

Blackledge River Habitat Restoration Project

Location: Colchester, Public property,
Salmon River State Forest

Completed: September 2004

Partners:

Department of Environmental
Protection

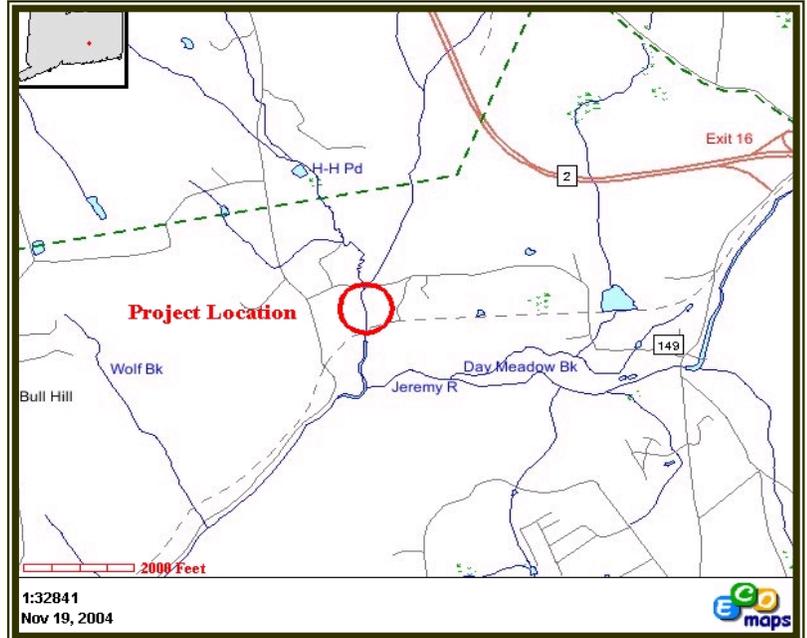
Inland Fisheries Division
Planning & Standards Division
Wildlife Division, (WHAMM)

Cost: \$120,000

Engineering and Design:

Biohabitats, Inc.

Meehan and Goodin, Inc.



Project Manager/Contact Information:

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Problem/Need

Approximately 710 feet of streambank along the lower Blackledge River had experienced channel instability and erosion. Based upon a review of aerial photographs, instability had been traced back to large flood events in 1973 and 1982. Within this stretch, an area approximately 440 feet in length was severely eroded causing a collapse of the streambank and degradation of instream aquatic and riparian resources. This lack of an extensive and stable root system contributed to significant quantities of sandy and coarse soils to erode and deposit downstream within the Blackledge River and Salmon River.

Restoration Actions

Design was based upon placing the subject reach of the river back into dynamic equilibrium, (condition where erosion/deposition are in balance) to effectively transport water and sediment. Approximately 440 linear feet of streambank was stabilized with a boulder rock toe up to the two-year storm elevation, erosion control fabric and live branch layering. At the top of the streambank, an upland vegetated riparian zone was restored with a variety of plants to establish a mixed hardwood forested riparian zone. A boulder J-hook structure was installed to deflect streamflow away from the stream bank and towards the stream's centerline. Several tree and rootwad structures were installed along the streambank to not only protect streambanks from erosion but to provide much needed large woody debris cover habitat for the resident fish community. Deep pool habitat was restored alongside the outside bank more than 200 feet in length.



Streambank erosion prior to restoration efforts.

Boulder toe, rootwad and streambank stabilization treatments during construction.



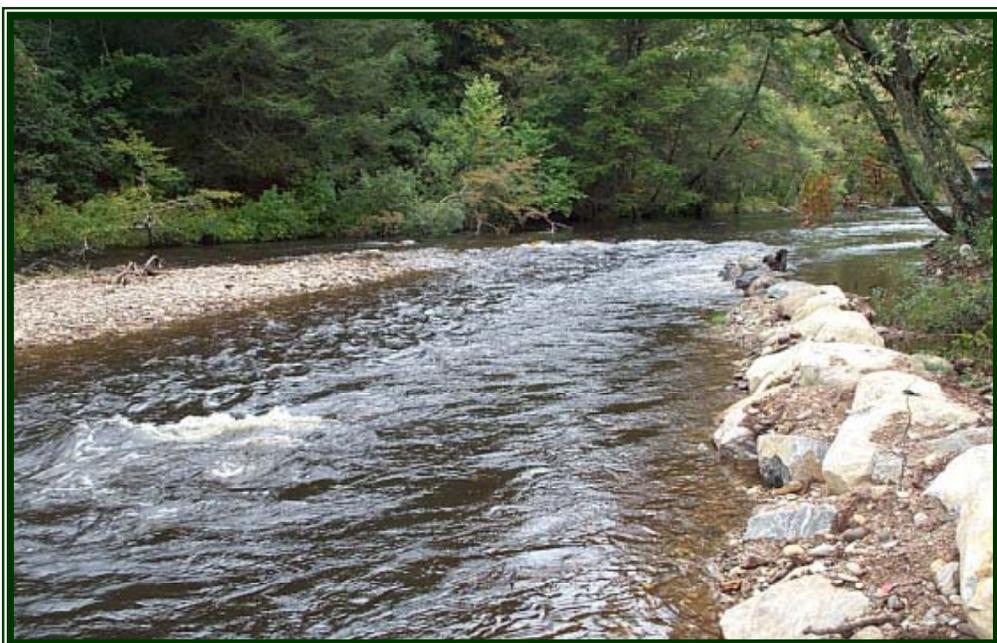
Bank stabilization treatments 1 week post project completion.



Construction of boulder J-Hook, a structure designed to redirect water away from streambank.



View of J-Hook looking upstream, immediately after construction.



J-Hook functioning during high flows to redirect water away from streambanks.