FINDING OF NO SIGNIFICANT IMPACT
AND ENVIRONMENTAL ASSESSMENT

TOWN OF CLAYTON
WATER RECLAMATION FACILITY CAPACITY EXPANSION

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:	Town of Clayton, North Carolina
Project Description:	The proposed project will expand the Town of Clayton's wastewater treatment capacity in phases up to 10 MGD with the following components: (1) a 6 million gallon per day (MGD) five-stage biological nutrient removal water reclamation facility (WRF) at the site of the Town's Neuse River pump station; (2) conversion of the existing Little Creek WRF to a pump station and forcemain to convey raw wastewater to the proposed WRF site; (3) expansion of the existing East Clayton Industrial Area (ECIA) pump station and construction of a new forcemain to convey flows from the ECIA to the proposed WRF site; (4) expansion of the existing Neuse River outfall; and (5) construction of an access road from O'Neil Street to the proposed WRF site with a parallel water main along the existing utility transmission easement. The new WRF will initially operate at 6 MGD and will be expanded in phases to the full 10 MGD. The Little Creek pump station will include pumps sized to meet the initial peak and average daily flow requirement for 6 MGD and is designed for expansion to accommodate future flows. The forcemain will be sized for the full 10 MGD treatment capacity. The Finding of No Significant Impact applies to the full expansion to 10 MGD.
Project Number:	CS370431-07
Project Cost:	$153,000,000
Clean Water State Revolving Loan Fund:	$30,000,000 (Note that the Town has been awarded $30 million in CWSRF loans at this time and intends to apply for an additional $60 million in future funding rounds)
Local Funds:	$63,000,000 in operating revenue, bonds, and low-interest loans

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,

Jon Risgaard

Jon Risgaard, Section Chief
State Revolving Fund Section
Division of Water Infrastructure

ENVIRONMENTAL ASSESSMENT

A. Proposed Facilities and Actions

The proposed project will expand the Town of Clayton's wastewater treatment capacity in phases to 10 MGD with the following components: (1) a 6 million gallon per day (MGD) five-stage biological nutrient removal (BNR) water reclamation facility (WRF) at the site of the Town's Neuse River pump station; (2) conversion of the existing Little Creek WRF to a pump station and forcemain to convey raw wastewater to the proposed WRF site; (3) expansion of the existing East Clayton Industrial Area (ECIA) pump station and construction of a new forcemain to convey flows from the ECIA to the proposed WRF site; (4) expansion of the existing Neuse River outfall; and (5) construction of an access road from O'Neil Street to the proposed WRF site with a parallel water main along the existing utility transmission easement. The new WRF will include an influent pump station, odor control, headworks for screening and grit removal, flow equalization, five-stage BNR for nitrogen and phosphorus, supplemental carbon for enhanced nitrogen removal, supplemental metal salts for backup and polishing of phosphorus removal, cloth media (disc) tertiary filtration, UV disinfection, and cascade re-aeration. The new WRF will initially operate at 6 MGD and will be expanded in phases to the full 10 MGD. The Little Creek pump station will include pumps sized to meet the initial peak and average daily flow requirement for 6 MGD and is designed for expansion to accommodate future flows. The forcemain will be sized for the full 10 MGD treatment capacity. Solids treatment at the new WRF will include thickening with rotary drum thickeners, 30-day aerated sludge holding, and dewatering with screw press with solids to be disposed through contract composting and/or landfill. This environmental assessment evaluates the environmental impacts associated with the full expansion to 10 MGD.

Funding Status: The estimated total cost for the project is $153,000,000. The Town is applying for a Clean Water State Revolving Fund (CWSRF) loan of $30,000,000 and intends to apply for an additional $60,000,000 in future CWSRF funding rounds. The remaining project costs will be funded through a combination of local bonds, low-interest loans, and operating revenues.

B. Existing Environment

Topography and Soils. Clayton is the Piedmont Physiographic Province, with topography gradually sloping toward the Coastal Plain and floodplains along streams. Elevations in the study are range from 130 to 370 feet above mean sea level, with a range from 140 to 220 feet above mean sea level at the proposed WRF site.

The dominant soil types in the project area are Wedowee sandy loam, Pacolet loam, Norfolk loamy sand, and Cecil loam. Typical soils in floodplains and adjacent to streams are Wehadkee and Chewacla. Soils throughout the project area have been impacted by development, grading activities, and other soil disturbances.

Surface Water. The project area is located in the Upper Neuse River Subbasin (HUC 03020201). Surface waters in project area include the Neuse River and Little Creek. Reaches of the Neuse River in the project area are designated as Water Supply-IV and Water Supply-V and classified

as nutrient sensitive waters. Some portions of the Neuse River in the study area are impaired for copper and zinc. Little Creek is classified as Class C and nutrient sensitive waters, with some portions impaired for benthos.

Water Supply. The Town of Clayton purchases drinking water from Johnston County, which draws water from the Neuse River.

C. Existing Wastewater Facilities

The Town provides wastewater conveyance and treatment services to residential users within town limits and its extra-territorial jurisdiction as well as several industrial and commercial customers. The Town owns and operates the 2.5 MGD Little Creek WRF, which discharges to the Neuse River under NPDES Permit NC0025453. The Little Creek WRF was constructed in the 1950s as a trickling filter plant and has undergone major upgrades and modifications since then. In 1990, the plant was converted to an oxidation ditch facility, and a second oxidation ditch was added in the mid-1990s. In the mid-2000s, anaerobic and anoxic zones were added. The current biological treatment process includes two oxidation ditches with additional anaerobic and anoxic ones for biological nutrient removal. Many of the processes at the WRF are in good condition, but much of the mechanical and electrical equipment is approaching the end of its useful life. Although the plant is permitted at 2.5 MGD, current operation is limited to approximately 2 MGD due to treatment limitations and total nitrogen restrictions.

The Town has an additional 2.4 MGD in treatment capacity through regional partnerships: 1.4 MGD through the City of Raleigh's Neuse River Wastewater Treatment Plant (WWTP) and 1.0 MGD through Johnston County's WWTP. The Town has a pump station at the ECIA that to conveys most of the flow from the ECIA to the County's WWTP, with the remainder going to the Little Creek WRF. The Town sends a portion of its flow to Raleigh through the Neuse 2 pump station. These partnerships, combined with the Little Creek WRF, give the Town a total of 4.9 MGD in treatment capacity. In 2028, the Town's average daily flow was 3.2 MGD.

The Town's collection system includes almost 160 miles of gravity sewer lines and forcemains and 28 pump stations with capacities ranging from 40 to 2,100 gallons per minute. Most of the pump stations are in moderate to very good condition. The Town is working to replace older pipe sections in the collection system as funding allows.

D. Need for Proposed Facilities and Actions

The Town's wastewater flow from residential, industrial, and commercial customers has been growing. New housing units are being built to support the growing population, and facilities in the ECIA are expanding. The Town is nearing 89 percent of its available capacity, with an increase in flow from an ECIA facility expected in 2023 that will push the Town's wastewater treatment demands close to the current capacity of 4.9 MGD before 2025. In addition, the Little Creek WRFs' infrastructure is aging and susceptible to flooding. Historically, the Town has utilized regional partnerships to delay major capital investments, but Johnston County and City of Raleigh have indicated their intent to increase fees to treat the Town's wastewater, and the

County will no longer accept wastewater with characteristics exceeding domestic-strength limits after 2023. The Town's contract with Raleigh expires in 2027. The Town anticipates higher-strength wastewater from ECIA as well as more concentrated wastewater from residential users. Without these partnerships, the Town will lose approximately 2.4 MGD of treatment capacity.

To address the growing residential, industrial, commercial demand for wastewater treatment and the increasing costs and limitations associated with regional partnerships, the Town has concluded that constructing a new WRF with a phased approach is the best solution to address the Town's future wastewater needs. The proposed project will provide 6 MGD of initial treatment capacity to meet the Town's short-term wastewater treatment needs, and will be constructed to allow for incremental expansion up to 10 MGD to meet longer-term needs within the planning period.

E. Alternatives Analysis

Alternative 1 – No-Action: This alternative would rely on existing treatment systems, infrastructure, and regional interconnections with no significant increase in capacity. This alternative was rejected because it does not meet the Town's need for increased wastewater treatment capacity.

Alternative 2 – Construction of a new WRF and continued use of a surface water discharge: Under this alternative, the Town would (1) build a new 6 MGD WRF with potential for future expansion to 10 MGD with two sites being considered: the Neuse 2 Pump Station site (Alternative 2a) and the ECIA Pretreatment Facility site (Alternative 2b); (2) continued operation of the Little Creek WRF at 2 MGD until the new facility is online; (3) decommissioning that facility and converting the site use to a new pump station to convey 3 MGD average daily flow; (4) continued reliance on regional contracts through 2023; (5) retention of regional contracts as backup after 2023 with minimization of flow to the County and Raleigh; (6) expansion of the Little Creek WRF surface water discharge to the Neuse River at the Neuse 2 Pump Station site; and (7) planning for future incremental expansion of the new facility to 10 MGD as flows increase.

Alternative 2a Neuse 2 Pump Station Site: This site alternative would utilize a Town-owned parcel, the Neuse 2 Pump Station site. The new facility would utilize five-stage BNR for nitrogen and phosphorus, supplemental carbon for enhanced nitrogen removal, supplemental metal salts for backup and polishing of phosphorus removal, cloth media (disc) tertiary filtration, UV disinfection, and cascade re-aeration. Solids treatment at the new WRF will include thickening with rotary drum thickeners, 30-day aerated sludge holding, and dewatering with screw press. Use of this site would require construction of an access road and expanding the existing outfall. The site is sufficiently sized to allow for construction of the WRF while maintaining stream and property buffers and avoiding the floodplain along the Neuse River. The public greenway infrastructure would remain available to the community. Connecting infrastructure would be required. The site is centrally located to Town operations and expected areas of development. Potential impacts to the Neuse River from an increased discharge would

be offset by purchase of nitrogen credits. The location, site size, and ability to minimize environmental impacts make this site more desirable than the Alternative 2b site.

Alternative 2b ECIA Pretreatment Facility: This site alternative would construct the new WRF adjacent to the R. Steven Biggs Regional Pretreatment Facility with conveyance system work required to connect existing sewer infrastructure to the new WRF. The treatment process would be similar to Alternative 2a except that diffused aeration would be used rather than cascade aeration due to limited elevation changes at the site. This alternative would expand and use the existing Neuse River outfall. The site is located near industrial and commercial customers but not in an area expected to see significant residential growth and development. The site is currently intended for future expansion of the pretreatment facility. Building at this site would require using the athletic field adjacent to the pretreatment facility and may require additional land acquisition. The site is unlikely to be large enough to accommodate future facility expansions, and wetlands bordering the site would likely lead to greater environmental impacts compared to the Alternative 2a site. For these reasons, Alternative 2b is rejected in favor of Alternative 2a.

Alternative 2, using site Alternative 2a, meets the Town's needs for long-term resiliency, expanded treatment capacity, control of treatment costs, and adaptability and phasing for longer term needs and is the preferred alternative.

Alternative 3 – Expansion of Little Creek WRF and continued use of surface water discharge: This alternative would rehabilitate the existing Little Creek WRF and expand its capacity to 6 MGD while adding biological nutrient removal to comply with Neuse River discharge limits. Expansion of the existing Neuse River outfall capacity would be accomplished with a parallel outfall. Additional infrastructure upgrades would be required, including the discharge forcemain, pump station, gravity line to discharge location, and Neuse River discharge. Much of the growth in the Town is projected to be on the Neuse River side rather than the Little Creek side, so a significant expansion of the Neuse River 2 Pump Station would be required to send flow back across town. The existing facility is on a steeply graded parcel with limited available space for expansion without significant site work. The site is also partially located in the floodplain and not well-suited for treatment infrastructure due to flooding risk. The site would likely involve greater impacts to streams and buffers compared to the preferred alternative, and the permitting process for work in the floodplain would pose a significant schedule risk. The complexity of continuing to operate the existing plant during the expansion would present management challenges. Site constraints limit the ability to provide cost-effective nitrogen removal with a future expansion to meet longer term needs. These challenges make this alternative less desirable than the preferred alternative, so it was rejected.

Alternative 4 – Continued use of Little Creek WRF and maximizing regional connections to existing wastewater treatment: Under this alternative, the Town would expand existing contracts with the County and the City of Raleigh while maintaining operation of the Little Creek WRF with improvements to nitrogen removal to allow the WRF to operate at the permitted capacity of 2.5 MGD. This alternative would likely require construction of additional conveyance infrastructure to the County or City's treatment facilities. Although this alternative is technically feasible, the Town has not been able to reach cost-effective agreements with the County or City

that will provide the needed treatment capacity at a reasonable cost. This alternative also leaves the Town vulnerable to flood impacts and reliability concerns associated with the Little Creek WRF. For these reasons, this alternative was rejected.

Alternative 5 – Construction of a new WRF and use of land application: Similar to Alternative 2, this alternative would build a new 6 MGD WRF with plans for future expansion to 10 MGD. For purposes of analysis, the Neuse 2 Pump Station site was considered because the Town already owns this land. This option would abandon the effluent discharge at the Neuse River and divert effluent to suitable locations for spray irrigation. The alternative would include construction of transmission infrastructure to convey effluent to land application site(s). Approximately 1,300 acres would be needed for land application. An advantage of this alternative is that nutrient removal requirements for land application are less stringent than surface discharge to the Neuse River, so certain elements of the WRF can be eliminated, including tertiary treatment, and purchase of nitrogen credits would be reduced or eliminated. Environmental impacts would be lower than the preferred alternative because of elimination of the surface water discharge, but spray operation would have to be monitored to ensure that run-off does not impact surface waters. Disadvantages of this alternative are increased pumping to convey effluent to land application sites, higher O&M costs to operate spray fields, and feasibility is questionable due to the high cost and limited availability of suitable land within ten miles of the proposed WRF site. This alternative was rejected because these disadvantages outweigh the possible benefits of this alternative.

Alternative 6 – Construction of a new WRF and implementation of larger-scale wastewater reuse: Similar to Alternative 2, this alternative would build a new 6 MGD WRF with plans for future expansion to 10 MGD. For purposes of analysis, the Neuse 2 Pump Station site was considered because the Town already owns this land. The Town has a limited reuse program available that provides a small amount of reuse water to a local golf course on a seasonal basis. Two additional golf courses were identified with a total estimated demand of 0.15 MGD. The Town reached out to industrial customers to investigate the possibility of interest in purchasing reuse water, but these customers already have environmental sustainability programs in place to conserve water use and, as a result, the amount of water purchased is minimal and leaves little opportunity for purchase of reuse water. The limited potential demand for reuse water is not enough for this alternative to be feasible. If feasible, this alternative would reduce environmental impacts by eliminating a surface discharge; however, due to limited potential for large-scale reuse of wastewater, this alternative was rejected because it is not a viable solution to the Town's wastewater needs.

Alternative 7 – Construction of a new WRF with alternative secondary treatment process: This alternative would construct a new 6 MGD WRF similar to Alternative 2 but using 4-stage BNR with metal salt addition. Heavy metal salts would precipitate phosphorus to facilitate removal during secondary treatment. This alternative would produce similar effluent as the preferred alternative and slightly lower capital costs; however, this alternative was rejected because chemicals used for phosphorus removal have the potential to vary in price, leading to uncertainty of operational cost. The slightly higher capital cost for biological phosphorus removal is offset by the potential for higher operating costs. In addition, there is an environmental benefit to

biological phosphorus removal compared to increased chemical use and delivery truck traffic associated with chemical phosphorus removal.

Alternative 8 – Construction of a new WRF with alternative biosolids treatment strategy: This alternative would construct a 6 MGD WRF similar to Alternative 2 but using a physical-chemical thermal hydrolysis process (Lystek THP®) to produce Class a biosolids. Under this alternative, the Town would contract with Lystek for management and disposal of biosolids. The solids treatment process would use the same thickening and dewatering equipment as Alternative 2 and adds Lystek THP® reactors to produce biosolids that can be sold as fertilizer. This alternative has similar environmental impacts as the preferred alternative and similar long-term benefit but slightly higher initial costs. This alternative was rejected due to the higher cost, but the Town could add this biosolids process in the future if desired.

Alternative 9 – Combination of Alternatives: The Town considered whether some combination of alternatives might meet the project purpose and needs. A possible combination considered was continuing operating the Little Creek WRF at current capacity and constructing a smaller 4 MGD WRF at a second site. This combination would have a lower capital cost but would still require investment in the Little Creek WRF to rehabilitate or replace aging equipment and maintain operational functionality of this plant. Operational costs for two plants would be higher than one plant. This combination was rejected because it does not offer any cost-savings or operation efficiency compared to the preferred alternative.

Another combination that was considered was land applying effluent during the dry season and discharging via the Little Creek WRF outfall during the wet season. This option would require a large area for the land application at very high cost. The alternative would also still require additional treatment to improve effluent quality for surface water discharge. This combination was also rejected as it offers no cost or operational benefits compared to the preferred alternative.

Finally, a combination of land application and large-scale reuse (Alternatives 5 and 6) was briefly considered but was rejected because the combination would be no more feasible than either alternative implemented independently.

Alternative 10 – Decentralized System: This alternative would transition from the Town's current strategy of collect wastewater at centralized points for transmission to the Little Creek WRF and regional partners for treatment to a decentralized system. A decentralized approach would not be efficient or effective for the Town. This alternative was deemed infeasible and rejected.

Alternative 11 – Optimum operation of existing facilities: This alternative would involve optimizing operation of the Little Creek WRF. Normal maintenance at this facility is becoming costly, and this alternative would require investment to replace or rehabilitate existing infrastructure. Even with these investments, this alternative would not meet the Town's needs for additional capacity and improved treatment to meet Neuse River discharge limits; therefore, this alternative was rejected.

F. Environmental Consequences and Mitigative Measures

Topography and Soils: Construction activities will have some permanent impacts to topography and soils for grading and fill, but these impacts are not expected to be significant. Approximately 42 acres will be disturbed for installation of linear infrastructure, and the WRF site will require grading of approximately 25 acres. Grading and fill will occur at the upland areas of the project site to avoid disturbance of the Neuse River floodplain, stream buffers, and wetlands. Soil loss during construction will be minimized by following a DEQ-approved Erosion and Sedimentation Control Plan. The Little Creek WRF site will be returned to existing grade and stabilized after demolition. Installation of the transmission main and the Neuse River outfall will have temporary impacts on floodplains. A Floodplain Development Permit will be obtained from the Town of Clayton for this work. Secondary and cumulative impacts (SCI) are not expected to be significant. The proposed expansion supports growth and development that is already in progress rather than stimulating new development. Impacts from development and construction will be mitigated through the Town's erosion and sedimentation control program, federal and local floodplain development requirements, Neuse River watershed stream buffer rules, Johnston County's stormwater management program, and the Town's stormwater design manual.

Land Use: Impacts to land use are not expected to be significant. The site to be used for the proposed WRF already includes a pump station, but more of the site will be cleared to for the WRF. Most of the access road and transmission main will be constructed within existing utility easements. The Little Creek Pump Station will be constructed at the Little Creek WRF site. SCI are not expected to be significant and will be mitigated through the Town's 2040 Comprehensive Plan, Uniform Development Code, General Design Guidelines, and zoning processes. These programs work together to plan for growth while maintaining open space and natural areas.

Wetlands: Significant impacts to wetlands are not anticipated. Impacts at the proposed WRF site will avoid impacts to wetlands by doing most construction in the center portion of the site away from wetlands, implementing an erosion and sedimentation control plan, maintaining a buffer around the construction site to prevent soil from settling in wetlands, and maintaining the site's existing natural forested buffers to minimize impacts from stormwater runoff. No wetlands are present along the access road alignment or near the Little Creek pump station site. Five wetland areas are located along the transmission route in an existing sewer easement that has been maintained as herbaceous wetlands through regular mowing and maintenance. Wetland soils be returned to these areas after construction to support wetland restoration, and all required permits will be obtained. SCI related to future growth and development will be minimized through water supply watershed protections, the Neuse River watershed stream buffer requirements, Johnston County's stormwater management program, the Town's stormwater design manual, and permitting programs.

Important Farmlands: Significant impacts to important farmlands are not anticipated. Construction of the WRF, access road, and transmission lines will impact soils classified as prime farmland and farmland of statewide importance but these lands are not in agricultural use. SCI on farmlands are not expected to be significant and will be mitigated through the Town's 2040 Comprehensive Plan, Uniform Development Code, General Design Guidelines, and zoning

processes. These program work together to plan for growth while protecting agriculture in the Town and County.

Public Lands and Scenic, Recreational, and State Natural Areas: Significant impacts to public lands, scenic, recreational, or state natural areas are not expected. The Sam's Branch and Neuse River greenways are adjacent to the WRF site and will be temporarily closed during construction, but the greenways will be restored to existing conditions and reopened. Forested buffers will limit visual and noise impacts from operation of the WRF. SCI are not expected to be significant and will be mitigated through the Town's 2040 Comprehensive Plan, Uniform Development Code, General Design Guidelines, and zoning processes. These program work together to plan for growth while maintaining open space and natural areas.

Cultural Resources: Impacts to cultural and historic resources are not anticipated. The North Carolina State Historic Preservation Office (SHPO) is not aware of any historic resources that will be impacted by the project September 22, 2020, ER 20-1074). The Town's downtown historic district will not be impacted by the project. SCI are not expected to be significant and will be mitigated through the Town's 2040 Comprehensive Plan, Uniform Development Code, General Design Guidelines, and zoning processes. The Town's historic downtown area is listed on the National Register of Historic Places and protected through the Town's Downtown Master Plan. Any large development activities will require investigation for potential historic value.

Air Quality: No significant impacts to air quality are anticipated. Construction may temporarily impact air quality. Dust suppression will be used to minimize these impacts. Odor control is proposed for the new WRF. An air quality permit will be obtained for the generator for the propose WRF. Truck traffic to and from the site during operations is not expected to have a significant impact on local air quality. SCI are not expected to be significant. Growth will follow the Town's 2040 Comprehensive Plan, and the town has attracted industries that are not large air polluters. Joint planning efforts have resulted in the County's Comprehensive Transportation Plan to support development while limiting transportation-related SCI through careful planning.

Noise Levels: No significant permanent noise impacts are anticipated. Construction activities will cause temporary increase in noise, but operation of the WRF will not change overall ambient noise level in the area. The surrounding area includes industrial activities. The forested buffer between the WRF and the public greenways will minimize noise for greenway users. will be limited to normal daytime working hours. SCI are not expected to be significant. Growth will follow the Town's 2040 Comprehensive Plan, which includes guidelines for noise control with site planning. Joint planning efforts have resulted in the County's Comprehensive Transportation Plan to support development while limiting transportation-related SCI through careful planning.

Water Resources: No significant impacts to water resources are anticipated. During construction of the WRF, the sediment and erosion control plan and a stormwater management plan will be implemented to minimize impacts from soil and pollution discharge into surface waters. The proposed WRF will include flow equalization to limit potential for untreated discharge to the Neuse River. Discharge into the Neuse River will increase from the permitted flow of 2.5 MGD to 6 MGD initially, with future discharge of 10 MGD planned. Potential water quality impacts have been evaluated for determination of permit limits for the expansion with modeling

conducted to determine treatment approaches needed to address seasonal variations of dissolved oxygen and other parameters. The facility will be designed to reliably meet permit limits. The Town will achieve the total nitrogen limit through treatment technologies and nitrogen credit purchases, and nitrogen offset credits have been purchased to meet nutrient requirements of the Neuse & Tar-Pamlico Nutrient Strategy Rules. Compliance with permit limits will protect water quality in the Neuse River. A cofferdam system will be used for construction of the outfall to minimize increases in turbidity. The additional effluent flow into the Neuse River will have an increase of approximately three percent during low flows and is not a measurable increase during normal and higher flows. This flow is not expected to lead to bank erosion or change the hydrology of the river downstream of the outfall. Installation of the transmission main will include crossings of ten perennial streams and six intermittent streams. Construction will likely be open-cut but measures will be taken to reduce impacts with trenchless technology used where feasible, and appropriate permits will be obtained. SCI related to future growth and development will be minimized through water supply watershed protections, the Neuse River watershed stream buffer requirements, stormwater management programs, and permitting programs.

Forest Resources: Significant impacts to forest resources are not expected. Approximately 24 acres of forest will be cleared for the WRF, and approximately 2.3 acres will be cleared for the access road. SCI are not expected to be significant and will be mitigated through the Town's 2040 Comprehensive Plan, Uniform Development Code, General Design Guidelines, and zoning processes. These program work together to plan for growth while maintaining forested and natural areas.

Shellfish or Fish and Their Habitats: Significant impacts to shellfish, fish, and their habitats are not expected. Compliance with the permit limits will protect aquatic life in the Neuse River. Soil and erosion control measures and best management practices will minimize construction impacts. Suitable habitat for the following protected species may be present: Dwarf wedgemussel (*Alasmidonta heterodon*), Tar River spinymussel (*Parvaspina steinstansana*), Yellow lance (*Elliptio lanceolate*), Atlantic pigtoe (*Fusconaia masoni*), Neuse River waterdog (*Necturus lewisi*), and Carolina madtom (*Noturus fuiosus*). The biological determination concluded that the project is not likely to adversely affect these species, and the U.S. Fish & Wildlife Service concurs with the determination (email October 27, 2020). SCI related to future growth and development will be minimized through water supply watershed protections, the Neuse River watershed stream buffer requirements, stormwater management programs, and permitting programs.

Wildlife and Natural Vegetation: No significant impacts to wildlife and natural vegetation are expected. Construction activities may result in temporary impacts, and some permanent loss of habitat may occur, but wildlife are expected to relocate to adjacent area with minimal effects. Potential habitat for Michaux's sumac (*Rhus michauxii*) was identified, but a survey was conducted during the growing season with no occurrences located. The Bald Eagle (*Haliaeetus laucocephalus*) and Red-Cockaded Woodpecker (*Picoides borealis*) have been identified within a mile of the project but are not expected to be impacted. The U.S. Fish & Wildlife Service concurs with the determination of "no effect" for these wildlife species. The town plans to create a corridor of native vegetation along the greenway by reseeding after construction with a native

seed mix and will modify mowing protocol to avoid mowing during the flowering spring and summer seasons to promote pollination, natural reseeding and long-term viability of this area.

Introduction of Toxic Substances: The project is not expected to introduce toxic substances into the environment. During construction, best practices and regular offsite maintenance will be used to minimize the risk of leaks or malfunctions from construction equipment. Construction wastes are not expected to be toxic, and no hazardous wastes will be generated by operation of the WRF. SCI are not expected to be significant and will be mitigated through the Town's 2040 Comprehensive Plan, Uniform Development Code, General Design Guidelines, and zoning processes. These program work together to plan for growth while maintaining open space and natural areas.

The U.S. Fish and Wildlife Service reviewed the proposed project and concurred with the Town's determinations for listed species (October 27, 2020). The North Carolina Wildlife Resources Commission, Natural Heritage Program, and DWR Raleigh 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 that would be affected by the project (September 22, 2020, ER 20-1074).

G. Public Participation, Sources Consulted

The Town held a public meeting on November 16, 2020 and made the engineering report/environmental information document available for review by the public through the Town's website. The meeting included a presentation about the project and an opportunity for public comment, with two comment received:

- Comment: A representative from Gifols Therapeutics expressed support for the project and noted that Grifols is undergoing expansion and will need additional wastewater treatment capacity from the Town.

  Response: Comment noted.

- Comment: A resident expressed support for the WRF overall but concern about cost and rate impacts to current residents. The resident asked if developers were contributing project funding and recommended developers pay into a system development program to reduce burden on existing residents

  Response: The Town will consider the comment and noted that the Town must treat ratepayers fairly.

The current user charge for a typical residential customer is $83.58 per month for water and sewer service combined, based on consumption of 5,000 gallons per month. The proposed project will increase the bill by $46.09 (approximately 55%), for a future combined bill of $129.67 in FY 2025. The Town plans to implement rate increases over the next five years.

Sources consulted about this project for information or concurrence included:

1) Town of Clayton
2) City of Raleigh
3) Johnston County
4) North Carolina Department of Environmental Quality
   -Wildlife Resources Commission
   -Natural Heritage Program
   -DEQ Raleigh 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

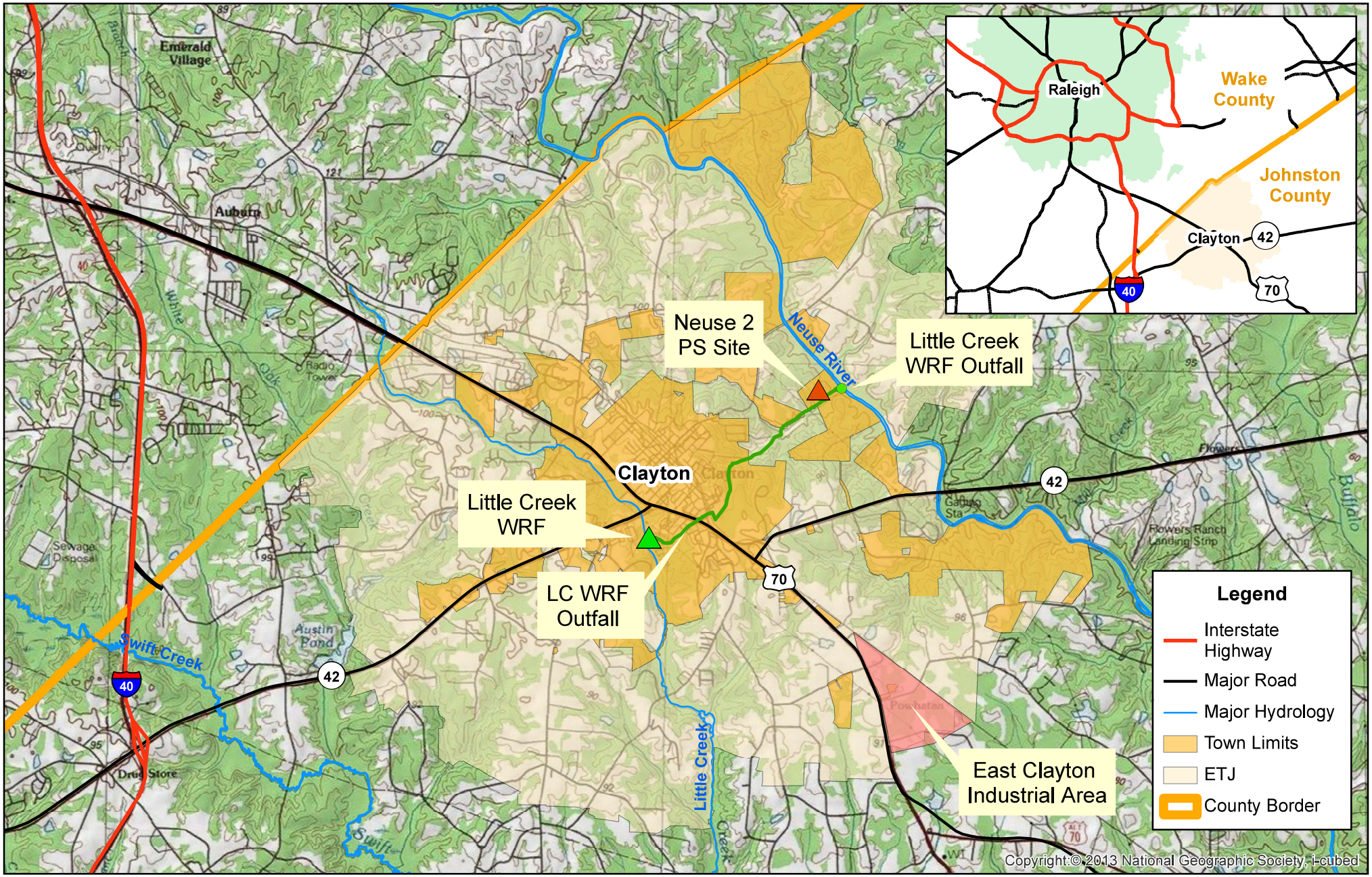

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Figure 1-1
Project Vicinity Map
Water Reclamation Facility Expansion
Town of Clayton, NC

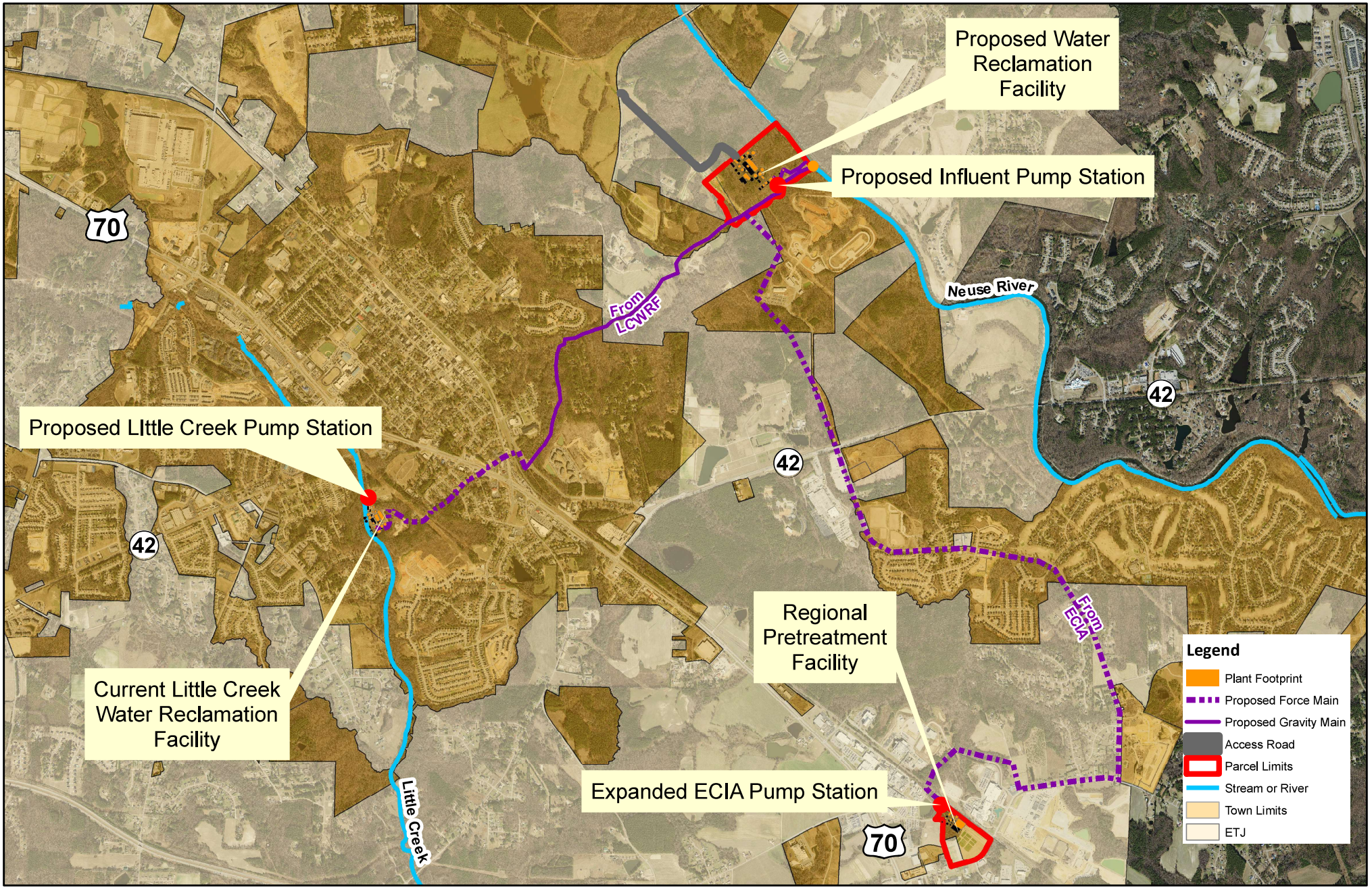

Figure 1-2
Project Location Map
Water Reclamation Facility Expansion
Town of Clayton, NC