



South Ellerbe Wetland Project

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Project Facts – Proposed South Ellerbe Wetland Project

- The City's Public Works Department is proposing to construct a wetland at the site of the former Duke Diet and Fitness Center, 808 West Trinity Avenue. This site, owned by Duke University, lies along a South Ellerbe Creek tributary that flows into Falls Lake.
- If constructed, this project could eliminate 500 – 1000 pounds of nitrogen annually as well as remove additional pollutants from this heavily developed area of Durham from flowing to Falls Lake. It would require 15 – 25 smaller projects to achieve that same amount of pollution reduction.
- In January 2011, the [Falls Lake Nutrient Management Strategy Rules](#) were adopted by the State of North Carolina. These rules aim to improve water quality in Falls Lake by reducing the amount of pollution coming from stormwater runoff from new and existing development, wastewater treatment plants, and agriculture.
- The Falls Lake Rules require a reduction in the amount of nitrogen and phosphorus entering the lake. These pollutants are targeted because they cause algae blooms and affect the water quality and uses of the lake. Falls Lake is a major water supply and is used as flood control, a fish and wildlife conservation area, and recreation.
- Locally, this project would benefit Ellerbe Creek and South Ellerbe Creek by providing flood control, improving aquatic health and reducing pollutants such as zinc, bacteria, sediment, nitrogen, and phosphorus.

Why was this site identified for this project?

Wetlands (including man-made ones) are a sustainable way to treat stormwater runoff. The former Duke Diet and Fitness Center site was identified as a potential site for a wetland for several reasons:

- It is a developed low point in the watershed where two large heavily developed drainage areas come together.
- The site provides an opportunity for wetland microbes, plants, and soil to reduce pollutants by natural processes.
- The nine acre site is large enough to design a wetland to State standards that treats both drainage areas and provides flood control.

Is this the only location for the project?

Yes, the proposed location is unique within the City of Durham. Its large size and geographical location in the watershed mean that it receives polluted stormwater runoff from 485 acres of heavily developed area. This project will provide for a portion of the reduction for the Falls Lake Rules. Additional projects in other developed areas are necessary in order to comply with the rules.

What else is the City doing to reduce the pollution entering Falls Lake and improve water quality?

The City is working with other partners in the watershed on various projects to help improve water quality by using cisterns, permeable pavement, green roofs, stream restorations, residential rain gardens, floating wetlands, algal turf scrubbers, and tree box filters. Other initiatives include fixing leaky sewers, increasing preservation areas, improving landscape and maintenance practices, and studying other sources of nitrogen such as atmospheric deposition. The City is also working with [Upper Neuse River Basin Association](#) on a monitoring and modeling project to address concerns for the Existing Development Stage 2 reductions required by the Falls Lake Rules.

What types of amenities will be considered?

If approved, the City would like for the project to become a community asset. The South Ellerbe Creek Trail will be realigned to provide opportunities for viewing areas, seating, interpretive signs, and trailhead parking. The wetland could also be used by nearby schools and universities as a 'Living Laboratory' to study nature and aquatic ecology. Additional input on amenities is being collected by City staff.

How much will the project cost?

The project is estimated to cost about \$8 million. Annual maintenance would include regular trash removal, replanting as necessary and maintenance of the structural components of the facility. Overall, the City is looking at costs in the hundreds of millions of dollars to clean stormwater in accordance to the Falls Lake Rules.

What are the next steps in this process?

Several meetings are being held for the public to ask questions and learn more about the concept plan for the proposed wetland. This fall, City staff will present the results of the public comment period to the City Manager. Ultimately, City Council will decide if the project should move forward.

How do I get more information?

In addition to the public meetings, the City will provide updates at www.DurhamNC.gov/Stormwater. You may also contact the people listed at the top of this sheet. Information on the Falls Lake Nutrient Management Strategy Rules is available at: <http://portal.ncdenr.org/web/wq/ps/nps/fallslake>. Information on the Upper Neuse River Basin Association is available at: www.unrba.org.

