Restoration and Stabilization along Lake Julia Outfall

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The stream's right-side bank was falling in...

Lots of soil was washing into the stream. Trees were being undercut and falling down, causing the embankment to continue to erode

The old stream was created when Lake Julia was built in the 1960's. But, because this channel was not located in the naturally flat floodplain, the force of the water over time had cut away sections of the old embankment along the right-hand side.

The old stream channel was dis-connected from the flood-plain, forcing the stream to carve deeper into the earth.

The stream bottom was flat and silted-over, hindering fish habitat.

....So we created a new, stable channel.

Restoration work was done in May 2011

Surveying & clearing a new stream path.

Building up a boulder vane structure.

Excavating a new stream channel.

Filling in the old channel.

Almost done, awaiting grass seed.

Riffles dissipate the water's energy, add habitat, and increase the oxygen in the stream.

Boulder vanes focus the stream flow towards the center of the channel.

Limbs and brush anchored into the streambank provide shelter for fish and beneficial aquatic insects which the fish use for a food source.

Downstream, looking back towards the bridge. The new streambank gradually slopes upwards and is stabilized with fiber netting.

Check Out The New & Improved Stream

Nearly 600 feet of stream was restored. This stream flows into the Little River, which is frequently visited for trout fishing. Fixing this stream will help to protect the trout habitat in the Little River. Even though we had to remove trees along the left-side of the streambank, new planted tree seedlings will help to re-forest the stream corridor. The new streambanks have been sloped back at a gradual angle to allow water to more easily rise out of the stream channel during storms and re-connect with its natural floodplain area. Allowing a stream to reach out into its floodplain will minimize flooding damage further downstream.

Our partners from NCSU held a workshop for stream restoration experts near completion of the work to show off the techniques used here.

Project Partners & Cooperators

N.C. Division of Water Resources
Water Resources Development Grant

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