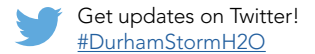
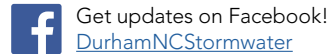




City of Durham Public Works Department - Stormwater & GIS Services Division
South Ellerbe Restoration Project

Frequently Asked Questions (FAQ) - February 2022

For more information, visit the project web page: <https://durhamnc.gov/1616>. You may also contact the City's Project Manager, **Sandi Wilbur**, at Sandra.Wilbur@DurhamNC.gov or (919) 560-4326, ext. 30286 or **Megan Walsh** at Megan.Walsh@DurhamNC.gov or (919) 560-4326 ext. 30220.



QUESTIONS (click a question below for the answer):

Project and Site Information

1. Why is there a need for this project?
2. What is the proposed project and how will it work?
3. Does the City own the site?
4. What is unique about this site?
5. Why does this site receive so much stormwater runoff?
6. Why did the existing building have to be demolished?
7. How much water will the constructed wetland hold?
8. How long will it take for the project to establish vegetation (i.e. to "grow in")?
9. Will the project attract nuisance species such as geese or mosquitoes?
10. What community amenities are being considered for this project?

Project Costs and Schedule

11. How much will the project cost to construct?
12. What will annual maintenance costs be?
13. What is the project timeline?
14. Is the project being coordinated with other departments?
15. What other projects or practices are being considered to meet the Falls Lake Rules?

Additional Information

16. How has the City been getting the word out about the project?
17. How do I get more information?

ANSWERS:

1. **Why is there a need for this project?** (return to top)

The [Falls Lake Nutrient Management Strategy Rules](#) were adopted by the State of North Carolina 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 can affect the water quality. A cleaner Falls Lake will help support its uses for drinking water supply, fish and wildlife habitat, and recreation. This project could help to reduce 500-1000 pounds of nitrogen annually from flowing

into Falls Lake, as well as remove additional pollutants from this heavily developed area of Durham. The project will provide additional ecosystem enhancements such as: increased biodiversity, increased green space and pollinator friendly habitat, carbon sequestration, and improved aquatic life for South Ellerbe Creek and Falls Lake.

2. What is the proposed project and how will it work? (return to top)

The project at 808 West Trinity Avenue is a constructed wetland and stream restoration. The City and its consultant, Wildlands Engineering, will design and build the restoration in several phases. Phase 1 of the project was the demolition of the existing building, which was completed in 2018 (see Question 6). Phase 2 of the project requires the removal of up to 50,000 cubic yards of soil. The City plans to reduce hauling and disposal costs by reusing some of the soil at suitable locations. Phase 3 will be the construction of the wetland and stream restoration that will incorporate features that promote natural filtration of pollutants. Constructed wetlands are built to mimic the functions of natural wetlands. As stormwater flows through the site, wetland microbes, plants, and soil filter pollutants and treat the water through natural ecological processes. To get up-to-date information on the proposed project, visit the project website: <https://durhamnc.gov/1616>. To learn more about the functions and benefits of constructed wetlands, watch this video: https://youtu.be/iK8rgCj_Nqq. A Spanish version of the video is also available: <https://youtu.be/JYXLCUU2WcQ>.

3. Does the City own the site? (return to top)

Yes, the City of Durham purchased the property in December of 2015.

4. What is unique about this site? (return to top)

This nine-acre site is unique within Durham due to its size and location in the watershed. The site is a natural low point in the watershed that receives stormwater runoff from two densely developed drainage basins, including a good portion of the downtown area totaling 485 acres. As rainwater runoff from these 485 urban acres makes its way to South Ellerbe Creek, it picks up pollutants such as nutrients, sediment, and litter. This constructed wetland and stream restoration will filter the polluted runoff before it enters the creek.

5. Why does this site receive so much stormwater runoff? (return to top)

It is a natural low-point where stormwater runoff collects from the City's drainage system. Stormwater runoff that reaches the site has primarily traveled through a closed pipe drainage system as opposed to a natural stream channel system. The property is located in the 100-year floodplain and partially in the floodway where buildings or fill are not normally allowed.

6. Why did the existing building have to be demolished? (return to top)

The primary reason this wetland and stream restoration will be so effective is its size. If the building and adjacent parking were preserved, the space available for a wetland and stream restoration project would be insufficient to treat polluted runoff from the area draining to it.

7. How much water will the constructed wetland hold? (return to top)

The maximum volume of water that the constructed wetland will be able to hold will be approximately equivalent to 30 Olympic-size swimming pools (approximately 20 million gallons of water). The constructed wetland will only hold that much water during very large storm events. The volume of water that the wetland will be holding on a regular basis will be much less.

8. How long will it take for the project to establish vegetation (i.e. to "grow in")? (return to top)

The restoration project will be able to capture and treat stormwater runoff as soon as it is created, but, as with any garden, it may take a few seasons of growth for the plants to fully establish and become most effective.

9. Will the project attract nuisance species such as geese or mosquitoes? (return to top)

As with any natural area, birds and other small wildlife will likely spend time there. Shrubby vegetation, such as sedges, rushes, and inkberry, along the shore of open water areas will discourage geese. Research by NC State

University scientists has shown that proper design and routine maintenance of a stormwater facility helps to establish a balanced ecosystem. For more information see: <https://content.ces.ncsu.edu/mosquito-control-for-stormwater-facilities>. For information on how to help control mosquitoes that may spread the Zika virus, visit the Center for Disease Control: <https://www.cdc.gov/zika/index.html>.

10. What community amenities are being considered for this project? (return to top)

During the October 10, 2019 Council Work Session, a presentation was made to City Council that reflected changes to the project concept plan. The boardwalks, some seating locations, and the Durham Rail Trail overlook amenities were identified as not being integral to the South Ellerbe Restoration project and could not be paid for with stormwater utility funds. The approximate cost of those amenities is \$1.8 million. Public Works staff informed Council at that time that a different funding source would be needed to cover the costs of those additional amenities at the time of construction.

Despite these amenities being currently removed from the baseline project, key amenities currently included with this project are:

- Trinity Street Plaza area with the demonstration bioretention cell and educational area (estimated cost of \$715,000),
- Duke Street Plaza area with educational signage and seating (estimated cost of \$100,000),
- An open grass area for seating behind the Trinity Ave Plaza (estimated cost of \$265,000), and
- A half-mile trail around the facility.

These plaza areas will provide for seating and education use by schools and other groups, and the trail will provide for walking, jogging, and cycling around the facility as well as maintenance access. The South Ellerbe trail travels through the project and will continue to the existing trail north of the site. Connections to the future Durham Rail Trail are being coordinated with our staff. This also allows for some of the top-rated amenities from the community survey to remain in the funded project scope, including access to nearby trails and educational signage. Once constructed, the project will achieve the top two priorities identified in community survey results - improve water quality in Ellerbe Creek and to create a natural area that improves habitat for wildlife.

11. How much will the project cost to construct? (return to top)

The estimated project cost is \$17.8 million, which includes land acquisition, professional design services, building demolition, soil removal, wetland and stream restoration construction, and landscaping and site stabilization. The estimated project cost does not include amenities that were identified as not being integral to the South Ellerbe Restoration, such as boardwalks, some seating locations, and the Durham Rail Trail overlook amenities (see Question 10 above).

12. What will annual maintenance costs be? (return to top)

The estimated annual maintenance cost is at least \$50,000, although this will depend on the amenities ultimately included in the final design. Annual maintenance will include such things as regular trash removal, replanting as necessary, invasive species control, upkeep of amenities, and maintenance of the structural components of the facility.

13. What is the project timeline? (return to top)

Field teams have completed environmental assessments that will inform the design process. In 2018, crews removed the former Duke Diet and Fitness Center building and stabilized the site (Phase 1). Since then, the project team has been coordinating the design for Phase 2 - Soil Removal and Phase 3 - wetland and stream

restoration construction, obtaining necessary permits, and preparing construction bid documents.

In the next step of the construction timeline, up to 50,000 cubic yards of soil will be removed/reused from the project site in 2022. After that, construction will begin on the wetlands and stream restoration in 2022.



Snapshot of the project timeline

14. Is the project being coordinated with other departments? (return to top)

Yes, the project is being coordinating with the Planning Department, Parks and Recreation Department, Transportation Department, City Manager’s Office, General Services, Department of Water Management, Solid Waste Department, Public Works, as well as other departments as needed.

15. What other projects or practices are being considered to meet the Falls Lake Rules? (return to top)

The City is working with other partners in the watershed on various projects to help improve water quality in a holistic way by using cisterns, permeable pavement, green roofs, stream restorations, residential rain gardens, floating wetlands, algal turf scrubbers, and tree box filters. For more information on some of these and other green infrastructure practices, visit the City’s Green Infrastructure website: <https://durhamnc.gov/1619>. 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 (<http://www.unrba.org/>) on a monitoring and modeling project to address the Existing Development reductions required by the Falls Lake Rules. This wetland and stream restoration project will be part of a larger comprehensive watershed strategy.

16. How has the City been getting the word out about the project? (return to top)

Public outreach has been a top priority for the project team. Up-to-date information about the project has been distributed through the project website (<https://durhamnc.gov/1616>), Facebook (@Durhamncstormwater), Twitter (@DurhamStormH2O), and YouTube (CityofDurhamNC) pages. Paper and digital versions of project status reports, meeting announcements, and press releases have been distributed and posted on the project website. Short videos that provide background on the project, summarize meetings, and highlight functions and benefits of constructed wetlands have been produced and posted on the project website. In an effort to reach Spanish-speaking residents, bilingual postcards that summarize the project and contain information about upcoming public meetings have been created, distributed, and posted on the project website. Spanish interpreters also attended project meetings.

17. How do I get more information? (return to top)

Information about the public meetings and other updates are provided at <http://durhamnc.gov/1616>. 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: <https://deq.nc.gov/about/divisions/water-resources/water-planning/nonpoint-source-planning/falls-lake-nutrient-strategy>. Information on the Upper Neuse River Basin Association is available at: <http://www.unrba.org>.