

NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM

Brown Branch Stream Restoration

Caldwell County, North Carolina



Biohabitats worked with the North Carolina Ecosystem Enhancement Program to restore approximately 6,000 linear feet of Brown Branch, a tributary to Mulberry Creek. Brown Branch was historically ditched

The restoration of Brown Branch incorporates a holistic approach to reconnecting the ecological processes of the floodplain with the geomorphological process of the stream channel.

and relocated to one side of a grazed alluvial valley. Entrenched into its former stream deposits, the stream had lost connectivity with its floodplain and proceeded to widen via chronic bank erosion.

Biohabitats' restoration design involved re-meandering the channel through the open valley fields, establishing a low floodplain surface, and revegetating the riparian area with native species. The design also sought to preserve existing recreational opportunities at a 4-H camp on site.

Restoration strategies incorporated natural channel design, fluvial geomorphologic principles and soil bioengineering techniques. Biohabitats' plan included in-stream design

techniques such as log vanes, J-hooks, root wads, rock cross vanes, log bank protection and log J-hooks. To create a mosaic of wetland and forested communities, complex floodplain grading included depressions left where the existing channel was abandoned. Standing snags, brush piles and downed logs were also left along the floodplain to increase habitat diversity and wetlands. Permanent fencing and watering facilities were installed to restrict livestock access to the restored channel.

SERVICES

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Construction Procurement
Construction Management
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*conservation planning
ecological restoration
regenerative design*



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