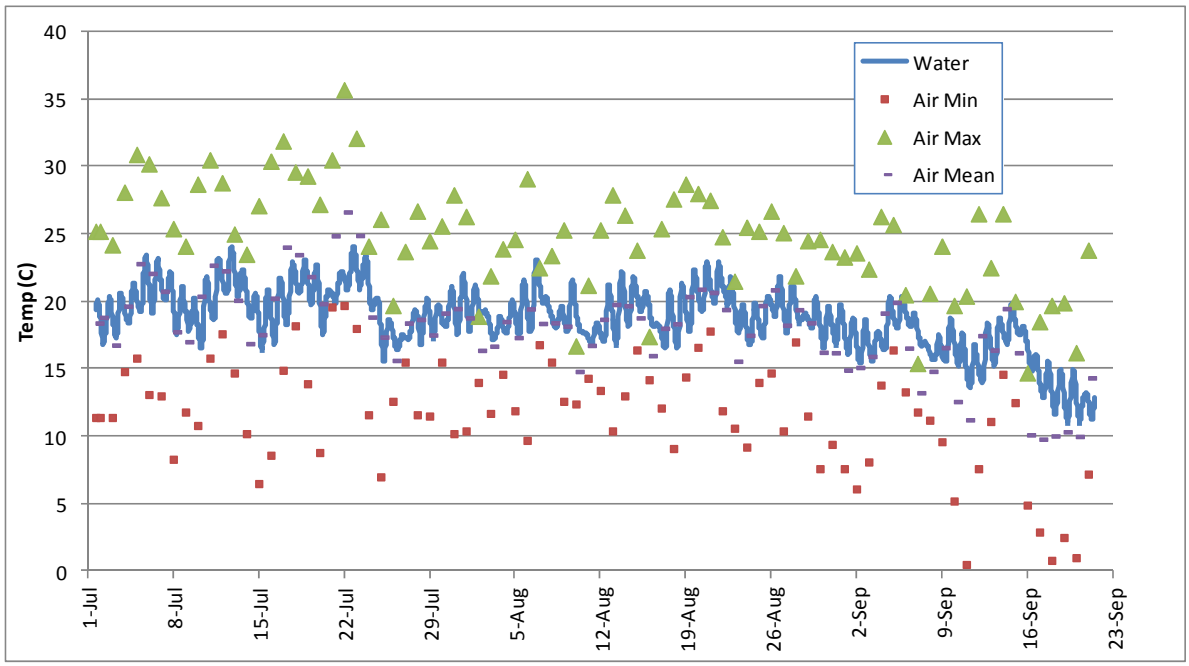
- **If applicable, what is the number of stream miles and or lake or pond acres of brook trout habitat with sediment, phosphorous, or nitrogen inputs that were rehabilitated to within 25% of natural or other desired levels such as numeric state water quality criteria?**
- This project opened 3 miles of stream habitat.

*******_Please include before and after photos of the project with a photo release form and appropriate credit line for the photos._*********

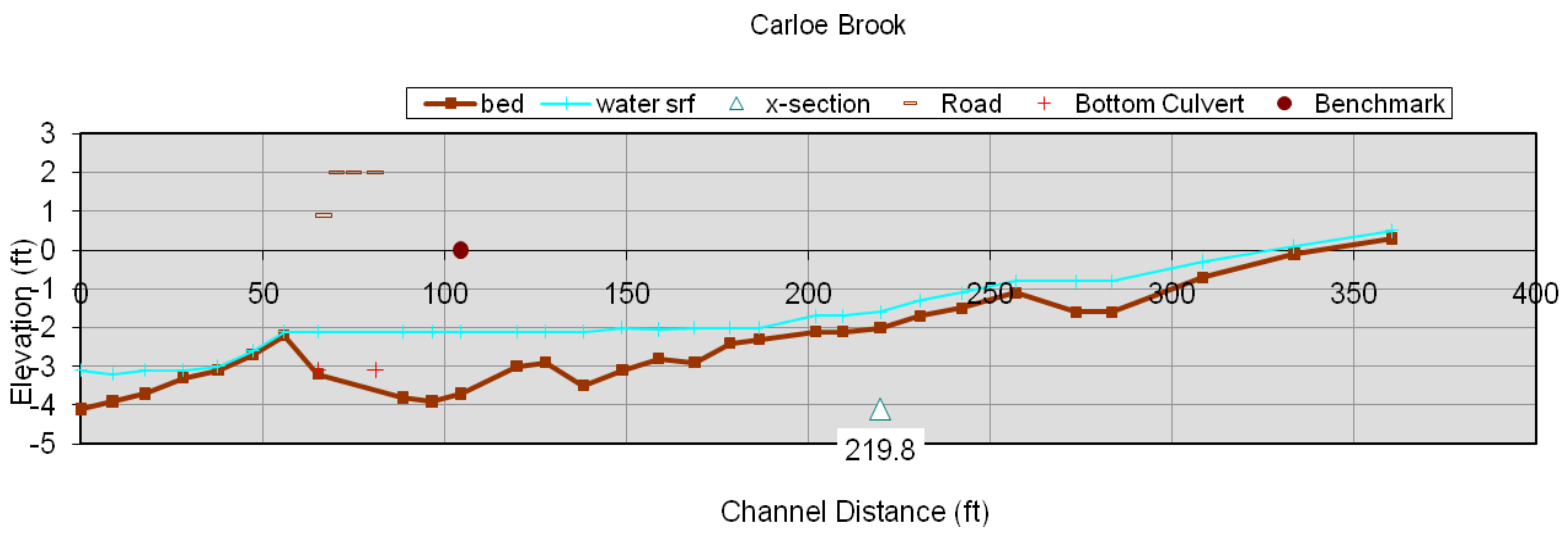
Looking upstream to Old Culverts (n=5).

Looking upstream to new 15 ft wide Open Arch. Aug 12, 2011

Photo Credits- Bob Cousins (Old Crossing) Keith Kanoti (New Crossing)

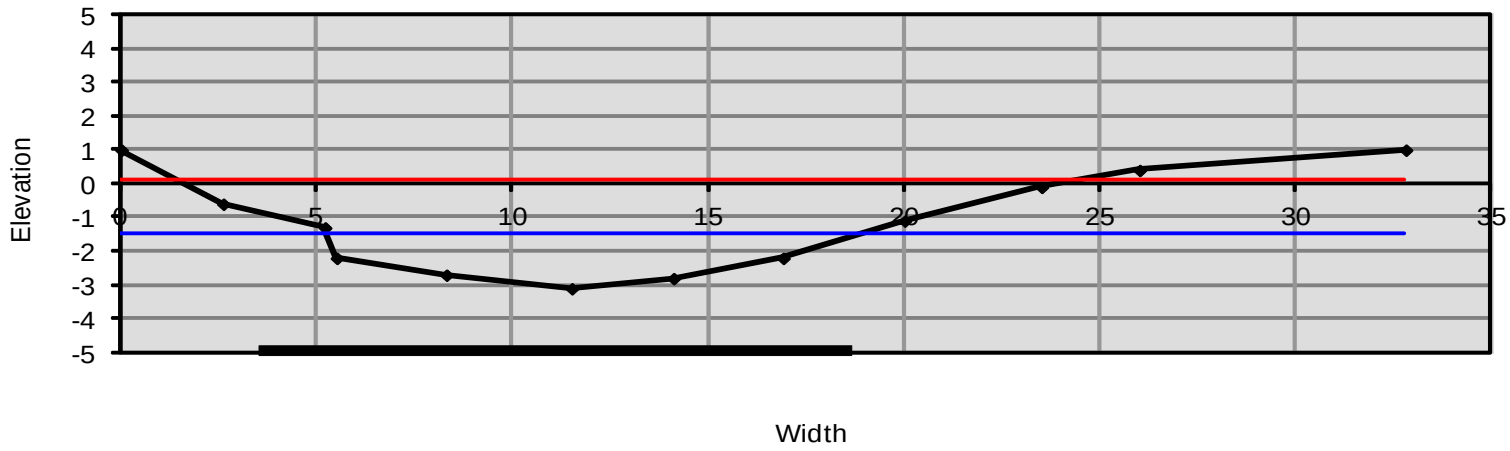


Water Temperature of Carloe Brook (above road) in summer 2011.



Lo

ngitudinal Profile- Pre Project.



Bankfull Dimensions		Flood Dimensions		Materials	
14.5	x-section area (ft.sq.)	23.0	W flood prone area (ft)	---	D50 (mm)
13.6	width (ft)	1.7	entrenchment ratio	---	D84 (mm)
1.1	mean depth (ft)	---	low bank height (ft)	31	threshold grain si
1.6	max depth (ft)	---	low bank height ratio		
14.4	wetted parimeter (ft)				
1.0	hyd radi (ft)				
12.8	width-depth ratio				

Channel cross section at location 219.8ft (Reference Area). Blue line= Bankfull, Red Line Flood Prone Elevation