

SNAPFINGER CREEK STREAM RESTORATION & WETLANDS

Pine Lake, Georgia



CLIENT

City of Pine Lake, Georgia

SCOPE OF SERVICES

Grant Application Support

Wetland Design

Stream Restoration Design

Plant Species Selection

Construction Plans

Bid Documents

Construction Oversight

Grant Management Support

Survey



Pine Lake is located about 13 miles east of Atlanta. Snapfinger Creek enters the City at its northeast corner, and flows through the City around the lake. Adjacent to the main channel of Snapfinger Creek is a diversion channel that directs storm flow from the City, from offsite and some overflow from Snapfinger Creek, to feed Pine Lake. A berm separates the channels at the north boundary of Snapfinger Creek, but due to frequent overtopping and high velocity storm flows this berm had become eroded and was failing.

In an effort to preserve, improve, and protect Snapfinger Creek the City acquired the entire stream corridor within City limits. The City contracted with Manhard to develop a Water Quality Improvement and Habitat Enhancement Project along Snapfinger Creek both upstream and downstream of their lake. Manhard successfully developed a **319(h) grant** application for the City that ultimately funded this project.

The project had two phases:

Phase 1 focused on restoration of the damaged berm, restoring the stream using Rosgen methodology, and placement of a new diversion structure at the City limits to prevent undermining of the existing earth berm.

Phase 2 was the development of wetland treatment cells within the 2-acre upstream project area for water quality improvement and habitat enhancement. For the constructed wetland area, the design included creating a low flow sinuous channel to maintain the water level within the wetland during normal rainfall conditions and drought periods.

The constructed wetland system was designed to treat a variety of urban stormwater pollutants. The wetland treatment cells help reduce total suspended solids (TSS), fecal coliform, and other pollutants of concern typical of an urban watershed. Ultimately, the water released from the wetlands is cleaner than when it entered the system. Additionally, through the upstream bank improvements along Snapfinger Creek, a major source of sediment was removed through the stabilization and planting of highly erosive areas.