



Town Branch Stream Restoration, Phase I Winchester, KY September - December, 2010

The purpose of this project was to lengthen and restore 5,862 feet of degraded channel in Town Branch at Winchester, KY. This Clark County tributary to Strodes Creek will benefit from a natural channel design that will produce nearly 7,000 feet of restored stream meanders and a 200-foot vegetated corridor. Sections of Town Branch within the project area were likely physically altered in the past to facilitate agricultural needs, construction of the railroad, or installation of a sewer line. As a result, habitat conditions in and along the creek are considered “Poor” due to little to no forested riparian area on either bank, a low substrate diversity, channelized/straightened sections and eroded banks.

The quality of water within the creek has been degraded by urban development upstream (City of Winchester) and non-point sources likely due to agricultural, residential, and transportation uses. Town Branch is a perennial tributary to Strodes Creek, which has been identified by the Kentucky Division of Water as impaired by sedimentation, nutrients, organic enrichment (sewage) and fecal coliform. The combination of a degraded stream channel, minimal riparian habitat, poor water quality, non-point source pollutants and large volumes of stormwater runoff have resulted in an unhealthy creek. Strodes Creek Conservancy is a local watershed organization undertaking stream and wildlife habitat improvement projects within the Strodes Creek. Through their coordination, partners include: Kentucky Waterways Alliance, US Fish and Wildlife Service, Kentucky Field Office, Kentucky Aquatics Resource Fund, Southern Conservation Corporation and Kentucky Transportation Cabinet’s stream mitigation program.

The goal of this project is to restore both the physical and biological elements of a healthy and stable central Kentucky stream system. Meanders and bends in the creek will slow down the water velocity during rain events. A sequence of deep pools and shallow riffle sections will provide variations of aquatic habitat. The banks will be sloped and stabilized to reduce erosion and sediment pollution. The floodplain will be lowered to accommodate large storm events. A diverse selection of native trees, shrubs, wildflowers and grasses suitable for the area will help reinforce streambanks, filter nutrients, trash and other pollutants as well as providing shade, food and shelter for wildlife. In addition to the visible changes on site, the project is creating groundwater aquifers below the

surface to work towards removing pollutants and improving water quality by using naturally occurring chemical and biological processes.

Key Features:

- Design/build
- Hyporheic aquifer
- Water quality treatment
- Natural stream channel design
- Riparian buffer
- Wetlands construction

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