

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

**CITY OF GASTONIA
SOUTHEAST SEWER WASTEWATER COLLECTION SYSTEM IMPROVEMENTS**

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

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February 23, 2021

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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 Gastonia, North Carolina

Project Description: The proposed project will construct new sanitary sewer lines and a regional pump station to serve residents of the south side of the Town of Cramerton and the southeast side of the City of Belmont in Gaston County. The project includes construction of approximately 165 LF of 30-inch, 2,625 LF of 24-inch, 3,505 LF of 21-inch, 85 LF of 20-inch, and 10 LF of 12-inch gravity sewer main; 7,520 LF of 20-inch forcemain; 25 new sewer manholes; an odor control station; and a new 18.0 MGD quadruplex regional wastewater pump station. (This Finding of No Significant Impact covers the full 18.0 MGD capacity.)

Project Number: CS370744-05

Project Cost: \$14,280,000

Clean Water State Revolving Loan Fund: \$14,000,000

Local Funds: \$280,000

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, Section Chief
State Revolving Fund Section
Division of Water Infrastructure

ENVIRONMENTAL ASSESSMENT

A. Proposed Facilities and Actions

The proposed project will construct new sanitary sewer lines and a regional pump station to serve the south side of the Town of Cramerton and the southeast side of the City of Belmont in Gaston County. This Southeast Sewershed project includes construction of approximately 165 LF of 30-inch, 2,625 LF of 24-inch, 3,505 LF of 21-inch, 85 LF of 20-inch, and 10 LF of 12-inch gravity sewer main; 7,520 LF of 20-inch forcemain; 25 new sewer manholes; an odor control station; and a new 18.0 million gallons per day (MGD) quadraplex Armstrong Ford Regional Pump Station (PS). The sewer lines will be primarily constructed of PVC pipe with ductile iron pipe used in areas requiring bore and jack construction. The Armstrong Ford Regional PS will be constructed in two phases. Phase 1 will include three pumps for a flow rate of 9.4 MGD. The fourth pump will be installed in Phase 2 to achieve the full 18.0 MGD. (This Finding of No Significant Impact covers the full 18.0 MGD capacity.) The new sewer system will convey wastewater directly to the Eagle Road Wastewater Treatment Plant (WWTP). Construction of the Southeast Sewer collection system and Armstrong Ford Regional PS will allow for decommissioning of the Baltimore PS. Flow from this pump station will improve reliability of the overall system by relieving stress on older infrastructure and decreasing the chance of disruption in wastewater flow conveyance and sanitary sewer overflows (SSOs).

Funding Status: The estimated total cost for the project is \$14,280,000. The Town is applying for a Clean Water State Revolving Fund (CWSRF) loan of \$14,000,000 and will use local funds for the remaining \$280,000 cost for closing/administrative fees.

B. Existing Environment

Topography and Soils. Gaston County is located in the Piedmont Physiographic Province. The project is in the non-mountainous portion of the old Appalachian Highlands with mostly irregular plains. Elevations in the project area range from 568 to 660 feet above mean sea level. Gneiss, schist, and granite are typical rock types.

The dominant soils in the project area are Cecil-Urban with loamy surface layer and clayey subsoil; Chewacla deep, somewhat poorly drained, moderately permeable soils on floodplains with slopes ranging from 0 to 2 percent; Lloyd with deep, well-drained, moderately permeable soils with slopes typically 2 to 10 percent; Tatum deep, well drained, moderately permeable soils with slopes ranging from 0 to 50 percent; Urban Land where more than 85 percent of the surface is covered with impervious cover and original soils have been greatly altered; Wilkes shallow, well drained, moderately slow to slow permeable soils with slopes ranging from 4 to 60 percent; and Winnsboro with deep, well drained slowly permeable fine soils with slopes ranging from 2 to 25 percent.

Surface Water. The project area is located in the South Fork Catawba Subbasin Subbasin (HUC 03050102). South Fork Catawba River and an unnamed tributary in the project area are classified as WS-V. This portion of the river is not impaired.

Water Supply. The City of Gastonia's Two Rivers Utilities supplies drinking water to the service area that is drawn from Mountain Island Lake.

C. Existing Wastewater Facilities

In 2011, the merger of the City of Gastonia's and Town of Cramerton's water and wastewater systems formed Two Rivers Utilities. The City of Gastonia's wastewater system includes a collection system and three WWTPs that serve the City of Gastonia, the Town of Cramerton, and adjacent areas. The collection system collects wastewater from over 28,000 service connections. The three plants collectively treat approximately 13.1 MGD on a daily average basis. The proposed sewer system for this area will discharge into the existing Eagle Road WWTP sewershed collection system. Eagle Road WWTP, which will serve the project area, was constructed in the 1950 and has a capacity of 4.0 MGD. It was upgraded in 2007 to improve biological ammonia removal and add chemical phosphorus removal. The WWTP has sufficient capacity to receive flow from the proposed project over the 20-year planning period.

The Eagle Road WWTP sewershed includes approximately 12 miles of 8-inch to 18-inch diameter gravity sewer mains, five (5) miles of 2-inch to 14-inch diameter forcemain, and seven (7) lift stations ranging in capacity from 28 gallons per minute (gpm) to 1,500 gpm. The collection system ranges from approximately 30 years old to newly constructed and includes a variety of materials such as PVC, ductile iron, vitrified clay, and hollow structural steel. The system has been well maintained and operates with minimal disruption. The lift stations have been upgraded as needed to meet capacity and maintenance requirement and provide dependable service.

D. Need for Proposed Facilities and Actions

The City's existing sanitary sewer infrastructure needs updated and enhancements to support expected growth in and around the project area and to relieve stress on older and/or failing infrastructure. The proposed project will enable the City to continue providing dependable wastewater collection service to the growing Eagle Road WWTP. The regional PS will allow for abandonment of a smaller station. The project area is largely undeveloped. The proposed project will provide sewer service to new developments.

E. Alternatives Analysis

Alternative 1 – No-Action: This alternative would continue to operate the existing sewer collection system without any changes or improvements. This alternative is rejected because directing additional flow from anticipated growth in the service area would impose additional stress on existing infrastructure and increase the likelihood of SSOs.

Alternative 2 – Collection System Expansion: This alternative would construct approximately 165 LF of 30-inch, 2,625 LF of 24-inch, 3,505 LF of 21-inch, 85 LF of 20-inch, and 10 LF of 12-inch gravity sewer main; 7,520 LF of 20-inch forcemain; 25 new sewer manholes; an odor control station; and a new 18.0 MGD quadraplex Armstrong Road Regional PS. This alternative would convey wastewater to the Eagle Road WWTP. Under this alternative, the PS is located on

the south side of the South Fork Catawba River. Under this alternative, the forcemain route would go from the WWTP along Eastwood Drive and then following Armstrong Ford Road down to the South Fork Catawba River. The portion of the forcemain crossing the river is being constructed via direction drill as part of another construction project beginning prior to this project. The proposed location of the Armstrong Ford Road Regional Pump Station is at a low-point in the sewershed making it an ideal location to collect wastewater flow. This alternative is preferred because it meets the needs for an infrastructure system for wastewater collection in the Southeast Sewershed.

Alternative 3 – Collection System Expansion Alternative Forcemain Route: This alternative would construct similar sewer infrastructure as Alternative 2 but with an alternate route for the forcemain. This alternative considered a route from the Eagle Road WWTP to the proposed Armstrong Ford Regional PS parallel to the South Fork River and around the Timberlake neighborhood, then across Armstrong Ford Road and then crossing the South Fork Catawba River. This route would increase environmental impacts by installing the forcemain in the 100-year floodplain and floodway. Two wetlands crossings would be required, and more homeowners would be impacted along this route compared to the preferred alternative. A sub-alternative was considered locating the Ford Armstrong Regional PS to the north side of the South Fork Catawba River. This PS location would require gravity sewer crossing the river at very deep depths made even deeper by higher elevations on the north side of the river. Due to the topography of the project area, alternate routes for the forcemain or location for the proposed regional PS would have higher construction costs and greater environmental impacts than the preferred alternative; therefore, this alternative was rejected.

F. Environmental Consequences and Mitigative Measures

Topography and Soils: Construction activities for installation of sewer lines will have temporary impacts to topography and soils. Disturbed areas will be restored to pre-construction conditions, stabilized, and re-seeded with native vegetation. Construction of the Armstrong Ford Regional PS will have some permanent impacts due to grading to accommodate the PS building and driveway, but these impacts are not expected to be significant. Areas not covered by building or pavement will be stabilized and re-seeded. The proposed project will not impact the 100-year floodplain and floodway. Secondary and cumulative impacts (SCI) related to growth and development in the service area will be minimized through Gaston County's Floodplain Development Regulation (which includes the City of Belmont) and the Town of Cramerton's Floodplain Hazard Prevention Ordinance.

Land Use: Impacts to land use are not expected to be significant. Most of the construction will take place on undeveloped land. Zoning in the broader project area includes a combination of residential, business highway, and neighborhood development. Some easements will be required for the sewer line installation, but these easements will not require revisions to zoning or land use plans. SCI related to development will be minimized by requiring new development to follow Gaston County's Unified Development Ordinance, the Town of Cramerton's Land Development Code and Land Use Plan, and the City of Belmont's Land Development Code.

Wetlands: Significant impacts to wetlands are not anticipated. Construction will disturb approximately 0.04 acre of wetlands for gravity sewer installation via open cut with pipe installed a minimum of three feet below the wetland surface elevation. Sediment and erosion control measures will be followed throughout construction. Following construction activities, wetlands will be regraded and restored to pre-construction conditions. The project will utilize Nationwide Permit 12/Water Quality Certification 3819, and construction will adhere to all permit conditions. SCI related to development will be minimized through compliance with Section 404/401 of the Clean Water Protection Act and Gaston County's stormwater ordinance, which limits impervious surfaces and requires stormwater control measures.

Important Farmlands: Significant impacts to important farmlands are not anticipated. The project area contains soils types identified as prime and unique farmland, but these areas are not in agricultural use. SCI to farmlands will be minimized through Gaston County's Voluntary Agricultural District Ordinance, which encourages preservation and protection of farmland and non-farm development.

Public Lands and Scenic, Recreational, and State Natural Areas: Significant impacts to public lands, scenic, recreational, or state natural areas are not expected. Two natural areas are located near the project area: Armstrong Ford approximately 300 feet northwest of the project area and Gateway Nature Preserve approximately three miles northeast of the project area. The project will be routed away from these natural areas, so no impacts are anticipated. SCI will be minimized by requiring new development to follow Gaston County's Unified Development Ordinance, the Town of Cramerton's Land Development Code and Land Use Plan, and the City of Belmont's Land Development Code.

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 (October 19, 2020, ER 20-2005). No areas of archaeological or historical value have been identified in the immediate project area. SCI will be minimized through consultation with SHPO and compliance with the Archaeological Historic Preservation Act and the National Historic Preservation Act.

Air Quality: No significant impacts to air quality are anticipated. Construction activities will have temporary and localized impacts related to exhaust from construction equipment and dust from exposed construction areas. Disturbed areas will be promptly reseeded to minimize impacts. No open burning will be allowed. Minor emissions may be associated with testing the generator at the PS. SCI will be limited through requirements in the City of Belmont's Code of Ordinances, Town of Cramerton's Code of Ordinances, and Gaston County's 2035 Comprehensive Land Use Plan.

Noise Levels: No significant permanent noise impacts are anticipated. Construction activities will be limited to daylight hours (weekdays from 7:00 am to 6:00 pm). The only anticipated operational impact will be noise from generator testing and emergency use, as needed, at the Armstrong Ford Regional Pump Station. SCI will be limited through the City of Belmont's Noise Ordinance, Town of Cramerton's Noise Ordinance, and Gaston County's 2035 Comprehensive Land Use Plan.

Water Resources: No significant impacts to water resources are anticipated. The proposed gravity sewer includes crossing an intermittent unnamed tributary to South Fork Catawba River via open cut with rip rap protection below the normal high water mark. If possible, this crossing will be completed in dry conditions to minimize disturbance. Other than the crossing, the sewer alignment will avoid buffer areas. An approved Erosion and Sediment Control Plan will be followed with erosion control measures including sediment fence, gravel check dams, and inlet and outlet protection will be utilized. The forcemain route includes a segment crossing the South Fork Catawba River installed via directional drill as part of a separate construction project preceding the proposed project. The proposed project will connect on either side of the river. SCI related to growth will be mitigated through Gaston County's stormwater ordinance, which limits impervious surfaces and requires stormwater control measures.

Forest Resources: Significant impacts to forest resources are not expected. Impacts will include approximately 11 acres of clearing. The construction corridor will be replanted with native vegetation. SCI will be mitigated through are not expected to be significant and will be minimized through Gaston County's Unified Development Ordinance, the Town of Cramerton's Land Development Code and Land Use Plan, and the City of Belmont's Land Development Code.

Shellfish or Fish and Their Habitats: Significant impacts to shellfish, fish, and their habitats are not expected. There is no evidence of threatened or endangered species in or downstream of the project area. Impacts to aquatic species will be minimized through compliance with a sediment and erosion control plan. SCI related to growth will be mitigated through Gaston County's stormwater ordinance, which limits impervious surfaces and requires stormwater control measures.

Wildlife and Natural Vegetation: No significant impacts to wildlife and natural vegetation are expected. Construction activities will temporarily disturb wildlife behavior. Maintained easements will be narrow enough to avoid disruptions to wildlife movement. Disturbed areas will be reseeded. Six threatened and/or endangered species were identified as possibly occurring within five miles of the project: Bald Eagle (*Haliaeetus Leucocephalus*), Bog Turtle (*Clemmys Muhlenbergii*), Northern Long-Eared Bat (*Myotis Septentrionalis*), Dwarf-Flowered Heartleaf (*Hexastylis naniflora*), Georgia Aster (*Symphotrichum Georgianum*), and Schweinitz's Sunflower (*Helianthus Schweinitzii*). Suitable habitat was found these species but no identified occurrences, and due to the nature of the project, no impacts to these species are anticipated. SCI will be minimized through compliance with the Endangered Species Act and Fish and Wildlife Coordination Act.

Introduction of Toxic Substances: The project is not expected to introduce toxic substances into the environment. During construction, fuels and lubricants needed for equipment will be located in a contained area to control any spills. Contractors will be required to perform vehicle inspections and maintenance to minimize pollution. Concrete will be prevented from entering surface waters.

The U.S. Fish and Wildlife Service reviewed the proposed project and determined that proposed mitigation will avoid impacts to protected species (December 9, 2020, Log No. 4-2-20-411). The North Carolina Wildlife Resources Commission, Natural Heritage Program, and DWR Mooresville 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 (October 19, 2020, ER 20-2005).

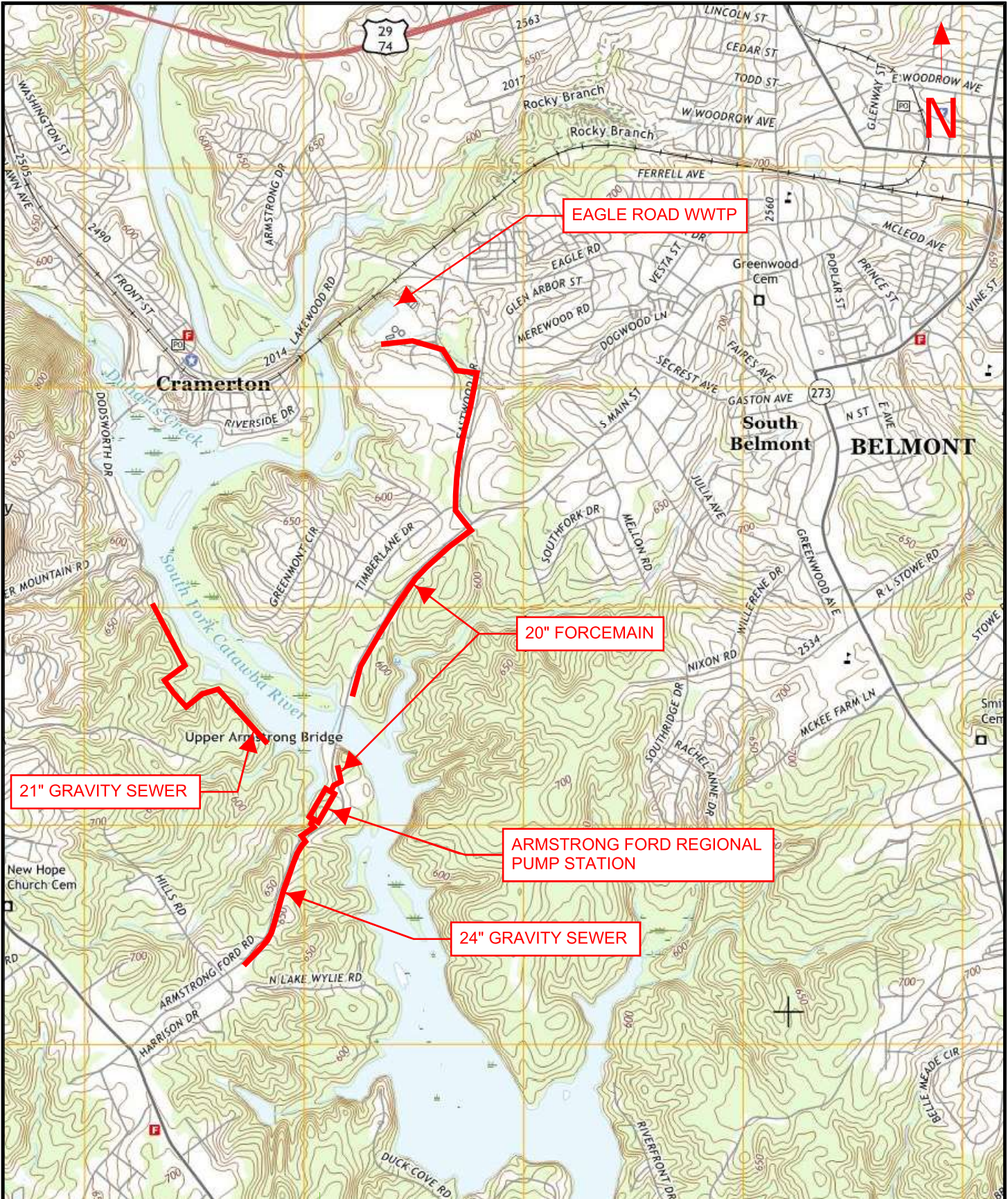
G. Public Participation, Sources Consulted

The City of Gastonia held a public meeting on February 3, 2021 and made the engineering report/environmental information document available for review by the public through the City's website. The meeting included a presentation about the project. There were no comments received.

The current user charge for a typical residential customer is \$62.60 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 \$2.47 (approximately 3.95%), for a future combined bill of \$65.07.

Sources consulted about this project for information or concurrence included:

- 1) City of Gastonia
- 2) City of Belmont
- 3) Town of Cramerton
- 4) Gaston County
- 5) North Carolina Department of Environmental Quality
 - Wildlife Resources Commission
 - Natural Heritage Program
 - DEQ Mooresville 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
- 6) North Carolina Department of Natural and Cultural Resources
- 7) North Carolina State Clearinghouse
- 8) North Carolina Department of Public Safety
- 9) U.S. Fish and Wildlife Service
- 10) U.S. Army Corps of Engineers



**PROJECT VICINITY MAP
SOUTHEAST SEWER**

GASTONIA, NC

Project No. 2170369

FIGURE 1.1

June 2020