
TOWN OF CHAPEL HILL NORTH CAROLINA

Eastwood Lake Watershed Study

Chapel Hill, North Carolina



Assessing the subwatershed to identify opportunities for ecological restoration, green infrastructure, and stormwater BMP retrofits.

A subwatershed study helps the Town of Chapel Hill identify and prioritize strategies for watershed-wide water quality improvement, flood mitigation, and infrastructure protection.

SERVICES

Engage
Assess
Plan

As part of a watershed master planning effort designed to control flooding, stabilize streams, and improve overall water quality in the Town of Chapel Hill, the Town's Stormwater Management Program launched studies of four subwatersheds within the Booker Creek Watershed.

A key member of a study team led by WK Dickson, Biohabitats helped conduct a study of the Eastwood Lake subwatershed, an area spanning nearly 700 acres and containing a popular community water resource. Biohabitats began by performing a desktop screening using GIS and data layers provided by the Town. This pre-analysis allowed for a more efficient stream walk and field investigation to supplement data with written, GPS and photo documentation of perennial and intermittent streams. Using the Center for Watershed Protection's Unified Stream Assessment protocol to locate stormwater outfalls and evaluate accompanying problems, Biohabitats identified and prioritized restoration opportunities, which included buffer and stream restoration, regenerative stormwater conveyances, and stormwater control measure retrofit concepts. Biohabitats then conducted water quality modeling to assess watershed hydrology and water quality changes based on the implementation of various restoration and retrofit strategies.

To help ensure that study findings were informed by and communicated to the community, Biohabitats participated in public and stakeholder meetings. Biohabitats prepared a summary of findings and models, which was subjected to a capital construction cost analysis and ultimately incorporated into the Subwatershed Study and Watershed Master Plan.