

Trout Unlimited
FishAmerica Foundation
Restoring stream habitat for Brook Trout in Wolf Creek, Cocke County, TN
Final Report

This project sought to achieve four goals; 1) replace a failing double-culvert crossing with a bridge to reduce sedimentation risk and reconnect the Brook Trout population, 2) reconstruct the impacted stream bed to mimic a natural stream system, 3) place course wood material to create better stream habitat, and 4) revegetate streambanks impacted by construction.

Goals 1, 2 and 4 were completed by 31 December 2022. P&L Construction were hired by Trout Unlimited for the crossing replacement and stream restoration. The two 6' corrugated metal pipes were removed. About 300' of streambed was reconstructed to replicate the habitat found in an upstream reference reach of Wolf Creek and the streambanks reconstructed to match the natural banks above and below the site. Four separate riffle/pool sequences were installed and habitat features such as log vanes and boulder were placed in the reconstructed reach. Construction was completed in October 2022.

A workday was held on 29 November 2022 to install live stakes in the newly constructed banks. Two volunteers from Cherokee Chapter Trout Unlimited and 3 staff members from the US Forest Service placed more than 400 stakes throughout the project area. These plantings will stabilize the area and discourage illegal offroad use.

Goal 3 was put on hold until 2024. It was determined that placing wood into the main project area should not be done until the site stabilizes. TU plans to place wood upstream and downstream of the culvert during the 2024 wood loading season. This placement will be guided by data that the US Forest Service collected on habitat and existing wood loading.

Photo Captions

- WolfCreek_PreProject_CulvertOutlets – An image of the original culvert outlets at Wolf Creek. It is easy to see why this was a passage barrier as both outlets are perched and no water is flowing through the culvert on the left side of the image. – Photo by Andy Brown. Taken in 2019.
- WolfCreek_PostProject_BridgeOutlet – A picture of the outlet side of the new bridge on Wolf Creek. This photo also shows the multiple riffle/pool sequences that were reconstructed based on the upstream reference reach. – Photo by Jeff Wright. Taken 10/25/22
- WolfCreek_VolunteerLiveStaking – Two volunteers from Cherokee Chapter Trout Unlimited installing live stakes at Wolf Creek in November 2022. These live stakes will help stabilize the reconstructed streambanks and discourage illegal, off-trail vehicle use. – Photo by Jeff Wright. Taken 11/29/22