

## ***East Prong of the Roaring River, Stone Mountain State Park, NC***

In the past, the East Prong of the Roaring River was greatly impacted by in-channel gravel mining, as well as agriculture throughout the valley. These human activities over time led to increased erosion, poor water quality, and the loss of instream and shoreline habitat in one of North Carolina's most popular trout streams. To address these impacts, a stream restoration project was undertaken on nearly 2 miles of the East Prong within the boundaries of the Stone Mountain State Park. The watershed area is approximately 22 square miles and is located in Wilkes and Alleghany counties in the Yadkin River Basin.

### **What was done and why?**

To restore the East Prong, a complete floodplain rehabilitation project was undertaken. This project included stabilizing stream banks and installing in-stream structures such as cross-vanes, rock vanes, and j-hook vanes to restore proper channel dimensions. Six thousand feet of new channel were excavated with the old, unstable reaches either filled or left as ponds to provide habitat for birds, amphibians, and other wildlife. The restoration of the channel to its original floodplain has resulted in the restoration and enhancement of wetlands that will filter runoff and provide wildlife habitat. Finally, riparian vegetation was planted using native species. When complete, the stream length will have increased from 8,336 feet to 10,662 feet. The additional stream length and the riparian vegetation will greatly increase the habitat and recreational functions of the East Prong River.

The goals of this project are to:

- Improve water quality degradation caused by sedimentation through restoration of the stream to its stable dimension, pattern, and profile.
- Restore the aquatic and terrestrial habitat of the stream corridor.
- Restore the functions of the floodplain and wetland systems.
- Improve the natural aesthetics of the stream corridor.
- Educate visitors about natural stream design and construction techniques.

### **Who was involved?**

The Stone Mountain State Park stream restoration project is a collaborative effort between the N.C. Wetlands Restoration Program, N.C. Division of Parks and Recreation, N.C. State University, and N.C. Stream Restoration Institute. Other participating agencies include: N.C. Wildlife Resources Commission, N.C. Division of Land Quality, and the U.S. Fish and Wildlife Service.

### **Where can I see the results of this project?**

Visit Stone Mountain State Park in Wilkes County, NC. Read more information in on the webpage of the [N.C. Stream Restoration Institute](#).

### **Why is this a model project?**

This was one of the first whole channel reconfiguration projects in the Southeast. Researchers at North Carolina State University have studied it extensively to understand in what ways it succeeded and in what ways it could be improved to better meet the goals of the project. This project meets several of the suggested standards for ecologically successful restoration, including having a guiding image and having a fully developed monitoring and evaluation program that is being used to inform the practice of restoration in the Southeast.

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pre-restoration (photos courtesy of NC Stream Restoration Institute)



Under construction (photo courtesy of NCSU College of Agricultural and Life Sciences)



post-restoration (photo courtesy of NCSU College of Agricultural and Life Sciences)

