

# Garner Creek Stream Restoration & BMP Design

Gwinnett County, Georgia

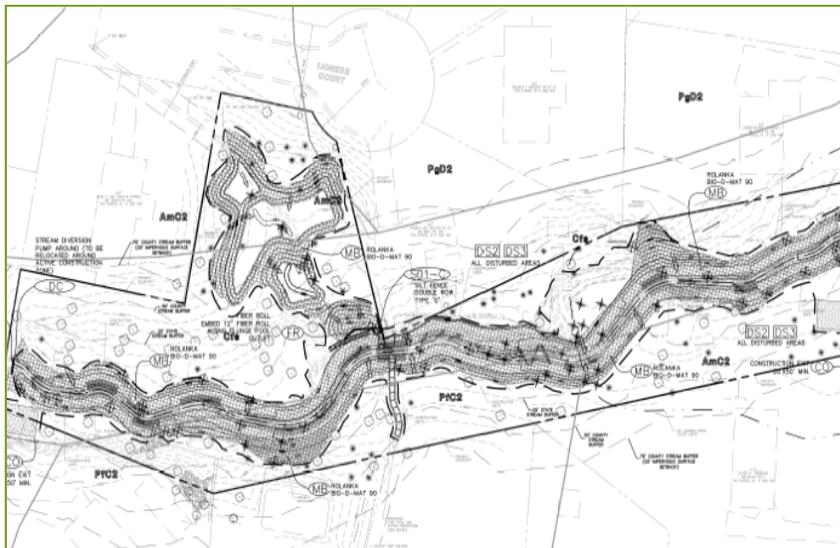


## CLIENT

Gwinnett County Dept. of Public Utilities

## SCOPE OF SERVICES

Stream Assessment  
Stream Restoration  
H&H Modeling  
BMP Design  
Storm water Design  
Plant Species Selection  
Construction Plans  
Bid Documents  
Construction Oversight



Gwinnett County selected Manhard as one of their on-Demand Consultants for professional services related to Watershed Management. In 2009, three stream restoration and BMP projects were awarded to Manhard under this contract, one of these projects was the Garner Creek stream restoration and BMP design project. This project is also known as “Lions Trail”.

The Lions Trail project is located along Garner Creek, within a County-owned parcel in Stone Mountain. The project site is about 3.5-acres. The streambanks along Garner Creek have become eroded over time causing bank failure to occur in places, which in turn is allowing large amounts of sediment to flow downstream during large storm events. The stream is also undercutting the toe of slope in several areas.

Manhard led the site analysis and restoration design for the Lions Trail site. The final design included stream restoration along 1072 linear feet of Garner Creek to provide a stable system within this stream reach. Primary activities required to restore the stream include a natural stable stream channel that maintains its dimension, pattern, and profile such that it does not degrade or aggrade. The stream system will also be stable in that it will maintain its function and form while transporting the sediment load supplied by the watershed. Bankfull benches will be constructed within the relocated channel and vegetated. Instream structures such as j-hooks, cross vanes, log vanes, brush matting, and rootwads will be installed within the restored stream channel. A small ephemeral stream lies within the stream buffer. Within this stream, a step pool system will be constructed in order prevent streambank erosion of the restored channel.

Additionally, the project included the design of a stormwater wetland bmp that will intercept storm flow from approximately 14 acres of the surrounding developed residential area. Georgia Stormwater Management Manual Design Criteria was used to maximize water quality benefits from this BMP.