

**FINDING OF NO SIGNIFICANT IMPACT
AND ENVIRONMENTAL ASSESSMENT**

**CITY OF NEW BERN
DUFFYFIELD COMMUNITY STORMWATER ENHANCEMENTS PROJECT
PHASES 2 and 3**

**RESPONSIBLE AGENCY: NORTH CAROLINA DEPARTMENT OF
ENVIRONMENTAL QUALITY**

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FINDING OF NO SIGNIFICANT IMPACT

Article I, Chapter 113A of the North Carolina General Statutes requires an action to be subject to the requirements of the North Carolina Environmental Policy Act (NCEPA) if it involves the expenditure of public funds and if a potential impact is anticipated to the environment. The project has been evaluated for compliance with the NCEPA and is determined to be a major agency action, which will affect the environment.

Project Applicant:	City of New Bern, North Carolina
Project Description:	The proposed project is a stormwater management project including construction of a stormwater control measure in the form of interconnected stormwater wetland areas intended to mimic the function of a natural wetland. The project will include construction of approximately 4.0 total acres of stormwater wetlands on an 8.22-acre project site to reduce flooding and improve water quality. The constructed wetland will drain to Biddle Street Stormwater Pond and Pump Station and will be designed to collect and treat runoff from the approximately 58-acre drainage area surrounding the project area.
Project Number:	CS370483-05 & SRP-SW-ARP-0016
Project Cost:	\$4,293,326
Local Assistance for Stormwater Infrastructure Investments Fund:	\$4,149,360
NCEM State Appropriation:	\$143,966
NC DOJ Environmental Enhancement Grant	\$66,100
Clean Water State Revolving Loan Fund:	\$855,000 (To be used only if construction costs exceed estimated cost and available grant funding)

The review process indicated that significant adverse environmental impacts should not occur if mitigative measures are implemented, and an environmental impact statement will not be required. The decision was based on information in the Engineering Report/Environmental Information Document (ER/EID) submitted by the applicant and reviews by governmental agencies. The attached Environmental Assessment (EA), prepared by the Division based on the ER/EID, supports this action and outlines mitigative measures that must be followed. This Finding of No Significant Impact (FONSI) completes the environmental review record, which is available for inspection at the State Clearinghouse.

No administrative action will be taken on the proposed project for at least 30 days after notification that the FONSI has been published in the North Carolina Environmental Bulletin.

Sincerely,

Stephanie Suter

Stephanie Suter, Deputy Director
Division of Water Infrastructure

ENVIRONMENTAL ASSESSMENT

A. Proposed Facilities and Actions

The proposed project is a multi-phase stormwater management project to reduce flooding and improve water quality in the Duffyfield Community in the City of New Bern. Proposed work reviewed in this environmental assessment includes construction of a stormwater control measure in the form of interconnected stormwater wetland areas intended to mimic the function of a natural wetland. The proposed project will construct approximately 4.0 total acres of stormwater wetlands on an 8.22-acre project site. The constructed wetland will drain to Biddle Street Stormwater Pond and Pump Station and will be designed to collect and treat runoff from the approximately 58-acre drainage area surrounding the project area. This proposed work includes Phases 2 and 3 of a multi-phase project. Phase 1, which was separately funded and is already underway, includes the rehabilitation of Biddle Street Stormwater Pond and a pump station. Phase 4 will be designed to incorporate educational and recreational opportunities, subject to the City's ability to acquire adjacent properties. Phase 4 will be separately funded, and improvements may include walking trails and boardwalks, a playground, benches, descriptive signage, and parking facilities.

The proposed constructed stormwater wetland, in combination with the stormwater pump station and force main constructed under Phase 1, will be designed to provide storage volume to reduce the frequency and duration of the nuisance flooding currently experienced in the area, and to provide treatment for the stormwater runoff to reduce pollution in the watershed. The wetland is designed to treat the first 1.5" of runoff from not just the current watershed conditions, but also from a fully developed future watershed per current zoning ordinances. This will ensure that additional runoff resulting from future development within the drainage area is treated and that the project will continue to provide water quality benefits as the surrounding area develops. The constructed stormwater wetland will be landscaped with native plant species and will be maintained to mimic a natural wetland. The project will result in an increase in wildlife habitat compared to the current overgrown condition of many of the dilapidated lots in the project area.

Funding Status: The estimated total cost for Phases 2 and 3 of the project is \$4,293,326. The City is applying for a Local Assistance for Stormwater Infrastructure Investments Fund (LASII) grant of \$4,149,360. Additional project costs of \$143,966 will be paid out of NCEM State Appropriation for the City, and closing costs/administrative fees of \$66,100 will be paid out of NC Department of Justice Environmental Enhancement Grant funds awarded to the City. The City is also applying for a Clean Water State Revolving Fund Loan in the amount of \$855,000. This loan will only be used if construction costs exceed the estimated project costs and available grant funding.

B. Existing Environment

Topography and Soils. New Bern is in the Coastal Plain physiographic province. The elevation of the project area ranges from 0.9 feet mean sea level (msl) to 9.2 feet msl, and the project area is located almost entirely within Flood Zones AE or X of the Neuse River, but not within the regulatory floodway. Soils in the project are primarily Seabrook-Urban Complex, Tarboro-Urban

Complex, and Arapahoe fine sandy loam. These are loamy sands or sandy loam typical of depressions and ridges in coastal plain terraces.

Surface Water. The project area is located in the Lower Neuse Subbasin of the Neuse River Basin (HUC 03020204). The project area is tributary to Jack Smith Creek, which is classified as Class C, Sw, NSW. The creek is a tributary of the Neuse River.

Water Supply. The City's public water supply relies on groundwater. The City operates 20 wells drawing from Castle Hayne and Black Creek aquifers.

C. Existing Stormwater Treatment Facilities

The Duffyfield Community was built prior to any development or stormwater construction standards. The stormwater infrastructure in the area is not adequate to control or treat even small storm events. A small rain event will result in water ponding in yards and ditches for days and results in untreated runoff water, including elevated levels of sediments, dissolved metals, hydrocarbons, nitrogen, and phosphorus, flowing into the Neuse River. Phase 1 of the project is already underway to rehabilitate the existing Biddle Street Stormwater Pond and construct a pump station.

D. Need for Proposed Facilities and Actions

A large portion of the Duffyfield community is located within the 1% annual chance flood area of the Neuse River. Several recent hurricanes, including Matthew in 2016 and Florence in 2018, caused significant flooding within the City. The drainage area feeding into the Biddle Street Stormwater Pond and Pump Station is in a depression with no defined natural outlet. With infiltration as the predominant means of stormwater discharge, the community experiences frequent nuisance flooding even from relatively small storm events. This flooding causes property damage to homes and businesses. Flooding also results in inflow from vented manhole lids, broken cleanouts, and damaged services into the wastewater collection system and contributes to groundwater infiltration into the wastewater collections system. The inflow and infiltration can inundate the collection system and allow for untreated wastewater to be released into the environment.

The properties located in the proposed project site are at the lowest points of the drainage area and are characterized by standing water, scrub trees, and overgrowth that is difficult for the City to maintain. The state of these undevelopable lots attracts illegal dumping, which exacerbates contamination of stormwater and contributes to visual blight in the area. Many of these properties have been purchased by the City with funds from the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program. These properties may not be redeveloped for any purpose other than open space, but stormwater management is allowed.

The proposed constructed wetlands will provide treatment and storage for runoff from the surrounding draining area and will reduce the frequency, magnitude, and duration of flooding. The project will include removal of utility services within the project site and relocation or

rehabilitation of portions of the wastewater collection system within and adjacent to the construction site to reduce inflow and infiltration.

E. Alternatives Analysis

No-Action: This alternative would allow nuisance and major flooding to continue in the Duffyfield Community, which would continue the damage to property and infrastructure. Vacant lots will continue to deteriorate. The no-action alternative would provide for continuing negative impacts downstream from untreated stormwater water and does not provide the environmental and social benefits of the other alternatives. No action will allow for continued negative impact and decline in the community; therefore, this alternative is rejected.

Alternative 1 – Constructed Stormwater Wetland: This alternative will create a constructed wetland stormwater control measure designed to treat the first 1.5 inches of stormwater runoff from approximately 58 acres of developed and currently untreated drainage area. The project will include native wetland plants to mimic natural habitat and flood mitigation and protection of downstream infrastructure. This alternative offers benefits including increased nutrient and sediment removal, provision of wildlife habitat and increase in wetland area, and a reduction in nuisance and major flooding. The project will provide resilience to the coastal neighborhood and project existing infrastructure. A future phase would include recreational trails, seating, and educational signage to offer social and recreational benefits for the community. Installation of the constructed wetland will create temporary impacts during construction, but mitigation measures will minimize the impacts. Although costs are slightly higher for this alternative, it is the preferred alternative because of the significantly positive environmental benefit to the community and downstream water body.

Alternative 2 – Stormwater Wet Pond: This alternative would include construction of a wet pond to provide flood mitigation and protection of downstream infrastructure. The wet pond would provide some treatment of nutrient and sediment but not as much reduction as the constructed wetland alternative. This alternative is less suitable for recreational and educational opportunities due to safety concerns. Construction impacts for this alternative would be similar to the constructed wetland alternative but would require greater soil volume disposal due to additional depth needed for a wet pond. The depth needed also has greater potential to negatively impact the water table at the site. This alternative is rejected because it offers less nutrient removal, reduced social and recreational opportunities, and has the potential for greater negative impacts due increased excavation and depth requirements compared to the constructed wetland.

F. Environmental Consequences and Mitigative Measures

Topography and Soils: Significant impacts to topography and soils are not anticipated. The project will include excavation ranging from 0 feet to 3 feet for construction of wetlands. Small, raised areas (less than 3 feet) may be constructed for visual interest. Excavated soil will be utilized by the City or properly disposed of. Dewatering operations will be used to lower the groundwater elevation for excavation with water filtered as needed prior to discharge to the Biddle Street stormwater pond and pump station. An approved Sedimentation and Erosion

Control Plan will be followed. Secondary and cumulative impacts (SCI) will be positive, including reduction in frequency and duration of flooding.

Land Use: Significant impacts to land use are not anticipated. The project site consists mostly of small, vacant lots that will be incorporated into a managed open space for stormwater control measures and recreational uses. The surrounding project area is predominantly small residential lots, multifamily residential, managed open space, and small commercial and institutional uses. The project offers positive SCI as the reduction in flooding will improve quality of life in the surrounding community.

Wetlands: Significant impacts to wetlands are not anticipated. The project is expected to remove approximately 2 acres of wetlands and 337 linear feet of stream. The U.S. Army Corps of Engineers and NCDEQ Division of Water Resources will be consulted for a Jurisdictional Determination prior to construction; however, these are expected to be considered isolated and non-jurisdictional. Should areas identified as Jurisdictional Wetlands be impacted, mitigation would most likely be in the form of payments to a mitigation bank through the North Carolina Stream and Wetland Mitigation Program. The proposed project is expected to have an overall positive impact by improving treatment of stormwater runoff and improving water quality downstream.

Important Farmlands: Significant impacts to important farmlands are not anticipated as such lands are not present at the project site.

Public Lands and Scenic, Recreational, and State Natural Areas: Significant impacts to public lands, scenic, recreational, or state natural areas are not expected as there are no such areas located within the project area. There are managed areas within a mile of the project including NC Division of Mitigation Services Easements and Tryon Palace State Historical Area. These areas are located outside of the project site and will not be impacted by the project.

Cultural Resources: Impacts to cultural and historic resources are not anticipated. The City has many areas and features of archaeological or historical value within a mile of the project area; however, these areas are not within the project site and are not expected to be impacted. The North Carolina State Historic Preservation Office (SHPO) conducted a review of the project and is aware of no historic resources which will be impacted by the project (September 28, 2021, ER 21-2159). If evidence of any archeological or historic items of value are found during construction, SHPO will be notified prior to continuing work in that area.

Air Quality: No significant impacts to air quality are anticipated. Construction activities may cause a temporary increase in emissions and dust related to earth moving equipment and diesel-powered pumps, but these impacts will not be significant. No open burning will be allowed. Dust control measures will be implemented as part of the Sediment and Erosion Control Plan.

Noise Levels: No significant noise impacts are anticipated. Noise from construction activities will be temporary with construction hours restricted under the City's Noise Ordinance. Once operational, no noise is expected from the project as the stormwater control measures will have no mechanical elements.

Water Resources: No significant negative impacts to water resources are anticipated. Construction activities will require temporary lowering of groundwater elevation to allow excavation of the stormwater wetlands. Some lowering of the local water table may occur through operation of the Biddle Street Pump Station previously to minimize flooding related to large storm events. A sedimentation and erosion control plan will be implemented to minimize impacts to surface water from construction activities. Improved stormwater treatment will protect water quality downstream from the project.

Forest Resources: Significant impacts to forest resources are not expected. The project site and surrounding area are urban in nature with no significant forest resources present.

Shellfish or Fish and Their Habitats: Impacts to shellfish, fish, and their habitats are not expected to be significant. There is no evidence of threatened or endangered fish or shellfish species in the project site or immediate surrounding area. Existing aquatic life is limited to mosquito fish and crayfish. Sediment and erosion control measures will be implemented to minimize impacts related to construction. Improved stormwater treatment will provide protection of shellfish and fish habitats downstream from the project.

Wildlife and Natural Vegetation: No significant impacts to wildlife and natural vegetation are expected. The project site is urban in nature. Potential habitat for two threatened and endangered species has been identified in the project vicinity: the northern long-eared bat and the American alligator. Mature trees within the project site are considered potential roosting habitat; however, the northern long-eared bat has not been identified within Craven County, and no known maternity roosts are located within 0.25 miles of the project. Any potential impacts will be mitigated by restricting tree clearing during the pupping season of June to July. The American alligator is listed as threatened due to similarity in appearance to the American crocodile, but the American alligator itself is not protected. A small area of existing wetland does have suitable conditions for a small alligator; however, an alligator is unlikely to be present in the urban setting. Disturbance from construction activities would likely cause any alligator present to leave the wetland area and not result in a take. Although construction activities may temporarily disturb wildlife in the project area, the project upon completion will mimic the function of a natural wetland and will improve wildlife habitat.

Introduction of Toxic Substances: The project is not expected to introduce toxic substances into the environment. Construction contract documents will require any spills or equipment leaks to be properly contained and disposed of. The project will remove or relocate unneeded sanitary sewer infrastructure thereby reducing potential for future contamination.

The U.S. Fish and Wildlife Service was consulted and concluded that the proposed project is not likely to adversely affect any federally listed threatened and endangered species and the requirements of Section 7(a)(2) of the Endangered Species Act have been satisfied (September 9, 2021). The North Carolina Wildlife Resources Commission, Natural Heritage Program, and DWR Washington Regional Office do not object to the proposed project. The U.S. Army Corps of Engineers was consulted and did not object to the project. The North Carolina Department of Natural and Cultural Resources is aware of no historic resources which will be impacted by the proposed project.

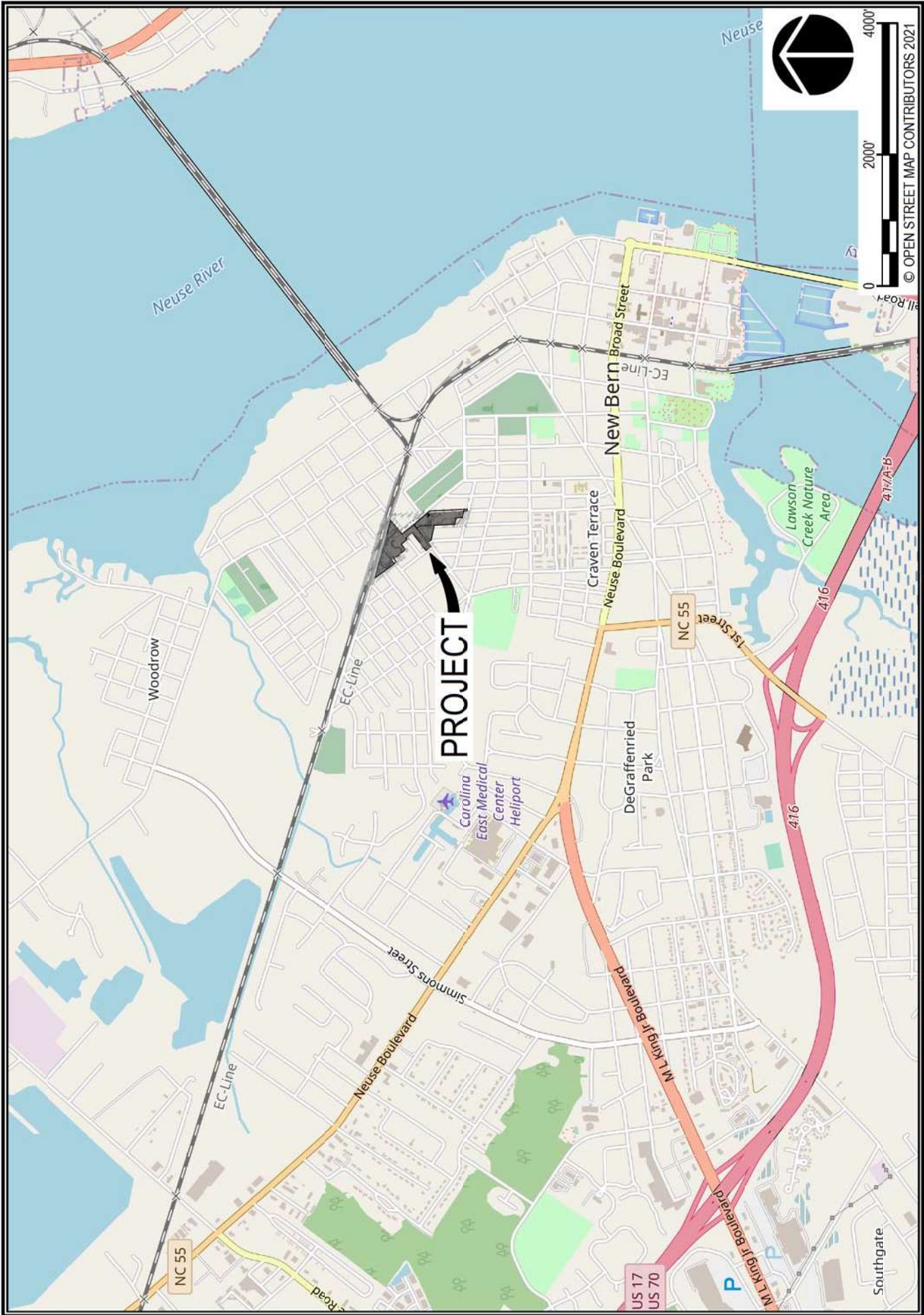
G. Public Participation, Sources Consulted

The City of New Bern held public meetings on November 17, 2021, and May 31, 2022. The meetings included a presentation about the proposed project and opportunity for public comments (none received). The Engineering Report/Environmental Information Document was made available for public review.

The project is expected to be fully funded from grants. If construction costs exceed expected project costs, any costs exceeding grant availability will be funded through a Clean Water State Revolving Fund loan. The City intends to repay any loaned funds from the Public Works budget portion of the City's General Fund.

Sources consulted about this project for information or concurrence included:

- 1) City of New Bern
- 2) Craven County
- 3) Town of Fuquay-Varina
- 4) North Carolina Department of Environmental Quality
 - Wildlife Resources Commission
 - Natural Heritage Program
 - DEQ Washington Regional Office
 - Division of Air Quality
 - Division of Water Resources
 - Division of Forest Resources
 - Division of Environmental Assistance and Customer Service
 - Division of Waste Management
- 5) North Carolina Department of Natural and Cultural Resources
- 6) North Carolina State Clearinghouse
- 7) North Carolina Department of Public Safety
- 8) U.S. Fish and Wildlife Service
- 9) U.S. Army Corps of Engineers

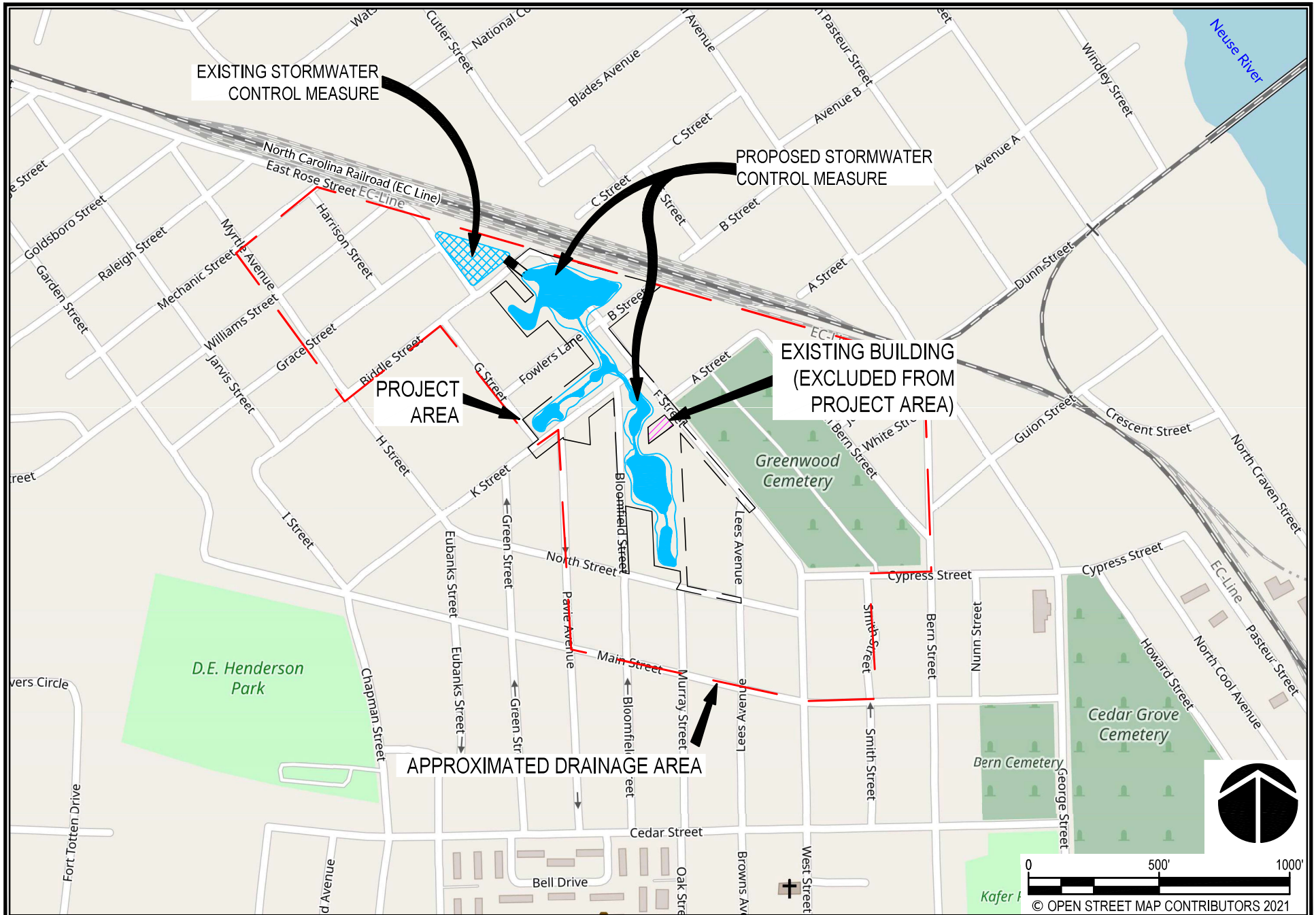



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Figure 1
Vicinity Map

DUFFYFIELD COMMUNITY
STORMWATER ENHANCEMENTS

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**DUFFYFIELD COMMUNITY
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**Figure 2
Location Map**

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