



At Work

Productive Local Partnerships: Extension Train-the-Trainer Program Protects Drinking Water in Durham and Wake Counties

Durham is the headwaters of two major North Carolina watersheds, the Neuse and the Cape Fear Rivers, which supply drinking water to Falls and Jordan Lakes and to over 750,000 residents of Wake County. Unmanaged urban stormwater flows and human activities like home and commercial construction and landscaping activities increase stormwater flows as well as sedimentation and nutrient pollution which often severely damages smaller, local streams. Ellerbe Creek in Durham was identified by the NC Department of Water Quality as the most degraded area stream. It was this classification that led to the formation of the Ellerbe Creek Watershed Association (ECWA), a grass-roots nonprofit dedicated to protecting and restoring Ellerbe Creek.

For over 10 years, Extension Area Specialized Agents Mitch Woodward and Bill Lord have partnered with the Ellerbe Creek Watershed Association (ECWA) volunteers to accelerate adoption of stormwater control measures (SCMs) and raise awareness of science-based solutions for Ellerbe Creek by delivering train-the-trainer workshops on SCMs.

Extension has partnered with the ECWA to deliver over 10 train-the-trainer workshops to hundreds of volunteers on subjects ranging from raingardens to innovative water harvesting to stream repair. In turn, ECWA has held over 20 workshops ON THEIR OWN working side-by-side with property owners to install over 200 SCMs in the watershed, routinely attracting over \$100,000 in contributions and grants annually. One ECWA project completed in 2016 at The Watts School in Durham installed five raingardens and rehabilitated a soccer field to capture and treat approximately 1 million gallons of stormwater annually. The project attracted over \$75,000 in funding and is used to educate the community on stormwater management. In a letter received from a resident living near the school, the parent wrote, "My two children who attend the school play in the raingardens and soccer field almost every day and I can't tell you how much the project has improved the playground, provided an outdoor classroom for students, and cleaned up Ellerbe Creek!"

Extension partnered with NCSU engineering researchers to



successfully develop and test a rainwater harvesting practice that reduced stormwater runoff by over 88% to local streams by using advanced irrigation system controllers that allowed controlled stormwater release after storms. A paper on the study was delivered at the 2016 International Low Impact Development Conference in Portland, ME.

The initial 10 workshops organized by Extension have created a ripple effect across the community. EWCA now has the tools it needs to continue to educate and support community members as they implement critical stormwater control measures. The SCMs implemented have significantly reduced stormwater runoff into Ellerbe Creek, thereby improving the region's overall water quality.

Because EWCA has the tools it needs to develop successful workshops on their own, Extension's impact reaches far beyond what it would have been able to accomplish alone. This suggests that Extension is strongly positioned to implement effective train-the-trainer programs that build local capacity to address issues like stormwater runoff.

For more information about this project, please contact:



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