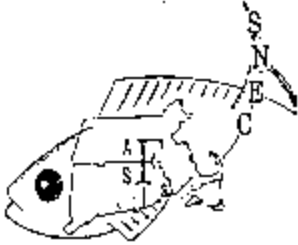


# Abstract Example Format



## *Southern New England Chapter American Fisheries Society*

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### **Merrick Brook habitat restoration: utilizing a geomorphology and bioengineering approach.**

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Approximately 350 linear feet of streambank along a channel meander of Merrick Brook was severely eroded causing a collapse of the streambank and degradation of instream and riparian resources. Irregular stream geometry was the suspected cause of channel instability (low radius of curvature) which resulted in an estimated loss of 400-600 tons of sediment from 1982-1998. Primary objectives were to restore the streambank, channel, instream and riparian habitat by incorporating geomorphology principles and soil bioengineering techniques into restoration design. Restoration design changed the low radius of curvature of 26 ft. to a higher radius of 85 ft. and the radius of curvature to bankfull width ratio from 0.5 to 2.1. These design parameters were consistent with stable meanders studied at reference sites within Merrick Brook. To achieve the higher radius of curvature, 60 ft. of existing channel was realigned and 150 ft. of new channel was created through a forested floodplain. A total of 140 ft. of channel was abandoned and converted to floodplain and vernal pool habitat. Bank and instream structures were installed which include vortex rock weirs, rock vanes, and root wads. These structures provided for grade control, energy dissipation and flow deflection in the restored channel as well as restored salmonid habitat through the creation of scour pools and a deep narrow thalweg adjacent to overhead and instream cover. Completed in 1998 at a cost of \$89,000, the project has developed a stable channel morphology and exhibited only minor spot erosion after several bankfull events.

AV Needs: (indicate LCD Projector, Slide Projector or Overhead Projector)

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#### Notes:

- please provide full contact information for the primary author or contact author (mailing address, phone, fax, email) and at least professional affiliations for all other authors
- please limit the body of the abstract to approximately 250 words
- please submit in computer file format (rich text format (RTF), MS-Word or WordPerfect) to the current Program Chair
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