

SECONDARY AND CUMULATIVE IMPACTS MANAGEMENT PLAN

For

**The Westside Wastewater Treatment Plant
City of High Point
Davidson and Guilford Counties, North Carolina**

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Memo

From: City of High Point

Project: Westside Wastewater Treatment Plant Secondary and Cumulative Management Plan

Date: September 1, 2009

RE: *Background and Service Area of the Westside Wastewater Treatment Plant Secondary and Cumulative Impacts Management Plan*

This Memo is to be attached to the Westside Wastewater Treatment Plant (WWTP) Secondary and Cumulative Management Plan (SCIMP or Plan) and explain the need for, history of, and Service Area associated with the SCIMP.

History and Need for the SCIMP

The City of High Point, North Carolina retained HDR Engineering, Inc. of the Carolinas to prepare a Secondary and Cumulative Impacts Management Plan in order to assess the potential for and proposed management of impacts for the Westside Wastewater Treatment Plant Service Area in Davidson, Guilford, Forsyth, and Randolph Counties, North Carolina. The SCIMP developed from comments related to the Kool Pool Outfall EA (FONSI issued 7/20/2007). In order to not repetitively address SCI in the area, the SCIMP approach was adopted, with agency agreement, to address the entire WWTP service area and therefore be applied to future projects such as WWTP expansion. The WWTP is currently being evaluated for future expansion, and associated outfall replacements and repairs are ongoing to comply with the Special Order by Consent (SOC) issued by the North Carolina Department of Environment and Natural Resources Division of Water Quality in 2006. The proposed WWTP improvements and wastewater line replacements are intended to alleviate problems associated with the aging sewer line outfalls and to comply with the SOC issued by the North Carolina Division of Water Quality.

This Management Plan was developed following SEPA guidelines but adapted to assess only secondary and cumulative impacts of development within the Service Area. A scoping document was prepared and submitted to the State Clearinghouse for review and comment in April 2007. A SCI Plan was developed in conjunction with the City's effort to address Phase 2 Stormwater requirements. Meetings with Agency representatives were held to discuss the comments generated by the scoping process and the proposed City ordinances. The Draft SCI Management Plan was developed and submitted to the North Carolina Department of Environment and Natural Resources (NCDENR) for review and comment on November 2, 2007. Edits to the plan were incorporated from comments received from the reviewing agencies and resubmitted to those agencies for concurrence on the document on October 23, 2008. This Plan (September 1, 2009) includes all documentation from the prior agency reviews and the Draft Memorandum of Agreement (MOA) between the City of High Point and the NCDENR.

SCIMP Service Area

The WWTP is located at 1044 West Burton Road, Thomasville, N.C. The Service Area for the WWTP includes portions of Guilford, Davidson, Forsyth, and Randolph Counties for a total of 26.20 sq. miles. The Service Area within Guilford County includes approximately 8.16 sq. miles, the majority of which are within the City of High Point boundaries, 15.62 sq. miles within Davidson County, 1.91 sq. miles in southeast Forsyth County, and 0.51 sq. miles within northwest Randolph County. Future development within the Service Area that will utilize the sewer infrastructure will be incorporated into the City of High Point jurisdiction and subject to the guidelines set forth in this plan as well as the City's administrative approval process.

Currently, there are two outfalls which tie into the WWTP, the Kool Pool and Ensley Creek Outfalls. The Rich Fork, Kindergarten, and Corbett Outfalls tie into the Kool Pool Outfall. The latter three of these lines are under the SOC. These major outfalls within the Service Area of the WWTP are adjacent to Payne Creek, Rich Fork, and Kennedy Mill Creek, and are in various stages of repair and replacement. The City of High Point has committed to upgrading these lines to meet current environmental standards. However, due to the need to address the secondary and cumulative impacts associated with these repairs; the City determined

that they would prefer to complete a standardized management plan that would cover the entire WWTP Service Area.

The SCIMP covers the WWTP Service Area but not the remaining City jurisdiction. Development of an overall master plan for the entire City jurisdiction was initially considered. At the time of the development of this plan, the City was already undergoing ordinance reviews and changes related to Phase II Stormwater requirements. In addition, the portion of the City's jurisdiction which outfalls to the Deep River and Eastside Wastewater Treatment Plant falls within the area governed under 15A NCAC 02B .0251 Randleman Lake Water Supply Watershed: Stormwater Requirements. The feasibility and political acceptability of additional changes throughout City jurisdiction was deemed to be less practicable than a SCIMP related directly to current and future planned projects (Kool Pool and WWTP) due to the differences in items such as stream buffers and other ordinances. This division of the Service Areas was the most logical way for the City to handle the differing regulations and allows the City to easily review plans and determine the appropriate management of the Service Areas.

**Memorandum of Agreement between the North Carolina Department
of Environment and Natural Resources and the City of High Point
Regarding the Use of its (City's) Secondary and Cumulative Impact
Management Plan for the
Westside Wastewater Treatment Plant Service Area**

This Memorandum of Agreement (MOA) is made and entered into on the date herein below last written by and between the City of High Point (hereinafter "CITY") and the NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES (hereinafter "NCDENR"), collectively referred to hereinafter as the "Parties". This MOA was developed for the management of Secondary and Cumulative Impacts associated with infrastructure projects specific to the Westside Wastewater Treatment Plant Service Area (hereinafter "WWTPSA").

WHEREAS, the CITY is required under the North Carolina Environmental Policy Act ("NCEPA") to prepare an Environmental Document;

WHEREAS, NCEPA environmental documents regarding infrastructure projects are required to address Secondary and Cumulative Impacts (SCI);

WHEREAS, addressing the SCI of growth and development that may be induced or supported by proposed infrastructure projects is a repetitive, time-consuming and expensive process for the CITY and NCDENR, and involves addressing essentially the same potential environmental effects from growth and development and measures for mitigation of such effects for each infrastructure project;

WHEREAS, it is to the mutual benefit of the CITY and NCDENR to develop a more effective procedure for addressing the SCI of the growth and development facilitated by the CITY'S infrastructure projects and of the measures implemented or to be implemented by the CITY to mitigate those impacts that may occur inside and outside of the CITY'S WWTPSA;

WHEREAS the CITY and NCDENR have agreed to use a single comprehensive document to address the SCI of growth and development induced or supported by all planned CITY infrastructure projects within the WWTPSA;

WHEREAS, the CITY and NCDENR wish to set out in this MOA the procedures to be used and the obligations and responsibilities of the Parties in developing a comprehensive document to satisfy NCEPA requirements that the secondary and cumulative impacts of a proposed infrastructure project be described and discussed.

THEREFORE, the Parties hereby enter into this Memorandum of Agreement.

1. Purpose and Scope of MOA

- 1.1 Purpose – This MOA defines the duties and responsibilities of the Parties concerning preparation, review and use of a comprehensive document, called

SCI Management Plan (PLAN) for the Westside Wastewater Treatment Plant, to satisfy NCEPA requirements to address SCI of growth and development induced or supported by the CITY'S future infrastructure projects within the CITY'S Westside Wastewater Treatment Plant Service Area.

- 1.2 Scope – The PLAN is intended to address SCI, as a result of growth and development induced and supported by infrastructure projects within the CITY'S Westside Wastewater Treatment Plant Service Area and for which NCDENR is the lead State agency under the NCEPA.

2. Definitions

- 2.1 “Environmental Document” means an Environmental Assessment, Finding Of No Significant Impact, Environmental Impact Statement, or Record Of Decision required to be prepared under North Carolina General Statute § 113A-4(2) and NCAC Title 15A, Subchapter 01C.
- 2.2 “Infrastructure Project” means any utilities, transportation, or other project for the CITY'S provision of services to its citizens as identified within the CITY'S Westside Wastewater Treatment Plant Service Area.
- 2.3 “Planning Area” means the area defined in the PLAN.

3. Secondary and Cumulative Impacts Management Plan (PLAN)

- 3.1 Scope of PLAN for the WWTPSA. The PLAN to be approved according to this MOA shall identify the SCI associated with the CITY'S Westside Wastewater Treatment Plant Service Area's future growth and development including capital projects that are in various master plans regarding water, sewer and transportation, and shall identify the mitigation measure in place for these impacts. Documentation of the ordinances implementing the mitigation measure shall be included in the PLAN.
- 3.2 Scope of Secondary and Cumulative Impacts. For the purposes of this MOA and the PLAN, secondary impacts are the reasonable foreseeable impacts of growth and development induced or supported by the proposed infrastructure projects. Secondary impacts may include changes in the pattern of land use, population, density, or growth rate and related effects on air, water, and other natural systems. Cumulative impacts are impacts that result from incremental effects of an activity when added to other past, present and reasonable foreseeable future activities regardless of what entities undertake such actions.
- 3.3 Approved PLAN. The Plan developed and approved for the purposes of this MOA, and as may be amended according to the procedures set forth in Section 6, shall be attached to this MOA as Attachment 1 upon approval.

4. Procedure for Adopting the PLAN

- 4.1 Draft PLAN – The CITY shall develop a draft PLAN for the WWTPSA and submit the document to NCDENR for review and comments according to the applicable requirements and established procedures for Environmental Documents under North Carolina General Statute § 113A-4 and the NCAC Title

15A, Subchapter 01C, including State Clearinghouse Review and all public meeting, comment and agency review requirements.

- 4.2 Final PLAN – The CITY shall develop and adopt a final PLAN to incorporate revisions agreed upon by NCDENR and the CITY as appropriate to address any comments and recommendations received through the review and comment procedure regarding the draft PLAN for the WWTPSA.
- 4.3 Coordination of the State Clearinghouse Process – The CITY shall ensure that all components of the draft and final PLAN and proposed revisions to the PLAN are submitted to the State Clearinghouse and are reviewed and approved in accordance with established procedures for Environmental Impact Statements under the NCEPA.
- 4.4 Copies of the final PLAN – After the State Clearinghouse review and NCDENR approval of the PLAN, the CITY shall post it on the CITY’S website and will provide twelve (12) copies of the final PLAN and this MOA to the NCDENR’s Environmental Review Coordinator (ERC) for distribution to appropriate NCDENR agencies.

5. Reporting Requirements

- 5.1 Report Required – On an annual basis, the CITY shall submit a report to NCDENR’s ERC regarding CITY actions that affect the PLAN. The reports shall be submitted to NCDENR with the first report due one year from the effective date of this MOA.
- 5.2 Contents of the Annual Report – The annual report shall identify any significant changes in actual land use or infrastructure that was anticipated or described in the PLAN. The report shall also describe any significant or proposed changes to the CITY’s land use and infrastructure plans; sediment and erosion control programs; stormwater programs; ordinances related to buffers and open space requirements; and other major mitigation measures described in the PLAN for the WWTPSA.
- 5.3 NCDENR Review – If requested by NCDENR, the CITY will meet with agency representatives to discuss the report.

6. PLAN Revisions

- 6.1 The CITY shall revise the PLAN and submit it to NCDENR by January 1, 2018 and by January 1 of each tenth year thereafter. The Secretary of NCDENR or his/her designee may require the PLAN to be updated sooner based upon the findings, conclusions, or contents of the annual reports and/or the following reasons:
 - 6.1.1. The CITY has made changes to its land use plan and/or infrastructure plans that may cause significant changes to the elements of the SCI PLAN.
 - 6.1.2. NCDENR provides information and data that demonstrate SCI mitigation presented in the PLAN have not been effective in addressing the SCI identified in the PLAN.

- 6.1.3. NCDENR provides information and data that demonstrate the existence of additional SCI that were not initially identified during the preparation of the PLAN.
 - 6.1.4. NCDENR informs the CITY that a new Federally listed endangered or threatened species has been identified within the CITY's Planning Area
 - 6.1.5. NCDENR informs the CITY of a change in characterization or status of a potentially impacted environmental resource.
 - 6.1.6. NCDENR informs the CITY of NCDENR program changes that require consideration of SCI impacts that were not initially addressed during the preparation of the PLAN.
- 6.2 Approval of PLAN Revisions. Revisions to the PLAN shall be subject to the same review and approval procedures set out in Section 4 of this MOA.

7. Use and Effect of the PLAN

- 7.1 NCDENR shall use the PLAN in reviewing NCEPA documents prepared by the CITY for future projects within the WWTPSA that are initiated after NCDENR approves the PLAN and after the date the MOA is signed by the Secretary of NCDENR.
- 7.2 The Parties agree that the approved PLAN shall satisfy the SCI discussion requirements of NCEPA with respect to the environmental impacts of growth and development associated with infrastructure projects proposed by the CITY during the period for which the PLAN is in effect.
- 7.3 The PLAN for the WWTPSA is not intended to address the direct impacts of proposed infrastructure projects. Direct impacts, including any direct cumulative impacts, and secondary impacts that are not associated with anticipated growth and development will be discussed in the Environmental Document for each individual project within the WWTPSA.
- 7.4 Participation in the MOA does not limit the ability of the lead agency to determine the type of Environmental Document required for an individual infrastructure project.
- 7.5 Endangered species impacts that occur outside the CITY's Planning Area, but within the impact area defined by the NCDENR lead agency for a proposed CITY infrastructure project, will be addressed in the individual Environmental Document for that project.

8. Relationship to Permitting

- 8.1 The Parties agree that participation in this MOA does not limit the regulatory authority of a NCDENR agency or limit the ability of any agency to require additional mitigation for an individual project as a condition of permit issuance.
- 8.2 Participation in this MOA does not imply endorsement by NCDENR of aspects of the project that are not subject to the NCEPA.

9. Termination and Dispute Resolution

- 9.1 Termination – NCDENR and the City of High Point may terminate this MOA giving ninety (90) days written notice to the other Party. Notwithstanding any termination of this MOA, the terms and conditions of the MOA shall be honored for any infrastructure improvement projects for which a NCEPA document has been submitted to the State Clearinghouse for final review prior to the date of the written notice of termination.
- 9.2 Conflicts and Disputes – If there is an alleged breach of the MOA or other complaint giving rise to a conflict or dispute, the party making the allegation must give written notice to the other Party. The Parties shall meet to resolve the conflict or dispute. Conflicts and disputes arising from the implementation of this MOA, including possible termination, shall be resolved by the Secretary of NCDENR or his/her designee.
- 9.3 MOA Administrators – The Environmental Review Coordinator for NCDENR and the City Manager or his designee for the CITY (or successor offices and designees) are designated as the contacts for the purpose of notice, implementation, and administration of the MOA.

10. Effective Dates

The effective date of this MOA is the date of the last signature below, and it shall remain in effect until December 31, 2039 unless terminated sooner as provided herein.

In Testimony Whereof, CITY and NCDENR have caused this AGREEMENT to be executed by their respective representatives and attested to by their respective Clerks, on this the ____ day of _____, 20____.

City of High Point

NC Department of Environment and Natural Resources

Signature _____
 Name (Printed) Stribling Boynton
 Title City Manager
 Date _____

Signature _____
 Name (Printed) Dee Freeman
 Title Secretary
 Date _____

Attested Signature _____
 Title City Clerk
 Date _____

Attested Signature _____
 Title _____
 Date _____

Secondary and Cumulative Impacts Management Plan For the Westside Wastewater Treatment Plant High Point, North Carolina

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1.0 INTRODUCTION

The City of High Point (City), North Carolina, has retained HDR Engineering, Inc. of the Carolinas (HDR) to prepare a Secondary and Cumulative Impacts Management Plan (SCI Plan) pursuant to the State Environmental Policy Act (GS 113A, Article 1) in order to assess the potential impacts and proposed mitigation for the Westside Wastewater Treatment Plant (WWTP) Service Area (Service Area) in Davidson, Guilford, Forsyth, and Randolph Counties, North Carolina. HDR previously prepared a direct impact environmental assessment for the Kool Pool outfall, with the commitment that a SCI Plan be prepared to cover future impacts from the line replacement and from potential expansion of the WWTP. The WWTP is currently being evaluated for future expansion, and associated outfall replacements and repairs are ongoing to comply with the Special Order by Consent (SOC) issued by the North Carolina Department of Environment and Natural Resources Division of Water Quality in 2006 (Appendix A). The proposed WWTP improvements and wastewater line replacements are intended to alleviate problems associated with the aging sewer line outfalls, the increased need for capacity at the plant, and to comply with a SOC issued by the North Carolina Division of Water Quality.

1.1 SCI Management Plan Process

This Management Plan was developed following SEPA guidelines but adapted to assess only secondary and cumulative impacts of development within the Service Area. A scoping document was prepared and submitted to the State Clearinghouse for review and comment in April 2007. A SCI Plan was developed in conjunction with the City's effort to address Phase 2 Stormwater requirements. Meetings with Agency representatives were held to discuss the comments generated by the scoping process and the proposed City ordinances. The draft SCI Management Plan was developed and submitted to the NCDENR for review and comment on November 2, 2007. Agency comments from scoping and draft reviews are included in Appendix B.

This Management Plan uses qualitative analyses of available data and literature to determine whether impacts to a given resource may occur. Due to the inherent uncertainty involved in predicting future impacts of development, quantitative analyses were not used. The document outlines the mitigation strategies in place to address those impacts identified in the analysis.

It should be noted that for a given infrastructure project, NCDENR may determine that the programs described in this document are insufficient to address the secondary and cumulative impacts of that individual project. In this case, this document will still be used to meet SEPA requirements, but additional requirements could be placed in the specific project's permit conditions. The City will submit annual reports documenting changes in infrastructure projects or mitigation strategies detailed in the plan. In addition, this SCI Plan is to be considered applicable for ten years from the finalization date. At that point, the Plan will be reevaluated and adopted or amended if necessary.

1.2 Project Service Area

The WWTP is located at 1044 West Burton Road, Thomasville, N.C. The Service Area for the WWTP includes portions of Guilford, Davidson, Forsyth, and Randolph Counties (Figure 1:

WWTP Service Area) for a total of 26.20 sq. miles. The Service Area within Guilford County includes approximately 8.16 sq. miles, the majority of which are within the City of High Point boundaries, 15.62 sq. miles within Davidson County, 1.91 sq. miles in southeast Forsyth County, and 0.51 sq. miles within northwest Randolph County. Future development within the Service Area that will utilize the sewer infrastructure will be incorporated into the City of High Point jurisdiction and subject to the guidelines set forth in this plan as well as the City's administrative approval process.

Currently, there are two outfalls which tie into the WWTP, the Kool Pool and Ensley Creek Outfalls. The Rich Fork, Kindergarten, and Corbett Outfalls tie into the Kool Pool Outfall, of which the last two are included in the SOC. These major outfalls within the Service Area of the WWTP are adjacent to Payne Creek, Rich Fork, and Kennedy Mill Creek, and are in various stages of repair and replacement. The City of High Point has committed to replacing or repairing their aging lines to meet current environmental standards. However, due to the need to address the secondary and cumulative impacts (SCI) associated with these repairs; the City determined that they would prefer to complete a standardized management plan that would cover the entire WWTP Service Area. This Plan is being prepared in association with the Kool Pool Outfall project, which was recently issued a Finding of No Significant Impact, but is also intended to be used for future SEPA documents in the WWTP service area, including future plant expansions.

2.0 BACKGROUND AND DESCRIPTION OF INFRASTRUCTURE

2.1 Wastewater

2.1.1 Existing Wastewater System

The existing Westside Wastewater Treatment Plant (WWTP) is located in Thomasville, N.C. within the Yadkin River Basin and discharging into Rich Fork Creek. The plant has been operational at its present location since 1929 and is operating under NPDES Permit No: NC0024228. The plant's current NPDES permitted discharge is discharge 6.2 MGD and the current daily average flow is 3.8 MGD. A design study is currently underway at the Westside Plant in anticipation of growth and stricter NPDES discharge limits. It is anticipated that the Plant will be designed around the biological nutrient removal (BNR) process and with the treatment capacity increased to 10 MGD.

The WWTP has undergone several upgrades since its construction. Renovations to the WWTP are as follows:

- In 1984, the WWTP was increased in size from 3.0 MGD to a 6.2 MGD facility. This renovation retained the activated sludge process which included anaerobic sludge digestion, disinfection using gaseous chlorine, sludge dewatering using belt filter presses, a biofilter unit, and influent pumping station, using Archimedean screw pumps, a mechanical bar screen, a bucket & chain aerated grit removal system, influent flow measurement using an Parshall flume, primary clarification, lime feed facilities and three aeration basins with a total capacity of 2.304 MG. Also, two new clarifiers were installed along with a traveling bridge

Sand Filter and a Dissolved Air Flootation (DAF) thickener. An original final clarifier was used for the DAF and a second original clarifier was utilized as a chlorine contact chamber.

- In 1992, Installation of a third influent screw pump and construction of two equalization basins were completed.
- In 1996, one of the two belt presses was replaced with a centrifuge for sludge dewatering. This was to coincide with the construction of a sludge incinerator at the Eastside WWTP Plant.
- In 1998, an alum feed system was constructed and placed in service for phosphorus precipitation.
- In 1999, the chlorine disinfection system was replaced with the installation of a Trojan 4000 ultraviolet disinfection system.
- In 2003, over 2000 feet of collection system lines was repaired or replaced from the Westside Plant to W. Lexington Avenue.
- In 2004, a new lime slaking system used for alkalinity adjustment was purchased and installed.

The current wastewater outfalls are discussed in Section 1.0. Several of these lines, including Kool Pool, Kindergarten, and Corbett are under various stages of repair or replacement to meet the requirements of the SOC. Of these projects, only Kool Pool exceeded the State Environmental Policy Act (SEPA) minimum criteria thresholds; therefore, requiring an EA and FONSI. Figure 2 shows the outfalls within the Service Area, the sizes of the outfalls, and year they were constructed.

2.1.2 Future Wastewater System

The future of the Westside Wastewater Treatment Plant includes a potential increase in capacity. A design study is currently underway at the Westside Plant in anticipation of growth and stricter NPDES discharges limits. It is anticipated the WWTP will be designed around the biological nutrient removal (BNR) process and with the treatment capacity increased to 10 MGD.

At this time, no additional major outfalls or interceptors are included in the City's 15-year plan for the Service Area. However, continued development will likely include smaller collection systems from individual subdivisions as they are planned and constructed.

2.1.3 Reclaimed Water Program

Although the City of High Point does not currently have a reclaimed or reuse water program or plan, they are currently investigating the potential for doing this in the future. Should the City expand and develop a reclaimed water program, this information will be included in City's annual report of conditions within the Service Area.

2.2 Water

2.2.1 Existing Water System

Currently potable water within the WWTP Service Area is served in several ways. The City of High Point, Davidson Water, Inc., and private wells supply water to residential and industrial facilities within the Service Area.

The City of High Point has a mission to enhance the quality of life in High Point by proactively maintaining, improving, and administering an effective and efficient water distribution and waste water collection system. The raw water sources for the City include the 340 acre City Lake, the 800 acre Oak Hollow Lake, and the Yadkin River. The City maintains and operates the Ward Water Filtration Plant to provide high quality drinking water to their customers by treating approximately 13.5 million gallons of water per day in accordance with the rules and regulations of the SEPA. The City provides its customers with sufficient volume and adequate water pressure as well as maintaining quality.

Davidson Water, Inc. was created in the late 1960's to provide a dependable water source to portions of Davidson County. The locations to which Davidson Water supplies potable water are often based on locations of subdivisions and higher population densities (Figure 3). Today Davidson Water has three intake stations on the Yadkin River with a pumping capacity of 31 million gallons a day, three lakes connected together that the stations pump into holding approximately 75 million gallons of water, and settling basins equipped to handle up to 20 million gallons of water per day. To maintain their quality standards, they have track-vacs installed in these settling basins to continually clean the basins of sediments and they have 20 dual media filters with each one capable of filtering 1 million gallons of water a day.

In other portions of the Service Area where potable water isn't supplied by either Davidson Water, Inc. or the City of High Point, individual groundwater wells often supply the residences. Groundwater wells are very common in rural areas and within the service area can be found in the more rural areas in Davidson County. Groundwater wells are often not reliable sources of water and can become contaminated. For these reasons and as the more rural areas are developed the potential for either the City of High Point or Davidson Water to supply water to these areas will increase.

2.2.2 Future Water System

The City of High Point currently does not plan to extend service beyond the existing facilities. However, should new development or subdivisions occur within the City's boundaries, the City will assess the need and would likely extend their service to those areas. At this point, no additional water lines are proposed or are currently being built. Throughout the western portion of the service area water is supplied by a private company, Davidson Water, Inc. The City can not regulate the growth and plans of a private company; however, developments also requiring sewer service will be under the jurisdiction of this Plan.

Davidson Water, Inc. is continually planning and building for the future needs of their members. They have planned for larger distribution lines going into all parts of the system as well as three more water tanks. They have installed generators for emergency use and load management at their water plant, portable generators for use at booster pump stations during power outages to keep their members with water service, and a large generator has been installed at their Hyattown pumping station. In addition to those power upgrades, a new telemetering system working off of radio signals has been installed to control tank levels and pump station status so that problems and their locations are identified sooner. Davidson Water has also installed a mapping system of their water lines displaying valve locations, hydrant locations and pressure, and meter locations.

2.3 Transportation

2.3.1 Existing Transportation System

Transportation infrastructure within the Service Area consists primarily of two-lane roads. Several major two-lane thoroughfares run east-west from the City, with limited interconnectivity from a few major and minor thoroughfares running generally north-south (Figure 4).

2.3.2 Future Transportation System

Four improvements are planned for the transportation system within or near the Service Area: widening of NC 109 in Davidson County; a new US 311 beltway around the east side of High Point, primarily in Guilford County; a new north-south connector from US 311 in Forsyth County to I-85 near Thomasville; and widening of Skeet Club Road near the Forsyth-Guilford County line (Figure 4).

As part of NCDOT Transportation Improvement Project (TIP) No. R-2568, NC 109 is proposed for widening to multilane facility, providing improved access from Thomasville northwest almost to the Davidson-Forsyth County line. A portion of this project runs along the southwestern edge of the Service Area in Davidson County. This project is being done in sections, beginning in the south near I-85 Business and progressing north to Forsyth County. Construction is underway or complete for the sections abutting the Service Area.

A new multilane US 311 Bypass facility (the High Point "East Belt") is planned to run from south of I-85 near Archdale north to US-311 near the Forsyth-Guilford County line (NCDOT TIP R-0609). This north-south connector runs along the east side of High Point outside of the Service Area, and joins US 311 north of High Point near the Service Area boundary, just east of where US 311 crosses the Guilford-Forsyth County line. The northern portion of this connector, which is the section that adjoins the Service Area, has already been constructed and is in use.

A new multilane road is proposed on the west side of High Point in Davidson County. This "North-South Connector" would begin at I-85 near Thomasville and run north on

new alignment to NC 66 at the US 311 interchange in Forsyth County. This project is in the early planning stages and has been listed as NCDOT TIP No. U-2537.

A fourth smaller project is the proposed widening of Skeet Club Road (SR 1003/1820, NCDOT TIP U-3615A) to a four-lane facility in the northeastern corner of the Service Area. Skeet Club Road encircles the northern half of Oak Hollow Lake. The portion of this project that falls within the Service Area is not yet funded for right-of-way acquisition or construction by NCDOT.

3.0 PURPOSE AND NEED FOR PROPOSED INFRASTRUCTURE

The purpose of the proposed infrastructure related to this Plan is to provide basic services to the current and future residents within the WWTP Service Area. The need for this proposed infrastructure is to address the current and projected growth within the Service Area as a result of its proximity to major thoroughfares and municipalities.

This SCI Management Plan will give the City a standardized plan for the entire Service Area, rather than having to address the same issues for individual projects, such as future WWTP expansion. To address these issues on the Service Area scale will help the City to enforce the mitigation and be less taxing on City resources for implementation.

4.0 DESCRIPTION OF EXISTING ENVIRONMENT

This section summarizes the affected environment for the WWTP Service Area. The inventory and evaluation of the existing environment (i.e., physical, human, natural, historic and cultural, and other resources) provides the necessary baseline from which to determine the potential secondary and cumulative impacts that could occur within the Service Area.

4.1 Topography

The Service Area serves the western portion of High Point in Guilford County and the eastern portion of Davidson County, as well as a providing service to a small area in Forsyth and Randolph Counties. These counties lie within the Piedmont physiographic region of North Carolina, which is characterized by gently rolling topography in the uplands and moderately steep slopes along the major drainages. The Service Area is located on the High Point West United States Geological Survey (USGS) topographic quadrangle (USGS 1969, revised 1987). Elevations within the Service Area range from 685 to 975 feet above mean sea level (AMSL). The highest point along the route is approximately 975 feet AMSL 1/4-mile north of the intersection of Business 85 and Old Thomasville Road in northwestern Randolph County, and the lowest elevation is approximately 685 feet AMSL 1/2-mile southwest of the intersection of US 311 and NC 66 in southwest Forsyth County in an active quarry (720 feet, along Payne Creek at the downstream end of the service area near the WWTP).

Floodplains within watersheds greater than one square mile are regulated by the Federal Emergency Management Agency (FEMA). Flood Insurance Rate Maps (FIRMs) for the area are dated 1981, 1998, 2000, and 2007 (FEMA 2007). The Service Area contains four streams which have Federal Emergency Management Agency (FEMA)-designated 100-year floodplains

associated with them. The streams are classified Zone A and AE. Floodplains serve several functions such as surface water storage during large rainfall events, wildlife corridors and habitat, and water quality and quantity functions. Some of the water quality functions include infiltration zones and removal or filtration of nutrients, etc. Pockets of riparian wetlands often exist in the microtopography of these floodplains. Approximately 2.83 square miles of FEMA regulated floodplains are located inside the WWTP Service Area; these floodplains represent 11 percent of the Service Area (Figure 5).

TABLE 1 FEMA Designated Floodplains

Stream	Watershed	Zone *	Stream Index #
Payne Creek	Yadkin	A, AE	12-119-7-1
Rich Fork	Yadkin	A, AE	12-119-7
Kennedy Mill Creek	Yadkin	A, AE	12-119-7-2
Cuddybum Creek	Yadkin	AE	12-119-2

* A - Areas subject to a one percent or greater annual chance of flooding in any given year. Because no detailed hydraulic analyses have been performed on these areas, no base flood elevations are shown.

AE - Areas subject to a one percent or greater annual chance of flooding in any given year. Base flood elevations are shown as derived from detailed hydraulic analyses

4.2 Soils

The majority of the soils within the Project Service Area fall within the following General Soil Map Units (Figure 6):

- Wilkes-Pacolet
- Mecklenburg-Enon-Cecil
- Tallapoosa-Pacolet-Madison
- Hiwassee-Cecil

The majority of the soils associations within the Service Area are well drained. Areas of poorly drained soils can be found along floodplains and adjacent to streams. The remaining soils are mostly sandy loams, clay loams, sandy clay loams or clays on gently sloping to steep slopes on uplands. In the eastern portion of the service area, many of the soils have been impacted by development and other soil disturbances associated with the City of High Point. Brief descriptions of the general soil types follow. Table 2 includes the detailed soil series mapped within the Service Area by County (McCachren 1994, Stephens 1977, Wyatt 2006, and Zimmerman 1976).

TABLE 2 Soils

	Soil Symbol	Soil Series Name
Forsyth County	ApB	Appling Sandy Loam, 2 to 6 Percent Slopes
	ApC	Appling Sandy Loam, 6 to 10 Percent Slopes
	CcB	Cecil Sandy Loam, 2 to 6 Percent Slopes
	CcC	Cecil Sandy Loam, 6 to 10 Percent Slopes
	Ch	Chewacla
	Cu	Cut and Fill Land
	EnB	Enon Fine Sandy Loam, 2 to 6 Percent Slopes
	EnC	Enon Fine Sandy Loam, 6 to 10 Percent Slopes
	Gu	Gullied Land
	LoD	Louisburg Loamy Sand, 6 to 15 Percent Slopes
	MeB	Mecklenburg Loam, Dark Surface Variant, 2 to 6 Percent Slopes
	MeC	Mecklenburg Loam, Dark Surface Variant, 6 to 10 Percent Slopes
	PaB	Pacolet Fine Sandy Loam, 2 to 6 Percent Slopes
	PaC	Pacolet Fine Sandy Loam, 6 to 10 Percent Slopes
	PaF	Pacolet Fine Sandy Loam, 15 to 45 Percent Slopes
	PcC2	Pacolet Clay Loam, 6 to 10 Percent Slopes, Eroded
	PcF2	Pacolet Clay Loam, 15 to 45 Percent Slopes, Eroded
	VaB	Vance Sandy Loam, 2 to 6 Percent Slopes
	W	Water
	WdB	Wedowee Sandy Loam, 2 to 6 Percent Slopes
	Wh	Wehadkee Soils
	WIC	Wilkes Soils, 6 to 10 Percent Slopes
	WID	Wilkes Soils, 10 to 15 Percent Slopes
WIF	Wilkes Soils, 15 to 45 Percent Slopes	
Davidson County	AaB	Altavista Fine Sandy Loam, 0 to 2 Percent Slopes, Occasionally Flooded
	ApB	Appling Sandy Loam, 2 to 8 Percent Slopes
	CcB	Cecil Sandy Loam, 2 to 8 Percent Slopes
	CcD	Cecil Sandy Loam, 8 to 15 Percent Slopes
	CfB	Cecil-Urban Land Complex, 2 to 8 Percent Slopes
	Ch	Chewacla
	EnB	Enon Fine Sandy Loam, 2 to 8 Percent Slopes
	EnD	Enon Fine Sandy Loam, 8 to 15 Percent Slopes
	EuB	Enon-Urban Land Complex, 2 to 8 Percent Slopes
	IrB	Iredell Loam, 1 to 6 Percent Slopes
	MeB	Mecklenburg Loam, 2 to 8 Percent Slopes
	MeD	Mecklenburg Loam, 8 to 15 Percent Slopes
	PaB	Pacolet Sandy Loam, 2 to 8 Percent Slopes
	PaD	Pacolet Sandy Loam, 8 to 15 Percent Slopes
	PaE	Pacolet Sandy Loam, 15 to 25 Percent Slopes
	PnB	Poindexter and Zion Sandy Loams, 2 to 8 Percent Slopes
	PnD	Poindexter and Zion Sandy Loams, 8 to 15 Percent Slopes
	PnE	Poindexter and Zion Sandy Loams, 15 to 25 Percent Slopes
	PnF	Poindexter and Zion Sandy Loams, 25 to 45 Percent Slopes
	PuD	Poindexter and Zion-Urban Land Complex, 2 to 15 Percent Slopes
SfB	Sedgefield Sandy Loam, 2 to 8 Percent Slopes	
Ud	Udorthents, Loamy	
w	WATER	

TABLE 2 Soils (Continued)

	Soil Symbol	Soil Series Name
Randolph County	BaD	Badin-Tarrus Complex, 15 to 25 Percent Slopes
	CcB	Cecil Sandy Loam, 2 to 8 Percent Slopes
	GeB2	Georgeville Silty Clay Loam, 2 to 8 Percent Slopes, Moderately Eroded
	MeB2	Mecklenburg Clay Loam, 2 to 8 Percent Slopes, Moderately Eroded
	MeC2	Mecklenburg Clay Loam, 8 to 15 Percent Slopes, Moderately Eroded
	MkC	Mecklenburg-Urban Land Complex, 2 to 10 Percent Slopes
	PaD	Pacolet Fine Sandy Loam, 15 to 30 Percent Slopes
	WpC	Wilkes-Poindexter-Wynott Complex, 8 to 15 Percent Slopes
	WtB	Wynott-Enon Complex, 2 to 8 Percent Slopes
	WtC	Wynott-Enon cComplex, 8 to 15 Percent Slopes
	WzB	Wynott-Wilkes-Poindexter Complex, 2 to 8 Percent Slopes
Guilford County	Ch	Chewacla Sandy Loam
	EnB	Enon Fine Sandy Loam, 2 To 6 Percent Slopes
	EnC	Enon Fine Sandy Loam, 6 To 10 Percent Slopes
	EuB	Enon-Urban Land Complex, 2 To 10 Percent Slopes
	MhB2	Mecklenburg Sandy Clay Loam, 2 To 6 Percent Slopes, Eroded
	MhC2	Mecklenburg Sandy Clay Loam, 6 To 10 Percent Slopes, Eroded
	MuB	Mecklenburg-Urban Land Complex, 2 To 10 Percent Slopes
	Ur	Urban Land
	WkC	Wilkes Sandy Loam, 6 To 10 Percent Slopes
	WkD	Wilkes Sandy Loam, 10 To 15 Percent Slopes
	WkE	Wilkes Sandy Loam, 15 To 45 Percent Slopes

Enon soils (fine, mixed, active, thermic Ultic Hapludalfs) consist of very deep, well drained, slowly permeable soils on ridge tops and side slopes in the Piedmont with slope ranging from 2 to 45 percent. These soils have formed in clayey residuum weathered from mafic or intermediate igneous and high-grade metamorphic rocks such as diorite, gabbro, diabase, or hornblende gneiss or schist.

Wilkes soils (loamy, mixed, active, thermic, shallow Typic Hapludalfs) consist of shallow, well drained soils with moderately slow permeability. These soils formed in residuum weathered from intermediate and mafic crystalline rocks on uplands in the Piedmont. The slope ranges from 4 to 60 percent.

Mecklenburg soils (Fine, mixed, active, thermic Ultic Hapludalfs) consist of very deep, well drained soils with slow permeability. These soils formed in residuum weathered from intermediate and mafic crystalline rocks of the Piedmont uplands. The slopes range from 2 to 25 percent.

Pacolet soils (Fine, kaolinitic, thermic Typic Kanhapludults) consist of very deep, well drained, moderately permeable soils. These soils formed in residuum weathered mostly from felsic igneous and metamorphic rocks of the Piedmont uplands and slopes are commonly 15 to 25 percent but range from 2 to 60 percent.

Cecil soils (Fine, kaolinitic, thermic Typic Kanhapludults) consist of very deep, well drained moderately permeable soils that formed in residuum weathered from felsic, igneous and high-grade metamorphic rocks of the Piedmont uplands. These soils are on ridges and side slopes of the Piedmont Uplands with slopes ranging from 0 to 25 percent.

Tallapoosa soils (Loamy, mixed, semiactive, thermic, shallow Typic Hapludults) consists of shallow, well drained, moderately permeable soils that formed in residuum weathered from mica schist. These soils are on narrow ridges and side slopes of the Piedmont Plateau with slopes ranging from 5 to 80 percent.

Madison soils (Fine, kaolinitic, thermic Typic Kanhapludults) consist of well drained, moderately permeable soils that formed in residuum weathered from felsic or intermediate, high-grade metamorphic or igneous rocks high in mica content. They are on gently sloping to steep uplands in the Piedmont with slopes mostly between 4 and 15 percent, but range from 2 to 60 percent.

Hiwassee soils (Fine, kaolinitic, thermic Rhodic Kanhapludults) consists of very deep, well drained soils on high stream terraces in the Southern Piedmont. They formed in old alluvium derived from felsic and mafic rocks and slopes range from 2 to 50 percent (Soil Survey Staff 2007).

4.3 Land Use

The proposed project is located in Davidson, Guilford, Forsyth and Randolph Counties, all of which have established land use and/or zoning ordinances. However, the majority of the Service Area for this project is located within Davidson and Guilford Counties. Land use within the Service Area ranges from developed areas within the City to predominately rural residential, agricultural and undeveloped areas. Figure 5 shows the Land Use information available for the Service Area. The current land use within the Service Area is mostly Agriculture and Single Family Residential based on current zoning information located in Table 3.

TABLE 3 Land Use by Jurisdiction (Based on Current Zoning)

ZONING DESIGNATION		AREA (acres)
City of High Point	Agriculture	34.4
	Industrial	1,030.8
	Commercial	531.1
	Residential – Multi Family	892.9
	Residential – Single Family	3,177.7
	Office	166.0
	Floating District, Plan Unit Develop	683.0
	Public, Institutional	202.9
Forsyth County	Agriculture	175.6
	Industrial	156.3
	Commercial	36.8
	Residential – Multi Family	11.7
	Residential – Single Family	852.6
Davidson County	City of High Point	530.5
	Agriculture	6,684.3
	Industrial	203.4
	Commercial	89.3
	Residential – Multi Family	18.2
	Residential – Single Family	2,190.5

4.4 Jurisdictional Waters of the United States

Jurisdictional waters of the United States include wetlands and streams under the authority of the Clean Water Act (CWA) Section 404 enforced by the US Army Corps of Engineers (USACE). The Clean Water Act defines wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.” In general, wetlands share three key characteristics: wetland hydrology, hydric soils, and hydrophytic vegetation. Wetlands are valuable because they often provide wildlife habitat and corridors, provide natural open spaces, protect water quality, control erosion, and limit flood damage. Wetlands within the Service Area are generally located in riparian areas and floodplains associated with intermittent and perennial streams. This is typical for the Piedmont Region of North Carolina. No detailed mapping was performed for the Service Area at this time.

Waters of the US, as classified by the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI), within the Service Area are primarily freshwater ponds totaling 43.43 acres within the Service Area. In addition, NWI maps 0.67 acre of freshwater emergent wetlands and 19.14 acres of freshwater forested/shrub wetlands (Figure 10). NWI has mapped a total of 63.24 acres of waters within the Service Area; however, it is likely the mapping does

not fully represent the riparian or bottomland forests associated with streams and their floodplains within the Service Area. For example, along the Kool Pool Outfall Improvements Project, approximately 6.15 acres of wetlands are anticipated to be impacted. The NWI mapping shows only a small portion of these wetlands along that corridor within the WWTP Service Area.

Within the WWTP Service Area, wetlands typically existing adjacent to streams or rivers consist primarily of forested floodplain wetlands. These areas are characterized by having strong hydric soil indicators, such as low soil matrix chroma (less than 2) and saturation. They also support vegetation suitable for hydric conditions such as red maple (*Acer rubrum*), river birch (*Betula nigra*), green ash (*Fraxinus pennsylvanica*), boxelder (*Acer negundo*), silky dogwood (*Cornus amomum*), tag alder (*Alnus serrulata*), jewelweed (*Impatiens capensis*), yellow flag iris (*Iris pseudacorus*), and *Juncus* spp. Small areas of emergent wetlands are present along ponds. Open water ponds have been created along many of the streams within the Service Area.

4.5 Prime or Unique Agricultural Lands

The Natural Resources Conservation Service document "Important Farmlands of North Carolina" was reviewed to determine the presence of soils that have potential for agriculture (USDA 1998). This list includes all farmland which is categorized as prime, unique, or of statewide importance. Criteria used for determining the prime and unique categories were published in the Federal Register on January 31, 1978, and amended on June 17, 1994. The criteria for statewide important farmland were developed in 1988 by the North Carolina NRCS State Soils Staff.

Prime farmland (PFL) includes, in general, all soils with slopes between 0 and 8 percent, which are in Capability Classes I and II, and some in Class III. Under certain conditions, soils that flood and are at least somewhat poorly drained, poorly drained, and very poorly drained can meet the requirements for PFL. Unique farmland includes soils that have a special set of properties that are unique for producing certain high value crops. For example, blueberries are considered a high value crop in North Carolina and are produced on Leon, Lynn Haven, and Murville soils.

Currently, approximately 45 percent of the WWTP Service Area is in agricultural use, as discussed in Section 4.3. Agricultural lands are concentrated in the western portion of the Service Area and include pockets of both cultivated row crops and pasture areas.

Of the soil types within the Service Area, Enon, Mecklenburg, Appling, Cecil, Pacolet, Vance, Wedowee, Altavista, Sedgefield, Georgeville, and Chewacla (when drained) are listed as PFL (USDA 1998). Several others within the Service Area are considered as a Farmland of Statewide Importance.

4.6 Public Lands and Scenic, Recreational, and State Natural Areas

No County, State, or Federal recreational areas exist within the Project Service Area. There are two City parks, Council Street Park and West End Park, comprising approximately 35 acres within the Service Area according to available mapping. There are no known areas under a

conservation easement or held by a conservation organization in the Service Area. The City's Land Use Plan has designated areas prone to flooding as recreational and open space areas which can provide both scenic and recreational opportunities for residents. Scenic areas include Significant Natural Heritage Areas (SNHAs) which provide passive recreational opportunities such as hiking and bird watching when located on public land. A designate State Natural Heritage Area does exist within the Service Area near the confluence of Payne Creek and Rich Fork Creek; however, the property is held by a private entity and isn't accessible to the public.

4.7 Areas of Archaeological or Historical Value

SEPA requires the conservation and protection of the state's natural resources and preservation of "the important historic and cultural elements of our common inheritance." Authorized under the National Historic Preservation Act of 1966, the National Register of Historic Places (NRHP) houses the formal repository of information pertaining to historic structures and districts worth preservation. A database search of the National Register listed eleven historic structures/areas within the Service Area. In addition to the NRHP search, data was obtained from the State Historic Preservation Office (SHPO) for the Service Area (September 2007). Recognized national historic properties in the Service Area include:

- John H. Adams House
- Hardee Apartments
- Oakwood Historic District
- Sherrod Park
- J. C. Siceloff House
- A. E. Taplin Apartment Building
- Lucy and J. Vassie Wilson House
- Brummell's Inn
- Eli Moore House
- Spring Hill Methodist Protestant Church Cemetery
- Barney Troxler House

Additional properties are located in the Service Area which are currently on the Study List for eligibility or some that have been Determined Eligible but are not on the National Register at this time. These lists are available to the public from the SHPO but are not included in this document as they are subject to change and updated regularly.

4.8 Air Quality

The US Environmental Protection Agency (EPA) uses the Air Quality Index (AQI) to report ambient air quality conditions with AQI ranges from good, moderate, unhealthy for sensitive groups, and unhealthy. Data from the US Environmental Protection Agency (EPA) Aerometric Information Retrieval System from 2002 to 2006 shows that air quality reached unhealthy levels 11 days out of the past five years of measurement in Davidson County, 35 days in Guilford County, and 33 days in Forsyth County. Data from 2001 to 2004 was analyzed for Randolph County; air quality reached unhealthy levels 20 days during that time (EPA 2007).

According to the AQI, the main pollutant of air in Davidson, Guilford and Forsyth Counties is particulate matter smaller than 2.5 micrometers. The main pollutant in Randolph County is ozone which is the second greatest pollutant in the previously mentioned counties. Fine particulate matter results from fuel combustion in motor vehicles, power plants, and industrial facilities, residential fireplaces, woodstoves, wildfires, and prescribed forest burning. Fine particles can also be formed in the atmosphere from gases such as SO₂, NO_x, and VOC. High levels of small particulate matter and ozone pollution levels occur in urban areas where there are numerous cars, industry, and other sources of combustion.

TABLE 4 County Air Quality Indices

Number of Recorded Days (Percent of Recorded Days)					
	Year	Good	Moderate	Unhealthy for Sensitive Groups	Unhealthy
Davidson County AQI	2002	67 (58)	47 (41)	1 (1)	0 (0)
	2003	66 (56)	50 (42)	2 (2)	0 (0)
	2004	133 (44)	168 (55)	3 (1)	0 (0)
	2005	179 (49)	178 (49)	5 (2)	0 (0)
	2006	49 (54)	41 (46)	0 (0)	0 (0)
Guilford County AQI	2002	217 (59)	126 (35)	19 (5)	3 (1)
	2003	224 (61)	137 (38)	3 (1)	1 (0)
	2004	201 (55)	162 (44)	3 (1)	0 (0)
	2005	209 (57)	152 (42)	4 (1)	0 (0)
	2006	169 (63)	99 (37)	2 (1)	0 (0)
Forsyth County AQI	2002	224 (61)	124 (34)	15 (4)	2 (1)
	2003	208 (57)	151 (41)	6 (2)	0 (0)
	2004	222 (61)	137 (38)	6 (2)	0 (0)
	2005	195 (53)	168 (46)	2 (1)	0 (0)
	2006	187 (51)	177 (48)	2 (1)	0 (0)
Randolph County AQI	2001	157 (73)	51 (24)	7 (3)	0 (0)
	2002	163 (76)	42 (20)	10 (5)	0 (0)
	2003	188 (87)	25 (12)	2 (1)	0 (0)
	2004	191 (89)	23 (11)	1 (1)	0 (0)

4.9 Noise Levels

Elevated noise levels have been documented as negatively affecting human health and welfare. Wildlife behavior patterns such as migration, breeding, hunting and predator avoidance have also been documented as being disrupted by human induced noises. The existing sources of noise pollution of the Service Area include traffic along the roadways and other ambient day-to-day noise representative of the residential, forested, and agricultural land uses.

Noise levels within the Service Area are mixed. The existing sources of noise pollution include those typical of moderate sized cities within the Guilford County portion of the Service Area. Also the Guilford County portion of the Service Area has an industrial area near Business I-85 in the southeastern portion of the Service Area which can produce elevated noise levels. The noise in Forsyth and Davidson counties include the human induced noise associated with suburban and rural residential, forested, and agricultural activities. Typical sources of residential noise include lawn mowers, leaf blowers, playing children and pets.

4.10 Water Resources

The WWTP Service Area is located in the Yadkin River and Cape Fear basins, more specifically in the Lower Yadkin Hydrologic Unit No. 03040103 (USGS 1987). The North Carolina Division of Water Quality (DWQ) Subbasin designation for the affected portion of the watershed is 03-07-07 (Abbots Creek Watershed) (NCDENR 2003). The streams within the Service Area include Payne Creek, Rich Fork, Kennedy Mill Creek (also known as Ensley Creek), Cuddybum Creek, and their unnamed tributaries (Figures 5 and 10).

The majority of the streams in the Service area are classified as Class C waters. Only Cuddybum Creek is classified as Class WS-III as it flows to Abbots Creek and eventually Lake Thom-A-Lex, the drinking water supply for Lexington and Thomasville. As defined by DENR, Class C streams are “protected for secondary recreation, fishing, fish and aquatic life propagation and survival, agriculture, and other uses. Secondary recreation includes wading, boating, and other uses involving human body contact with water where such activities take place in an infrequent, unorganized, or incidental manner. There are no restrictions on watershed development or types of discharges” (15A NCAC 02B .0211). WS-III streams are “a source of water supply for drinking, culinary, or food-processing purposes for those users where a more protective WS-I or WS-II classification is not feasible and any other best usage specified for Class C waters” (15A NCAC 02B .0215).

TABLE 5 Surface Water Classifications

Stream	Watershed	DWQ Subbasin	14 Digit HUC	Class	Stream Index #
Payne Creek	Yadkin	03-07-07	03040103030030	C	12-119-7-1
Rich Fork	Yadkin	03-07-07	03040103030030	C	12-119-7
Kennedy Mill Creek	Yadkin	03-07-07	03040103030030	C	12-119-7-2
Cuddybum Creek	Yadkin	03-07-07	03040103030010	WS-III	12-119-2

Section 303(d) of the Clean Water Act requires that states develop a list of waters not meeting water quality standards or which have impaired uses. DWQ must prioritize these water bodies and prepare a management strategy or total maximum daily load (TMDL). According to the NC Water Quality Assessment and Impaired Waters List 2006 Integrated 305(b) and 303(d) Report, Rich Fork is listed as impaired (NCDWQ 2006). The cause for the impairment is Low Dissolved Oxygen, Fecal Coliform, and Impaired Biological Integrity. In addition, the 2003 Yadkin–Pee Dee River Basinwide Water Quality Plan states that the majority of waters within the 03-07-07 Subbasin exhibit some level of impacts to water quality and that many streams are impaired by a combination of nonpoint and point source pollution (NCDWQ 2003).

Groundwater in the Service Area is generally found in the unconsolidated quaternary sediments and within fractures in the underlying bedrock. The typical water table is found in the saprolite layer, while supply wells are completely in bedrock. Groundwater flow is generally from high to low elevations, and the water table tends to be a subdued reflection of topography. Recharge occurs in upland areas, and perennial streams tend to be discharge points. Groundwater quality can vary from location to location as problems can result from natural geochemical processes as well as human activities. Human activities which can impact quality include: discharge from septic tanks, petroleum products leaking from storage tanks, improper handling/transport of industrial chemicals, improperly constructed water-supply wells, agricultural activities, highway de-icing salts, and infiltration of contaminated surface water from lakes and streams (Daniel and Dahlen 2002).

4.11 Forest Resources

Site visits and aerial photography analysis indicate land use within the WWTP Service Area is primarily forested, agricultural, and low density residential. Naturally regenerated forest resources typically occur along the stream channels and adjacent floodplains. Woody vegetation within these areas often include mid-successional red maple, river birch, boxelder, willow oak (*Quercus phellos*), sweetgum (*Liquidambar styraciflua*), Chinese privet (*Ligustrum sinense*), and yellow poplar (*Liriodendron tulipifera*). Many areas within the Service Area show signs of disturbance related to residential growth or agriculture offering little opportunity for forestry activities.

4.12 Shellfish or Fish and their Habitats

The named streams (Payne Creek, Rich Fork, Kennedy Mill Creek, and Cuddybum Creek) within the proposed corridor are perennial second or third order streams which can provide habitat for shellfish and fish if the water quality is sufficient to support the species. These streams provide free-flowing, warm-water habitats with moderate gradients, generally alternating pools and riffles, and substrates consisting mainly of rocks, gravel, sand, and silt. Numerous ponds within the Service Area also provide warm-water habitat. Typical fish species caught within the streams and lakes include catfish, suckers, bass, crappie, and sunfish. Larger perennial tributaries of these streams may also provide aquatic habitat for smaller species of fish. The intermittent streams along the project corridor flowing into these streams have little or no flow during the summer months, which limits the aquatic life within those streams primarily to aquatic invertebrates.

There are no NCDWQ sampling points on any stream segments within the Service Area. However, a fish sampling point is located downstream of the project area on Rich Fork. That sampling point yielded a North Carolina Index of Biotic Integrity (NCIBI) of poor for the fish community (NCDWQ 2003), adding to the impaired classification of the stream.

4.13 Wildlife and Natural Vegetation

Due to minimal development along the major streams and associated floodplain, riparian areas offer habitat for wildlife species. These areas present a corridor for animal movement within the Service Area, giving shelter and providing food sources. Wildlife was noted within the Service Area by direct observation and the visible evidence of animal tracks and scat. This field evidence indicates that eastern cottontail rabbits (*Sylvilagus floridanus*), raccoons (*Procyon lotor*), white-tailed deer (*Odocoileus virginianus*), Virginia opossum (*Didelphis virginiana*), frogs, snakes, turtles, and songbirds inhabit the area. Additional species typically found include gray squirrel (*Sciurus carolinensis*), red and gray fox (*Vulpes vulpes* and *Urocyon cinereoargenteus*), and several types of shrews and mice. Bird life in the Service Area is typical of the Carolina Piedmont. Northern cardinals (*Cardinalis cardinalis*), American robins (*Turdus migratorius*), Carolina chickadees (*Poecile carolinensis*), bluebirds (*Sialia sialis*), sparrows, warblers, rufous-sided towhees (*Pipilo erythrophthalmus*), and other songbirds make their homes in the backyard habitats and forests. Hawks, such as the red-tailed hawk (*Buteo jamaicensis*), and owls are predator species known to inhabit the area.

Natural vegetation within the area consists of several different forest types. In using the Classification of the Natural Communities of North Carolina (Schafale and Weakley 1990), the most dominate communities within the Service Area are Mesic Mixed Hardwood Forests, Basic Mesic Forests, Dry-Mesic Oak—Hickory Forests, Bottomland Hardwood Forests, and Alluvial Forests.

4.14 Protected Species (Threatened and Endangered Species)

Under the provisions of the Endangered Species Act (ESA) of 1973 as amended, any action likely to adversely affect a species classified as federally protected is subject to review by the United States Fish and Wildlife Service (USFWS). Plants and animals with Federal classifications of Threatened or Endangered are protected under the provisions of Sections 7 and 9 of the ESA. Federal Species of Concern (FSC) are also a priority of the USFWS but are not protected under the ESA. Species listed as Endangered or Threatened by the State (North Carolina Natural Heritage Program) are afforded limited State protection under the North Carolina State Endangered Species Act and the North Carolina Plant Protection and Conservation Act of 1979.

The North Carolina Natural Heritage Program (NCNHP) and the USFWS databases were reviewed for known occurrences of protected species in Forsyth, Guilford, Davidson, and Randolph Counties (Table 6). There are four federally listed Endangered species listed in the Counties and one federally listed Threatened due to similarity of appearance. In addition, there are twelve FSC listed for the Counties and one Candidate species. Of these seventeen species, five are mussels, five are fish, four are plants, one bird, one turtle, and one mammal.

Habitat may occur for several of these species within the Service Area; however, only one species has been documented within the Service Area, the Eastern small-footed Myotis (*Myotis leibii*). Several species listed occur in clearings and edges of upland woods often found along power line, roadway, and sewer line right-of-ways.

The small-footed myotis is the smallest myotis in the eastern United States. It has long glossy chestnut brown fur with black accents. They generally roost on the ground under rocks, in crevices, occasionally in buildings, and under tree bark during summer months. They are found in wild, heavily forested, mountain regions, frequently known from hemlock forest habitats. Caves and mines are the only known winter habitat (Bat Conservation International 2007).

TABLE 6 Federally Listed Species (For Davidson, Forsyth, Guilford, and Randolph Counties)

Scientific Name	Common Name	State Status	Federal Status	County Status
<i>Picoides borealis</i>	Red-cockaded woodpecker	E	E	Historic
<i>Myotis leibii</i>	Eastern small-footed Myotis	SC	FSC	Current
<i>Glyptemys muhlenbergii</i>	Bog turtle	T	T (S/A)	Current
<i>Anguilla rostrata</i> *	American eel		FSC	Current
<i>Moxostoma sp. 2</i> *	Carolina redhorse		FSC	Current
<i>Notropis mekistocholas</i>	Cape Fear shiner	E	E	Current
<i>Alasmidonta varicose</i>	Brook floater	E	FSC	Obscure
<i>Etheostoma collis pop 2</i>	Carolina darter – Eastern Piedmont Population	SC	FSC	Current
<i>Etheostoma collis pop 1 (collis)</i>	Carolina darter - Central Piedmont population	SC	FSC	Obscure
<i>Fusconaia masoni</i>	Atlantic pigtoe	E	FSC	Current
<i>Villosa vaughaniana</i>	Carolina creekshell	E	FSC	Current
<i>Toxolasma pullus</i>	Savannah lilliput	E	FSC	Current
<i>Lampsilis cariosa</i>	Yellow lampmussel	E	FSC	Current
<i>Cardamine micranthera</i>	Small-anthered bittercress	E	E	Historic
<i>Helianthus schweinitzii</i>	Schweinitz's sunflower	E	E	Current
<i>Lotus unifoliolatus var. helleri</i>	Prairie birdsfoot-trefoil	SR-T	FSC	Current
<i>Symphotrichum georgianum</i>	Georgia aster	T	C	Current

* This species is listed on the USFWS list but is not listed on the NCNHP list.

4.15 Introduction of Toxic Substances

Toxic substances and their cleanup are regulated by the Resource Conservation and Recovery Act (RCRA) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). The goals of these programs are to eliminate or reduce toxic waste; clean up waste that has been leaked, spilled, or improperly disposed; and protect people from harmful waste. There are no Superfund sites within the WWTP Service Area. There are seven Hazardous Substance Disposal Sites (determined by the NC Division of Waste Management, CERCLA Information System (CERCLIS), the National Priorities List, the State Inactive Hazardous Sites

List, and the Sites Priority List) located in the industrial area at Highway 29 and Business I-85 intersection in the southwest portion of the WWTP Service Area.

Other potential sources of toxic substances present in the source basin study area include agriculture-related substances such as fertilizers, herbicides, and pesticides. Additional toxic substances such as glues, solvents, and paints are employed in the construction of homes and commercial buildings. Typical household hazardous wastes include oils, cleaners, solvents, paints, herbicides, and fertilizers. Industrial areas also provide potential for toxic substance releases but are required to have spill prevention plans in place should an incident occur.

5.0 SECONDARY AND CUMULATIVE IMPACTS RELATED TO PROJECT GROWTH IN THE AREA

This section outlines the secondary and cumulative impacts to the natural resources and environment that may result from future development within the Service Area. These impacts are treated in a general manner, due to the uncertainty involved in predicting future growth. This development may occur with or without planned infrastructure improvements such as increased line capacity of the Kool Pool Outfall, or expansion of the WWTP. A summary table of anticipated impacts from construction of the line is provided at the end of Section 7 (Table 9). Although mitigation of these impacts are addressed in the next section, current federal, state, and local ordinances already being implemented are included in this assessment. These measures are an integral part of the development process directly affecting the design and construction of planned developments, and therefore altering the impacts of future development.

5.1 Topography

Clearing and grading of undeveloped lands can change the topography within the Service Area if the disturbed ground is not returned to its pre-construction grades. Development within the floodplain can reduce its overall water storage and function, and therefore affect downstream resources. Intact floodplains serve as critical habitats for wildlife and can support rich ecosystems. Disconnection from stream channels results in channel entrenchment and lateral bank erosion. As described in Section 6, the City has set limitations on development in areas with steep slopes. Impacts to floodplains are limited due to the City's floodplain protection and riparian buffer ordinances are also described in Section 6.

5.2 Soils

Land development can result in soil disturbance. In development areas, soils can be displaced, removed, and replaced as a result of clearing and grading activities which may alter the soil types shown on the soil surveys. The use of heavy equipment could compact soils or some soils may be eroded prior to vegetation being established on a site during clearing and grading. These impacts would be minimized through implementation of the City's soil erosion and sediment control ordinance. Sediment and erosion control plans must be approved prior to ground disturbance, and include measures to limit soil loss and disturbance, as described in Section 6.

5.3 Land Use

The Northeast Davidson Area Plan was used to estimate future land use conditions. A Land Use Plan is a guidance document that illustrates the land use the City would like to see in a given area. Figure 8 illustrates broad land use categories within the Service Area and Table 7 provides detail on the area (square miles) within each broad land use category. The Table summarizes the conditions that would occur if the land is developed as predicted by the Land Use Plan including areas set aside as open space. A portion of the Service Area within Davidson County has not been included in the Table due to no proposed land use available for the area outside that assessed in the Northeast Davidson Area Plan. Changes in land use often result in increased impervious surfaces which in turn lead to increased stormwater runoff and other downstream effects. These issues are covered in following sections.

In the event a development is proposed outside the appropriate land use designation, it would have to go through the City's rezoning process. Through this process, described in Section 6, conditions are generally placed on the development to ensure compliance with City standards and reduce impacts to the environment and the surrounding community. Examples of the City's implementation of this process are included in Appendix C.

TABLE 7 Proposed Future Land Use (From Northeast Davidson Area Plan)

Land Use	Square Miles (Acres)
Community / Regional Commercial	0.37 (234.20)
Future Growth Area	2.92 (1,869.22)
Heavy Industrial	1.94 (1,241.22)
High-Density Residential	0.02 (12.83)
Institutional	0.59 (374.41)
Light Industrial	0.42 (265.91)
Local / Convenience Commercial	0.51 (329.02)
Low-Density Residential	9.41 (6,024.70)
Medium-Density Residential	0.76 (485.36)
Moderate-Density Residential	0.86 (550.15)
Office	0.30 (165.84)
Recreation / Open Space	1.14 (726.73)

5.4 Jurisdictional Waters of the United States

Wetlands in the Service Area are typically located within the riparian zones and floodplains adjacent to stream channels and ponds. Development must avoid and minimize impacts to these resources where possible. Road and utility crossings may be required on sites where access is limited by stream channels. Continued maintenance of the utility corridors causes

secondary impacts to wetlands to wetlands adjacent to the sewer lines. This is taken into account during the permitting process as the USACE requires mitigation for these impacts. Wetlands play an essential role in water retention, regulating stream flows, filtering pollutants and fertilizers, and providing habitat for a wide range of plant and animal species. The loss of wetland functions can have adverse impacts on wildlife by reducing habitat and biodiversity.

As discussed in Section 4, some wetlands within the Service Area may be protected by the floodplain regulations. The Clean Water Act requires developments to obtain permits for any impacts to streams or wetlands, regardless of the size of impact. This process ensures that the least amount of impact occurs on a given site since all development would have to provide evidence of avoidance and minimization of impacts. Compensatory mitigation would be required for all but minimal impacts, in order to ensure no net loss of wetland functions. In addition, the City's watershed protection ordinance would further protect these resources by limiting development within the riparian areas, where a majority of wetlands are located. These programs are described in Section 6.

Wetland functions may also be decreased from stormwater runoff. This runoff may increase sediment loading, nutrient enrichment, and surface water pollutants that could impact aquatic and amphibious organisms inhabiting jurisdictional waters. The, overall quality of wetlands may be decreased by Secondary and Cumulative Impacts in Service Area. However, these impacts would be minimized by federal regulations on jurisdictional waters, and stream buffers and stormwater controls implemented through the City's watershed protection ordinance (Section 6).

5.5 Prime or Unique Agricultural Lands

Future impacts to Prime Farmlands and Farmlands of Statewide Importance may be attributed to land conversion for residential and/or commercial uses. Growth to the west of High Point has increased and thus many acres of agriculture and Prime Farmlands within the Service Area may have already been converted. This conversion is likely to continue even without the proposed infrastructure as residential lots serviced by wells and septic systems increase in the area. While the pattern of growth may be different, and density may be lower, farmland would likely be converted. Proximity to residential growth and adjoining urbanization would determine the location and extent of reduction.

As the area develops, the values of the farmland can rise which can sometimes forcing farmers out of business due to increased property taxes or as new residential growth occurs farming businesses may move away, vandalism of crops may occur, and the use of farm equipment on public roads becomes undesirable and more dangerous with the increased traffic.

5.6 Public Lands and Scenic, Recreational, and State Natural Areas

Growth in the Service Area should have limited impact on scenic and recreational areas. Few of these resources are present within the Service Area. These areas may become more valued by the community as open spaces are converted to other land uses. The City recognizes the value of open space and implements open space requirements through their conditional use zoning process as shown in the Appendix C.

5.7 Areas of Archaeological or Historical Value

Archaeological and historical areas may be impacted by future projects. Three historic properties on the National Register occur within the Service Area outside of the City's jurisdiction. The remaining properties listed on the National Register are within the City's jurisdiction and those within the designated historic districts are subject to the rules and procedures of the High Point Historic Preservation Commission. In addition to the known sites, unknown sites or sites eligible but not listed may exist within the Service Area. Some loss of these resources could inadvertently occur with development. However, projects requiring Section 404/401 Permits must undergo a review by the State Historic Preservation Office for clearance as well as any federal undertakings. Federal undertakings also include activities sponsored by state or local governments or private entities if they are licensed, permitted, approved, or funded (wholly or in part) by the federal government.

5.8 Air Quality

The cumulative impacts of a growing population may impact air quality. Levels of air pollution may rise due to increased vehicle emissions from additional traffic and industrial emissions. Even without the proposed infrastructure, population within the area is likely to increase and contribute to higher levels of air pollution. In Davidson and Guilford Counties fine particulate matter and ozone are the major pollutants of concern.

According to the AQI, the main pollutant of air in Davidson County is particulate matter smaller than 2.5 micrometers. This is also the main pollutant of air in Guilford County with the second greatest pollutant being ozone. Fine particulate matter results from fuel combustion in motor vehicles, power plants, and industrial facilities, residential fireplaces, woodstoves, wildfires, and prescribed forest burning. Fine particles can also be formed in the atmosphere from gases such as SO₂, NOX, and VOC. High levels of small particulate matter and ozone pollution levels occur in areas where there are numerous cars, industry, and other sources of combustion. It is likely that these air pollutants would continue to be a problem in the Service Area as more development occurs. Increased air pollutants can impact human health. To address the impacts of growth on air quality, the Service Area is currently part of the Early Action Compact (EAC) for the Triad. The EAC Ozone Action Plan was developed in 2004 to try to get the area into attainment status by December 2007.

The EPA has deferred the designations for the 1997 8-hour ozone standard until mid April 2008. From the data that has been presented, it appears that the Triad EAC was successful in the region and that they will be in attainment according to the information in the Federal Register ([http://www.epa.gov/ttn/naaqs/ozone/eac/fr_20080206_73\(25\)_6863_eac_attain_designation.pdf](http://www.epa.gov/ttn/naaqs/ozone/eac/fr_20080206_73(25)_6863_eac_attain_designation.pdf)).

5.9 Noise Levels

Projected growth may have an affect on the amount of noise in the Service Area especially as rural portions of Davidson County are developed. A change in land use to residential and commercial development would produce a greater amount of noise from vehicles traveling on local roadways, daily business operations, and overall domestic noise. Increasing noise levels

can also impact human health and potentially impact wildlife behavior. The City regulates “offenses against public peace and order” including excessive noise from music, vehicles, and other sources. There are no ordinances for noise outside the City’s jurisdiction.

5.10 Water Resources

Surface Water

With the addition of either planned infrastructure improvements or septic systems, population density is likely to increase potentially impacting surface water resources within the Service Area. Impervious surfaces within the Service Area would increase resulting in an increase in stormwater runoff. Pollutant loads and scouring would increase without practices to control the stormwater runoff. Typical stormwater pollutants include sediment, nutrients (nitrogen, phosphorus), bacteria (fecal coliform), and potential toxicants (metals, oil and grease, hydrocarbons, and pesticides). The increase in runoff could cause a decline in water quality and create subsequent impacts on aquatic habitat, wetlands, and sensitive aquatic and amphibian species. The City’s Watershed Protection Ordinance, which complies with the Phase II stormwater requirements, reduces these potential impacts through implementation of impervious surface limits and stormwater control requirements for development.

Increases in impervious surface could increase the rate of runoff and impact stream baseflows, which also may impact stream stability, stream channel sinuosity, streambank slopes, floodplain dynamics, and hydrologic flow rates. The construction of sewer lines, water lines, and roads may also impact water quality and aquatic habitat, particularly where they cross streams although the proper use of erosion and sediment controls help minimize sediment impacts within the riparian zones. The City’s Watershed Protection Ordinance contains riparian buffer protections which limit disturbance adjacent to stream channels. In addition, the Clean Water Act requirement of avoiding and minimizing impacts reduces the amount of crossings associated with development to those necessary for each site.

303(d)-Listed Streams

Land use changes may impact both water quality and quantity in the Service Area. These impacts may limit or impede the ability of the State to prepare and effectively implement management strategies to improve water quality in Section 303(d)-listed water bodies. 303 (d) listed streams suffer from water quality or aquatic habitat stresses. In this instance, Rich Fork suffers from low dissolved oxygen, fecal coliform, and impaired biological integrity associated with urban runoff and storm sewers. Since the headwaters of this water body are located in areas that are already urbanized, it would be difficult to attain a healthy aquatic community in this stream, even with no future development. However, the City is working to upgrade and repair their sewer outfalls in the Service Area which would help alleviate some of the issues with Rich Fork. Increases in runoff may further degrade these water bodies. The City’s Watershed Protection Ordinance addresses this issue and limits impervious areas and post-construction stormwater runoff as described in Section 6.

Groundwater

As water and sewer services are expanded in the Service Area, fewer residents would rely on groundwater as a public water supply source. Also, a number of septic tank/ground absorption systems serving residences may be eliminated. These are positive secondary impacts to the groundwater resources of the Service Area by reducing the demand for groundwater as a source for drinking water and the public health risk of groundwater contamination from leaking or failing septic tanks.

Future development may degrade groundwater quality if contaminants common to urban activities reach the groundwater. These include fertilizers, petroleum products, semi-volatile and volatile organic compounds, and metals and nutrients from stormwater runoff. A general increase in impervious surfaces may also impede groundwater recharge and groundwater's ability to maintain base flow during drought conditions.

5.11 Forest Resources

Portions the forested land within the Service Area could be converted to other uses. As the population increases the land would mostly likely be replaced with low density residential development, in accordance with the Land Use Plan. The majority of the forested land within the project area consists of mid-successional hardwoods. Sustainable silviculture practices are not suitable due to amount of disturbance from residential growth and agricultural activities. A decrease in forested areas may have an impact on air quality and temperature due to their ability to filter air and provide shade to cool air temperatures.

Forest resources are likely to remain primarily along the stream channels and adjacent floodplains. Forested wildlife habitat could be reduced within the Service Area and may become more fragmented. The Land Use Plan and other ordinances described in Section 6 would help to limit some of the impacts to forest resources. The stream buffers and steep slope regulations would provide some protection to these resources. Open space requirements, along with floodplain and buffer preservation, would allow the potential for a network of natural corridors along stream channels within the Service Area. This would allow migration of wildlife from one area to another while limiting exposure to human infrastructure.

5.12 Shellfish or Fish and Their Habitats

Degradation of water quality and aquatic habitats described above may impact aquatic resources and fish communities. Sources of degradation include increasing erosion of stream channels, sedimentation from construction activities, changed hydrology from increased impervious surfaces, and increased stormwater runoff containing high levels of nonpoint source pollutants. These impacts may affect a fish community by altering species diversity by eliminating the less tolerant of habitat/pollutant stress species or reducing the number of individuals within a community. This may occur without the quantity of fish present changing, or a community may lose both diversity and population. Insectivorous fish species dependent on healthy benthic macroinvertebrate communities may be impacted by a loss or change in their food source. Fish species dependent on riffle habitats may disappear with habitat impacts.

Another factor that may change a fish community includes replacement of sensitive fish species by pollutant-tolerant exotic species.

The construction of sewer lines, water lines, and roads may also impact water quality and aquatic habitat, particularly where they cross streams although the proper use of erosion and sediment controls help minimize sediment impacts within the riparian zones. In addition, where culverts are used for road crossings and not sufficiently buried, a natural substrate would no longer exist to provide aquatic habitat or a corridor for movement.

The potential impacts described in this section are generally related to impacts associated with other resources such as soils (sedimentation), land use (stormwater runoff), and water resources (stream degradation). Therefore, the measures currently in place to address these other resources would also apply to the aquatic habitats described above.

5.13 Wildlife and Natural Vegetation

Urbanization within the Service Area may impact wildlife resources through the degradation of wildlife habitat. The conversion of land, wetlands, streams, and forested areas could result in habitat loss and fragmentation of sensitive and non-sensitive aquatic and terrestrial species. Ultimately, terrestrial species diversity could decline as a result of habitat loss from land use changes. Cumulatively, land use changes fragment the landscape making wildlife movement more difficult. As wildlife corridors become fragmented and decrease in area, the abundance and diversity of wildlife species may decline.

Without proper protective measures in place, changes in land use can impact aquatic species and their habitats. These changes can result in increased pollutant loading, sedimentation, reduction in streambank stability, and other channel modifications. Impacts to fish communities and forested areas and habitats were discussed in the previous sections.

Natural vegetation within the Service Area is typical of Piedmont upland and bottomland communities. As forested lands are converted to other uses, natural communities would decrease in size and wildlife habitat is lost or fragmented. Rare communities may run the risk of being lost if adequate protection is not afforded them. Loss of natural vegetation is likely in disturbed areas where non-native exotic species may out-compete the native vegetation and alter community structure. Major tracts of natural vegetation may be limited to riparian zones protected by undisturbed buffer zones. These areas could provide a corridor for wildlife passage due to their association with stream channels and floodplains. In addition, clearing land for residential and commercial development can result in reductions in water storage capacity and surface water infiltration.

5.14 Protected Species (Threatened and Endangered Species)

While the Endangered Species Act protects threatened and endangered species from takings, impacts to a species' habitat over time may reduce the number of individuals of a species. Table 6 presents a list of Federally-listed species that could occur within the Service Area. This list is based on the presence of habitat and observations of the species within the Service Area counties at some point in time. Habitat for several of the species could occur within the Service

Area. Most likely to occur would be those species which rely on open woods and roadsides such as Schweinitz's sunflower, Georgia aster, and Carolina birdfoot-trefoil. The streams in the Service Area are large enough to support several of the species listed; however, the majority of streams in the Service Area are impaired as noted in Section 4.10 and unlikely to provide suitable habitat for these listed species. Habitat for the eastern small-footed myotis includes hollow trees for summer roosts and caves or mines for winter roosts. The Service Area has potential to support summer roosts for this small bat but Davidson County is at the eastern limits of the range for the species.

5.15 Introduction of Toxic Substances

As urbanization continues in the Service Area, the potential for release of toxic substances from residential and commercial sources increases. Improper disposal of these substances could impact groundwater and surface water quality and potentially impact human health through drinking water supplies, fish consumption, and other means. As the amount of traffic and urban uses increase, stormwater runoff would contain increasing levels of water pollutants such as sediment and silt, nitrogen and phosphorus from lawn fertilizers, oils and greases, rubber deposits, toxic chemicals, pesticides and herbicides, and road salts. Unless contained and treated before entering surface waters, this urban stormwater could impact the water quality and sensitive species living within the receiving basin. The long-term impact of toxic discharges to the surface and groundwater from urban stormwater, landfill leachate, and accidental and/or intentional spill of household and industrial chemicals in the receiving basin could lead to declines in water quality without proper protective measures in place. This could contribute to the potential loss of wildlife and their habitats.

The City's Watershed Protection Ordinance implements stormwater controls and best management practices that help to alleviate these potential impacts. BMPs that remove nutrients and sediment from stormwater also control toxic substances to varying degrees, depending on the specific BMP. The City regulates generators of toxic substances through their Hazardous and toxic substances ordinance. The City has also formed partnerships with other cities and counties to educate the public on the impacts of stormwater runoff on water quality. The Piedmont Triad Water Quality Partnership works to educate residents about stormwater and water quality issues; including non-point source pollution, regulations, and best management practices.

6.0 MANAGEMENT OF SECONDARY AND CUMULATIVE IMPACTS

As discussed in Section 5.0, federal state and local measures that are an integral part of the planning, design, approval, and construction of developments are discussed in conjunction with the potential impacts. Therefore, this section is provided as a summary of the measures previously described in relation to impacts to each resource. The summary includes federal and state programs (Section 6.1), as well as the local programs and ordinances applicable to the Service Area (Section 6.2). The City of High Point is actively managing its growth using innovative planning approaches and techniques. The City recently amended their ordinances to comply with Phase II stormwater requirements. However, even prior to this implementation the City has implemented their Land Use Plan policies to reach their objective for the City's future growth, as shown in Appendix C. The City has married its land use plan with watershed

protection policies and development procedures to form ordinances and regulations that they can implement and maintain for future years. The City's plan addresses environmental concerns related to open space, water, wastewater, transportation, and stormwater. The ordinances and conditional use process preserve open space, protect floodplain and riparian buffers, steep slopes, and maintain water quality through erosion and sediment control and stormwater programs.

6.1 Summary of Federal and State Regulations and Programs

There are several Federal and State regulations and programs that will assist with mitigation of Secondary and Cumulative Impacts. These include: the ESA, the Clean Water Act, National Flood Insurance Program (NFIP), stormwater regulations, archaeological protection through various laws and programs, and the Sedimentation and Pollution Control Act. Table 8 summarizes these programs and gives a reference to review the entire Act or program. In depth descriptions of these regulations are not included in this document to avoid repetitiveness and to allow focus on the local programs within the Service Area. The local programs are discussed in depth to provide an understanding of the City of High Point's ordinances in relation to the possible Secondary and Cumulative Impacts that could occur within the WWTP Service Area.

TABLE 8 Summary of Federal and State Regulations and/or Programs

Act or Program	Key Points of Act / Program
<p>ENDANGERED SPECIES ACT</p> <p>Federal action and State programs (16 U.S.C. 1531- 1544)</p> <p>http://www.fws.gov/endangered/esa.html</p>	<ul style="list-style-type: none"> • Authorizes the determination and listing of species as endangered and threatened. • Prohibits unauthorized taking, possession, sale, and transport of endangered species. • Provides authority to acquire land for the conservation of listed species, using land and water conservation funds. • Authorizes establishment of cooperative agreements and grants-in-aid to States that establish and maintain active and adequate programs for endangered and threatened wildlife and plants. • Authorizes the assessment of civil and criminal penalties for violating the Act or regulations. • Requires Federal agencies to ensure that any action authorized, funded, or carried out by them is not likely to jeopardize the continued existence of listed species or modify their critical habitat.
<p>FISH AND WILDLIFE COORDINATION ACT</p> <p>16 U.S.C. §§ 661-667e, March 10, 1934, as amended 1946, 1958, 1978 and 1995.</p> <p>http://www.fws.gov/laws/laws_digest/fwcoord.html</p>	<ul style="list-style-type: none"> • Requires consultation with the USFWS, the National Marine Fisheries Service, and the lead state wildlife agency whenever the waters or channel of a body of water are modified by a department or agency of the U.S. • The purpose of this Act is to prevent or minimize impacts to wildlife resources and habitat due to water or land alterations. When modifications occur, provisions must be made for the conservation, maintenance, and management of wildlife resources and habitat in accordance with a plan developed with the wildlife protection agencies listed above. • Provides that land, water and interests may be acquired by federal construction agencies for wildlife conservation and development. In addition, real property under jurisdiction or control of a federal agency and no longer required by that agency can be utilized for wildlife conservation by the state agency exercising administration over wildlife resources upon that property.

TABLE 8 Summary of Federal and State Regulations and/or Programs

Act or Program	Key Points of Act / Program
<p>SECTION 303(D) OF CLEAN WATER ACT</p> <p>http://www.epa.gov/waterscience/standards/303.htm</p>	<ul style="list-style-type: none"> Requires states to identify waters that do not support their classified uses. These waters must be prioritized, and a Total Maximum Daily Load (TMDL) must subsequently be developed. As part of the TMDL development process, the sources of the pollutant must be identified, and the allowable amount of pollutant must be allocated among the various sources within the watershed. NCDWQ has developed a TMDL for fecal coliform for Rich Fork Creek (approved in April 2004). This TMDL represents an early phase of a long-term restoration project to reduce fecal coliform loading to acceptable levels in Rich Fork Creek and Hamby Creek watersheds. DWQ in cooperation with the City of High Point, City of Thomasville, and the counties involved (Davidson, Forsyth, Guilford, and Randolph Counties) should evaluate the progress of implementation strategies and refine the TMDL as necessary, in the next phase (five-year cycle). This will include recommending specific implementation plans for identified problem areas. Potential mechanisms of reduction of fecal coliform loading should be explored. These include BMP implementation, local regulations or ordinances related to zoning, landuse, or storm water runoff controls. 319 nonpoint source grants may be a good source of funding for BMP implementation. The involvement of local governments and agencies will be needed in order to develop implementation plans.
<p>SECTIONS 404/401 OF THE CLEAN WATER ACT</p> <p>http://www.epa.gov/owow/wetlands/regs/sec404.html</p> <p>http://www.epa.gov/owow/wetlands/regs/sec401.html</p> <p>http://h2o.enr.state.nc.us/hcwetlands/</p>	<p>Two Federal regulatory programs from the Clean Water Act currently regulate impacts to jurisdictional waters. Section 404 administered by the U.S. Army Corps of Engineers (USACE) regulates dredge and fill activities and Section 401 Certification that a project does not violate the State's water quality standards is administered by NCDWQ. All private and public construction activities over a specific acreage that affect jurisdictional waters are required to obtain certifications and permits from NCDWQ and USACE.</p> <p>A common problem in the adequate protection of jurisdictional waters is inadequate personnel at both State and Federal levels to enforce the regulations. Effective March 1999, DWQ stepped up the enforcement of regulations for wetlands protection, particularly those related to hydrologic conditions necessary to support wetlands function (15A NCAC 2B.0231(b)(5)) and biological integrity (15A NCAC 2B.0231(b)(6)). DWQ is joined in this initiative by the North Carolina Division of Land Resources (DLR), which also will be looking at possible violations of the State Sedimentation Pollution Control Act.</p>
<p>PROTECTION OF WETLANDS, EXECUTIVE ORDER 11990</p> <p>http://www.epa.gov/owow/wetlands/regs/eo11990.html</p>	<p>The Protection of Wetlands (Executive Order 11990) was set into place to avoid adverse impacts associated with the destruction or modification of wetlands and to avoid new construction in wetlands wherever a practicable alternative exists. Every Federal agency should provide leadership and shall take action to minimize the destruction, loss, and degradation of wetlands.</p>
<p>ISOLATED WETLAND PROTECTION</p> <p>http://h2o.enr.state.nc.us/hcwetlands/documents/isolatedWetlandRules.pdf</p>	<p>Isolated wetlands are described as having no visible connection to surface waters. Because they lack this connection, they are not regulated under Section 404 of the Clean Water Act; however, NCDWQ has jurisdiction over isolated wetlands within the state's boundaries requires permitting and mitigative measures for these resources. NC DWQ states that any activity that results in the loss of wetland function including filling, excavating, draining, and flooding shall be considered a wetland impact.</p>
<p>SAFE DRINKING WATER ACT</p> <p>http://www.epa.gov/safewater/sdwa/index.html</p>	<p>The Safe Drinking Water Act (SDWA) protects public health by regulating the nation's drinking water supply and applies to every public water system in the United States. SDWA authorizes the USEPA to set national health standards for drinking water to protect against naturally-occurring and man-made contaminants that may be found in drinking water. The USEPA is responsible for assessing, protecting drinking water sources, and ensuring the integrity of water delivery systems and informing the public of the quality of their drinking water supply.</p>

TABLE 8 Summary of Federal and State Regulations and/or Programs

Act or Program	Key Points of Act / Program
<p>CLEAN AIR ACT</p> <p>http://www.epa.gov/air/caal</p> <p>http://daq.state.nc.us/</p>	<p>In April 2004, the USEPA designated ozone nonattainment areas. These nonattainment areas either violated the national 8-hour ozone standard or have contributed to the violation of the national 8-hour ozone standard. The Service Area lies within the Triad Area which is classified as a nonattainment area and therefore, the Area must meet an ozone attainment date of December 2007. As a result of this classification, the local and state regulators had to develop a plan to meet the 8-hour ozone standard.</p> <p>The Triad Area is one of the Early Action Compacts (EAC) within NC. EACs are metro areas that have formed compacts to resolve ozone problems on a faster timetable. The EAC Ozone Action Plan was submitted on March 31, 2004 and outlines control measures to reduce point, highway mobile, and nonroad mobiles sources of emissions.</p> <p>In North Carolina, the Division of Air Quality has also implemented an Air Awareness Education Program that includes daily reports on the ozone forecasts by meteorologists, television, newspapers, and radio. The public has become very informed of ozone issues and steps they can take to reduce ozone emissions.</p>
<p>FLOODPLAIN MANAGEMENT, EXECUTIVE ORDER 11988</p> <p>http://www.epa.gov/owow/wetlands/regs/eo11988.html</p>	<p>Floodplain Management (Exec. Order 11988) addresses the adverse impacts associated with the occupancy and modification of floodplains and to avoid support of floodplain development wherever there is a practicable alternative. Federal agencies shall provide leadership and take action to reduce the risk of flood loss and flood impacts on human safety, health, and welfare. Agencies are also responsible for restoring and preserving the natural and beneficial values of a floodplain.</p>
<p>NATIONAL FLOOD INSURANCE PROGRAM</p> <p>http://www.fema.gov/about/programs/nfip/index.shtm</p>	<p>The National Flood Insurance Program is a Federal non-regulatory program that affords limited protection to stream riparian areas and wetlands by restricting floodplain development. FEMA manages this program, which has three components: Flood Insurance, Floodplain Management, and Flood Hazard Mapping. Floodplain management under the NFIP is a program of corrective and preventive measures for reducing flood damage. It includes emergency preparedness plans, flood control works, and floodplain management regulations. Protection of wetlands and riparian areas is provided through restrictions on development within floodplains.</p>
<p>NPDES STORMWATER REGULATIONS</p> <p>http://h2o.enr.state.nc.us/su/NPDES_Phase_II_Stormwater_Program.htm</p>	<p>Enforced by the NCDWQ, the National Pollutant Discharge Elimination System (NPDES) program was established under the authority of the Clean Water Act. Phase I of the NPDES program was established in 1990 and regulates all major discharges of stormwater to surface waters. NPDES permits are designed to require the development and implementation of stormwater management measures. These measures reduce or eliminate pollutants in stormwater runoff from certain municipal storm sewer systems and industrial activities. The NPDES stormwater permitting system is being implemented in two phases. Phase I was implemented in 1991 and applied to six municipal separate storm sewer systems (MS4s) in North Carolina with populations exceeding 100,000. USEPA's Phase II rules were finalized on October 29, 1999, and published in the Federal Register on December 8, 1999.</p>
<p>WILD AND SCENIC RIVERS ACT</p> <p>http://www.rivers.gov/wsract.html</p>	<p>Provides protection of selected rivers of the nation that possess remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values. No Wild and Scenic rivers exist in Davidson, Guilford, Forsyth, or Randolph Counties.</p>
<p>ARCHAEOLOGICAL PROTECTION</p> <p>http://www.arch.dcr.state.nc.us/ncaarch/resource/laws.htm</p>	<p>Archaeological resources are protected on private and public lands through the following federal and state acts and programs:</p> <p>FEDERAL</p> <ul style="list-style-type: none"> • Archaeological Resources Protection Act of 1979, Public Law 96-95 • Department of Transportation Act, Public Law 89-670 • National Environmental Policy Act, Public Law 91-190 • National Historic Preservation Act of 1966 , Public Law 89-665 • Native American Graves Protection and Repatriation Act, Public Law 101-601 • Protection and Enhancement of the Cultural Environment , Executive Order 11593

TABLE 8 Summary of Federal and State Regulations and/or Programs

Act or Program	Key Points of Act / Program
	<p>STATE</p> <ul style="list-style-type: none"> • Archaeological Resources Protection Act, Chapter 70, Article 2 • North Carolina Archaeological Record Program, Chapter 70, Article 4 • North Carolina Environmental Policy Act , Chapter 113A, Article 1 • Protection and Enhancement of the Historical and Cultural Heritage of North Carolina, Executive Order XVI • Protection of Properties in the National Register, Chapter 121-12(a) • Unmarked Human Burial and Human Skeletal Remains Protection Act, Chapter 70, Article 3 • Cemetery Protection, G.S. 14, G.S. 65 <p>These laws are only applicable to projects that are State or Federally approved, permitted, funded, or exist on State or Federal lands. This often exempts many private development projects; however, the USACE require archaeological reviews for any project that needs a Section 404 permit.</p>
<p>ARCHAEOLOGICAL AND HISTORIC PRESERVATION ACT</p> <p>http://www.nps.gov/history/local-law/FHPL_ArchHistPres.pdf</p>	<p>The Archaeological and Historic Preservation Act of 1974 provides preservation of historical and archeological data (including relics and specimens) which might be otherwise be irreparably lost or destroyed as the result of:</p> <ul style="list-style-type: none"> • Flooding • Building of access roads • Erection of workmen's communities • Relocation of highways and railroads • Alterations of terrain caused by the construction of dams (by the U.S. government and private persons or corporations) • Any alteration of terrain caused as a result of any Federal construction project or any federally licensed activity or program. <p>If any Federal agency finds that a federally supported project may cause irreparable loss or destruction of scientific, prehistorical, historical, or archaeological data, the agency must notify the Department of the Interior so it may undertake recovery, protection, and preservation of the data.</p>
<p>NATIONAL HISTORIC PRESERVATION ACT</p> <p>http://www.achp.gov/NHPA.pdf</p>	<p>The National Historic Preservation Act is the central act that establishes historic preservation law. The act sets the policy for the U.S. government to promote conditions in which historic properties can be preserved in harmony with modern society. The Act authorizes the Department of the Interior to establish, maintain, and expand the National Register of Historic Places. State Historic Preservation Officer (SHPO) responsibilities are established by the Act, and it levees them with the responsibility to develop a statewide plan for preservation, surveying historic properties, nominating properties to the National Register, providing technical assistance to Federal, State, and local agencies, as well as undertaking the review of Federal activities that affect historic properties.</p>
<p>PROTECTION AND ENHANCEMENT OF THE CULTURAL ENVIRONMENT, EXECUTIVE ORDER 11593</p> <p>http://www.archives.gov/federal-register/codification/executive-order/11593.html</p>	<p>This Order requires the federal government to provide leadership in preserving, restoring, and maintaining the historic and cultural environment of the nation. Federal agencies shall:</p> <ul style="list-style-type: none"> • Administer the cultural properties under their control in a spirit of stewardship and trusteeship for future generations, • Initiate measures necessary to direct their policies, plans and programs in such a way that federally owned sites, structures, and objects of historical, architectural or archaeological significance are preserved, restored, and maintained for the inspiration and benefit of the people, and • In consultation with the Advisory Council on Historic Preservation, institute procedures to assure that Federal plans and programs contribute to the preservation and enhancement of non-federally owned sites, structures and objects of historical, architectural or archaeological significance.

TABLE 8 Summary of Federal and State Regulations and/or Programs

Act or Program	Key Points of Act / Program
<p>FARMLAND PROTECTION POLICY ACT</p> <p>http://www.nrcs.usda.gov/programs/fppa/</p>	<p>Administered by the USDA, the purpose of the Farmland Protection Policy Act is to minimize the impact that Federal programs contribute unnecessary and irreversible conversion of farmland to nonagricultural uses. The Act assures that Federal programs are administered in such a manner to be compatible with State, local governments, and private programs to protect farmland.</p>
<p>N.C. SEDIMENTATION POLLUTION CONTROL ACT OF 1973</p> <p>http://www.dlr.enr.state.nc.us/pages/sedimentation_new.html</p>	<p>The DLR administers programs to control erosion and sedimentation caused by land disturbing activities on one or more acres of land. Control measures must be planned, designed, and constructed to protect from the calculated peak rate of runoff from a 10-year storm. Enforcement of the program is at the State level, but may be delegated to local governments with certified erosion control programs.</p>
<p>NORTH CAROLINA CLEAN WATER MANAGEMENT TRUST FUND</p> <p>http://www.cwmtf.net/</p>	<p>The Clean Water Management Trust Fund (CWMTF) was created by the 1996 Legislature to help finance projects that specifically address water pollution problems. It is a nonregulatory program that focuses its efforts on enhancing or restoring degraded waters, protecting unpolluted waters, and contributes toward a network of riparian buffers and greenways for environmental, educational and recreational benefits. Grants are issued to local governments, state agencies, and conservation non-profits.</p>
<p>NORTH CAROLINA ECOSYSTEM ENHANCEMENT PROGRAM (FORMERLY WETLANDS RESTORATION PROGRAM)</p> <p>http://www.nceep.net/</p>	<p>The Ecosystem Enhancement Program (EEP) was established as a non-regulatory program within DENR to:</p> <ul style="list-style-type: none"> • Provide a systematic approach for meeting NCDOT's compensatory mitigation requirements, • Maximize the ecological benefit of compensatory mitigation projects, and • Reduce delays in the construction of transportation improvement projects associated with compensatory mitigation requirements. <p>EEP also provides compensatory mitigation for permit applicants other than the NCDOT and currently the City of High Point has requested mitigation from EEP for impacts to wetlands associated with the replacement of the Kool Pool Outfall within the Westside Wastewater Treatment Plant Service Area.</p>
<p>GROUNDWATER PROTECTION</p> <p>http://h2o.enr.state.nc.us/aps/gpu.htm</p>	<p>The Groundwater Protection Unit of NCDWQ is responsible for protecting and preserving the high quality of North Carolina's groundwater resources. This is accomplished by implementing both groundwater and surface water pollution prevention strategies, compliance assessments and abatement programs. Several regulations and programs exist at the State and local levels that protect groundwater from urban growth:</p> <ul style="list-style-type: none"> • Wellhead Protection Program • Underground Injection Control Program • Regulation of potential contamination sources • Management of groundwater contamination incidents • Ambient groundwater monitoring • Regulation of well construction <p>These programs afford some protection to groundwater wells from the most common forms of groundwater pollution—point sources such as chemical manufacturing facilities, underground storage tanks, and accidental spills.</p>
<p>MISCELLANEOUS INCENTIVE PROGRAMS</p>	<p>Other voluntary strategies exist at Federal and State levels that provide incentives to protect natural lands, wetlands, agricultural lands, and sensitive species habitat and forest lands from development. These approaches include providing tax credits for donating lands to specific organizations (usually land trusts) and offering funding for various grants and trust funds to purchase or protect undeveloped lands.</p>

6.2 Local Regulations and Programs

The City of High Point has several existing ordinances which apply to the key issues identified in this SCI Plan. Each of these ordinances was discussed in relation to potential SCI in Section 5. The ordinances are detailed under each section of the City of High Point Development Ordinance, which can be reviewed at: <http://high-point.net/plan/ordinance.cfm> and is summarized below. In addition, Table 9 presents the key issues of this Plan and the ordinances that apply to it.

Although multiple jurisdictions exist within the Service Area, including Davidson County, Forsyth County, Guilford County, and Randolph County, only the City ordinances will be addressed at this time. The City requires that all development tying onto their wastewater infrastructure must go through their administrative approval process. This ensures that the ordinances below will apply to all development within the Service Area.

6.2.1 Zoning Ordinance (Chapter 4)

The zoning ordinance applies restrictions on development by land use classification according to each property's zoning. It is the tool used by City planners to implement initiatives from their land use plans by placing restrictions on individual properties that are rezoned, or by allowing conditional use districts and permits. All residential developments approved within the last several years in the Northeast Davidson County area have been approved through this conditional use process. A City letter detailing the measures used in each development is attached as Appendix C. Standard conditions that have been applied to all subdivisions include:

- 1) Stream buffer implementation in areas without established buffer programs
- 2) Flood plain protection
- 3) Steep slope protection
- 4) Common area open space requirements

6.2.2 Subdivision Ordinance (Chapter 6)

This ordinance defines the approval process and submittal requirements that new residential developments must undergo, including:

- 1) A stepwise progression through the application process involving:
 - a. Pre-application meeting with the Technical Review Committee
 - b. Sketch plan submission requirements
 - c. Preliminary Plat requirements
 - d. Final Plat requirements
- 2) Soil erosion and sediment control requirements (see below)
- 3) Drainage and stormwater management requirements (see below)
- 4) Flood plain protection requirements (see below)

6.2.3 Environmental Ordinance (Chapter 7)

This extensive ordinance is divided into subsection dealing with the following relevant issues.

6.2.3.1 Watershed Protection:

The Service Area is not located within a Water Supply Watershed, and therefore is not currently subject to the City's Water Supply Watershed ordinance. However, the City has complied with Phase 2 stormwater requirements by amending the WSW Watershed ordinance to be a Watershed ordinance applicable to the entire City jurisdiction. The City's Watershed Protection Program was also audited by DENR within the last year and was found to be operating correctly. The following summarizes the adopted and current requirements of this comprehensive city-wide ordinance:

- 1) Fragile area protection:
 - a) Compliance with soil erosion and sediment control requirements above.
 - b) Hydric and erodible soils should be avoided.
 - c) Encourage low impact design and allow the Technical Review Committee to accept modifications that facilitate low impact design use.
 - d) Promote clustering of development on suitable soils.
 - e) Allow density shifting of development to protect water quality.
- 2) Ensure compliance with Flood Damage Prevention ordinance (above).
- 3) Stream buffers will be required as follows:
 - a) Apply to all lakes, ponds, and streams shown on USGS or NRCS soil survey.
 - b) Low density development buffers of 50-feet for intermittent and perennial streams.
 - c) High density development buffers of 50-feet for intermittent and 100-feet for perennial streams.
 - d) Stream mapping may be superseded by on-site evidence of the presence or lack of stream channel following NCDWQ methodology.
 - e) Zones 1 and 2 (first 30 and 20 feet) must be undisturbed, with some exceptions such as water dependent uses and utility or road crossings.
 - f) Zone 3 (50-foot high density buffer) must remain vegetated.
 - g) Sheet flow must be established and maintained throughout Zones 1 and 2.
 - h) No new lots will be allowed within any portion of the buffers.
- 4) Steep Slope Protection: The following buffers will be required in addition to those above:
 - a) 0-15% slopes: no additional buffers.
 - b) 15-25% slopes: an additional 15-feet of Zone 2 buffer will be required.
 - c) 25+% slopes: an additional 30-feet of Zone 2 buffer will be required.
 - d) In high density areas, the additional buffer can be offset by a reduction of the Zone 3 buffer.
- 5) Stormwater Requirements: Built upon area limitations and associated stormwater requirements will apply as follows:
 - a) Alternative measures include extended dry ponds, infiltration trenches, natural infiltration areas, low impact design techniques, or participation in a regional stormwater management system runoff control program.
 - b) Engineered controls include measures designed to control the first inch of rainfall and remove 85% TSS.

Residential Single Family	Non-residential or Multi Family	Stormwater Requirement
<1 du/2 acres	<6% BUA	None
<2 du/acre	<24% BUA	Alternative measures
>2 du/acre	>24%	Engineered controls

6.2.3.2 Compliance and Inspections:

The City is dedicated to ensuring that its ordinances are upheld and that measures implemented in the development approval process are successful. The City annually inspects all Best Management Practices and notifies the owner if deficiencies are found. These deficiencies must be corrected within 90 days of the notice. If the problem is not resolved, the City will undertake the work and be reimbursed by the developer or association.

6.2.4 Soil Erosion and Sediment Control

The City implements a full erosion and sediment control ordinance in compliance with NC Division of Land Resources requirements. This ordinance includes:

- a. Basic requirements of land disturbance

Permits are required for any land disturbing activity over 1 acre, on highly erodible soils, including a pond or retention area within a watershed, or within the first two tiers of a watershed critical area.
- b. Objectives of the design

A soil erosion and sedimentation control plan is required to meet the following objectives:

 - i. Identify critical areas that are subject to erosion and/or sedimentation
 - ii. Limit the time of exposure of the land disturbance
 - iii. Minimize the area to be exposed at any one time
 - iv. Control surface water upstream of the exposed areas
 - v. Prevent off-site sedimentation
 - vi. Manage stormwater runoff
- c. Mandatory standards
 - i. No land disturbing activity should take place within 25 feet of a lake or natural watercourse
 - ii. Fill material must be screened and free of organic matter and debris
 - iii. Fills to be vegetated can be no steeper than 2:1
 - iv. Permanent ground cover must be established on disturbed areas within 15 working days or 30 calendar of completion of work, whichever is shorter
- d. Design standards
 - i. Erosion control devices must be designed for the 10-year storm
 - ii. Sediment basins must be designed to capture 70% TSS
 - iii. In High Quality Waters:
 1. Uncovered areas will be limited to 20 acres
 2. Control measures will be designed for the 25-year storm

3. Sediment basins must remove 70% total suspended solids
 4. Vegetated open channels must be 2:1 or flatter
- e. Stormwater outlet protection
- i. Post-construction velocity of the 10-year storm must be within:
 1. Non-erosive
 2. The pre-construction velocity in the receiving watercourse

6.2.5 Flood Damage Prevention

The City's flood damage prevention ordinance complies with FEMA requirements as described below. In addition, the City implements flood plain protection through their Conditional Use Permit process, as described in Section 6.2.1. Note that development is not allowed within any portion of the floodplain located within the buffers described in Section 6.2.3.1.

- a. No fill or structures are allowed in the floodway unless an engineer certifies that no rise in flood levels will occur
- b. Development is allowed in the floodway fringe as long as flood proofing is provided or the finished floor is set at least 1 foot above base flood elevation
- c. For streams with established flood elevations, the most recent FIRM map establishes the location of the floodplain
- d. For streams without established flood elevations, the limitations above will be in effect within 20-feet of the stream bank

6.2.6 High Point Historic Preservation Commission

The High Point Historic Preservation Commission is a nine-member body appointed by the City Council. Not more than one member may be appointed from each of the City's two existing Historic Districts, Johnson Street and Sherrod Park, which is within the Service Area. Historic Districts are established in order to help maintain and preserve areas of the City that have significant historic or architectural value. Regulations are applied through the use of an overlay zoning district, which sets forth rules that require review of all building activity affecting the exterior of structures.

It is the general responsibility of the Commission to hear requests for Certificates of Appropriateness for exterior alterations to structures and surrounding grounds as well as demolition and new construction within the designated historic districts of the City of High Point. The Commission operates under an approved set of rules and procedures, which are available for public review. Decisions are made in accordance with Design Guidelines reflecting standards of the Secretary of the Interior, and with reputable sources such as the technical pamphlets of the National Park Service.

7.0 SUMMARY OF MANAGEMENT STRATEGIES TO ADDRESS SECONDARY AND CUMULATIVE IMPACTS

The following table summarizes the assessment of impacts and proposed mitigation for each resource. Additional information is described in Sections 5 and 6. Although many of the

Federal and State programs described in the previous sections provide mitigation for SCI, this table is limited to those ordinances under the control of the City.

TABLE 9 Summary of Local Ordinances to Address Secondary and Cumulative Impacts

Resource	Action	Effect	Local Ordinance	Section Reference
Topography	Clearing, grading, fill in floodplain	Decreased flood storage, habitat; increased flow & erosion	Steep Slope Protection; Floodplain Protection	6.2.3.1(4); 6.2.5 & 6.2.1 (2)
Soils	Soil displacement, removal	Increased erosion & sedimentation; Decreased water quality & habitat	Sediment Erosion Control Ordinance	6.2.4
Land Use	Conversion / rezoning	Decreased agriculture & forest land	Zoning Review & Conditional Use Process	6.2.1
Jurisdictional Waters	Direct impact from development, road & utility crossings; Increased stormwater flow	Direct fill; Change in hydrology; Fragmentation; Decreased aquatic function, habitat, biodiversity	Floodplain Restrictions; Riparian Buffer Implementation; Stormwater Controls	6.2.5; 6.2.3.1 (3) & (5)
Prime Agricultural Lands	Conversion to residential	Loss of agriculture; Increased noise/traffic	Zoning Review & Conditional Use Process	6.2.1
Public Lands...	N/A	N/A	N/A	N/A
Archaeological / Historical Sites	Direct impacts from development in removal of structures or fill / grading of archaeological sites	Removal of structures or disturbance of archaeological sites	Historic Preservation Commission review	6.2.6
Air Quality	Increased vehicles, some increase in dischargers	Decrease air quality; Increased particulate matter	N/A	N/A
Noise	Increased traffic, receptors	Minimal effect on wildlife behavior & quality of life	N/A	N/A
Water Resources	Increased impervious area, runoff, erosion	Decrease water quality, stream stability; Increased sedimentation	Riparian Buffers; Sediment Erosion Control Ordinance; Stormwater Controls	6.2.3.1 (3) & (5); 6.2.4
Forests	Clearing / land conversion	Decreased air & water quality	Floodplain Restrictions, Riparian Buffers; Conditional Use Process	6.2.5; 6.2.3.1 (3); 6.2.1
Aquatic Habitat	Decreased water quality, stream stability; Increased erosion	Decreased diversity & habitat	See Water Resources; Soils	See Water Resources; Soils

TABLE 9 Summary of Local Ordinances to Address Secondary and Cumulative Impacts (cont.)

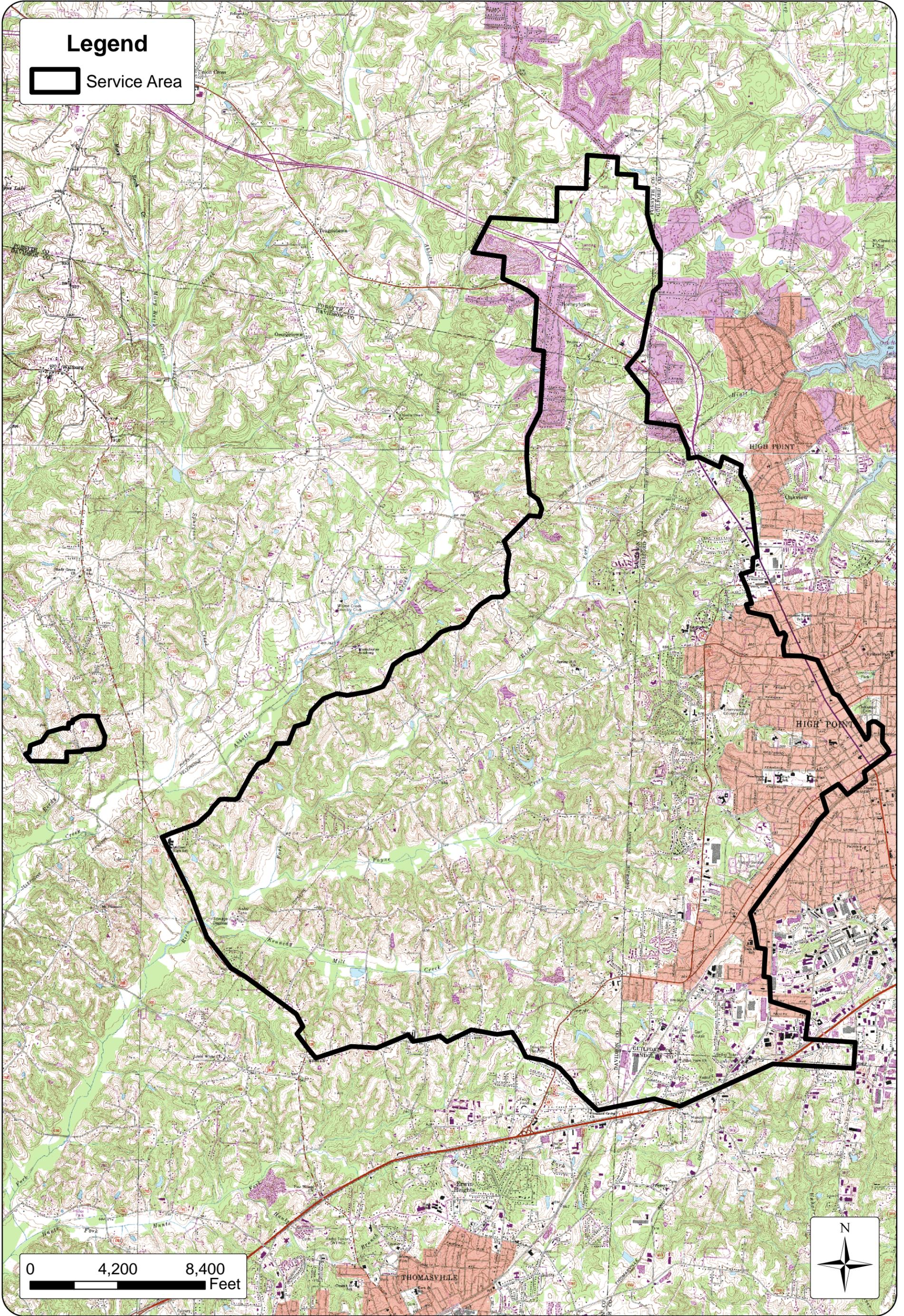
Resource	Action	Effect	Local Ordinance	Section Reference
Wildlife / Vegetation	Clearing/land conversion	Decreased diversity, abundance, habitat; Increased fragmentation	Floodplain Restrictions, Riparian Buffers; Conditional Use Process	6.2.5; 6.2.3.1 (3); 6.2.1
Protected Species	See wildlife/vegetation	Limited - lack of habitat	See Wildlife / Vegetation	See Wildlife / Vegetation
Toxic Substances	Increased chance of release, pollutants in stormwater	Decreased water quality, aquatic habitat	Stormwater Controls	6.2.3.1 (5)

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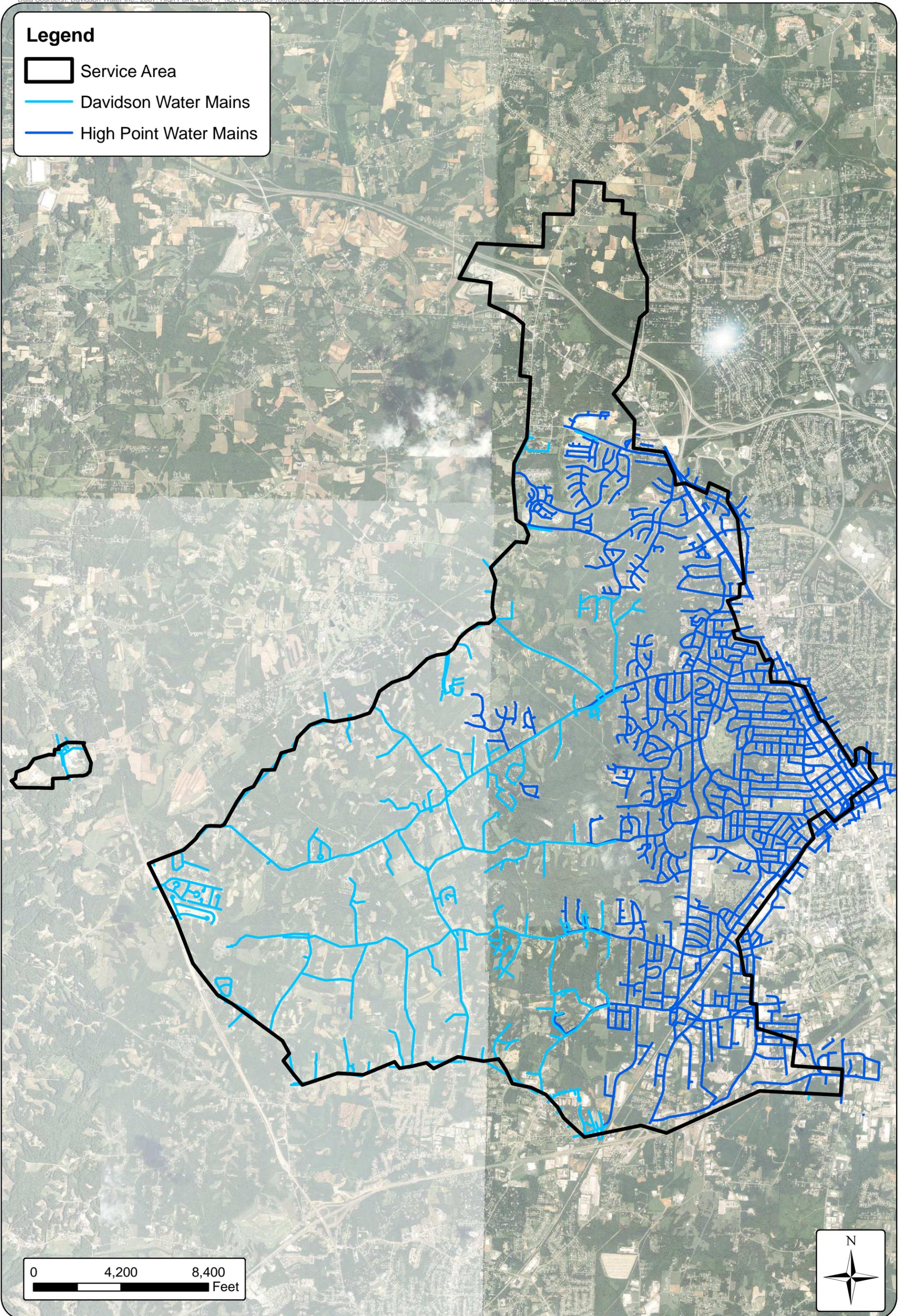
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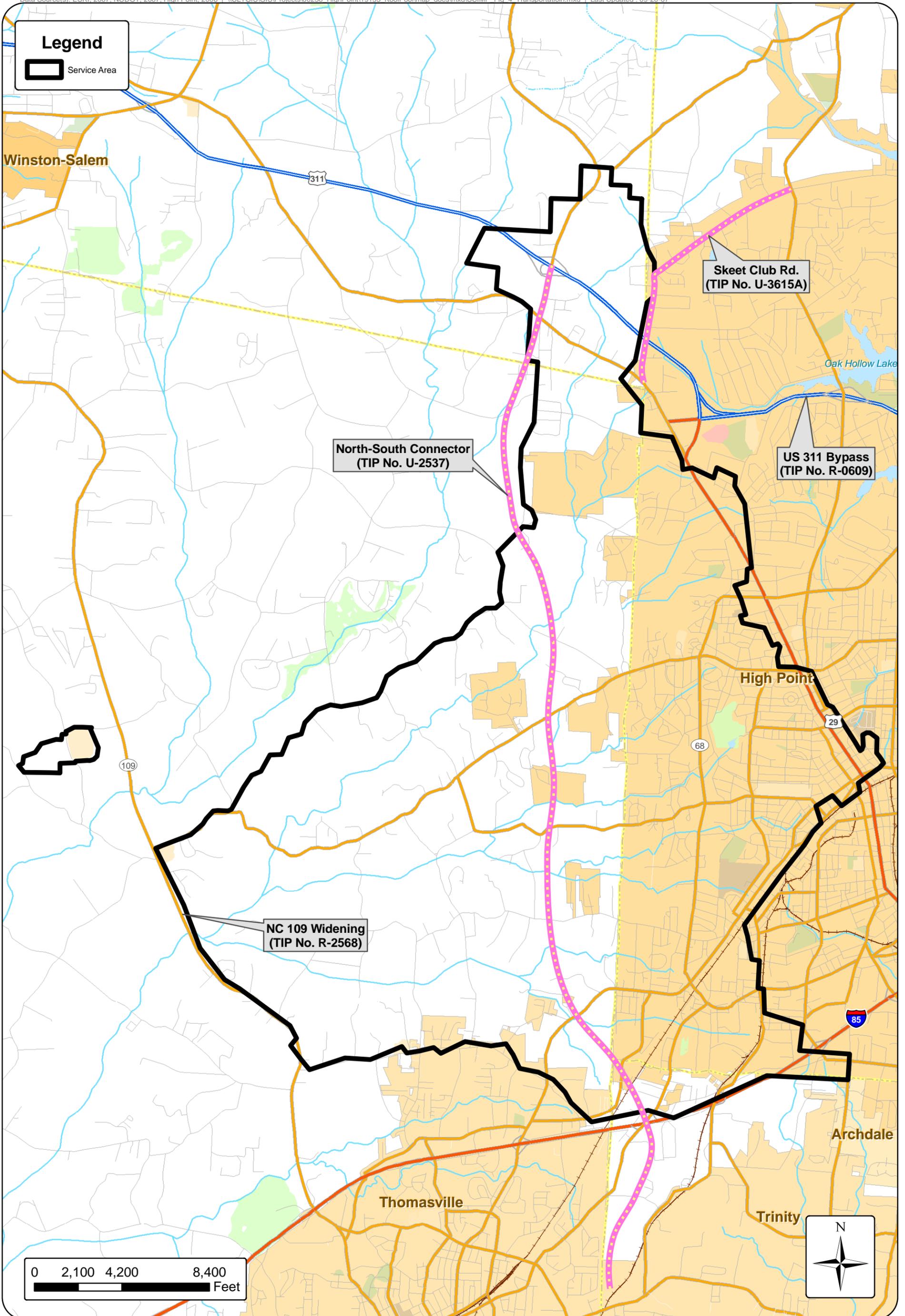
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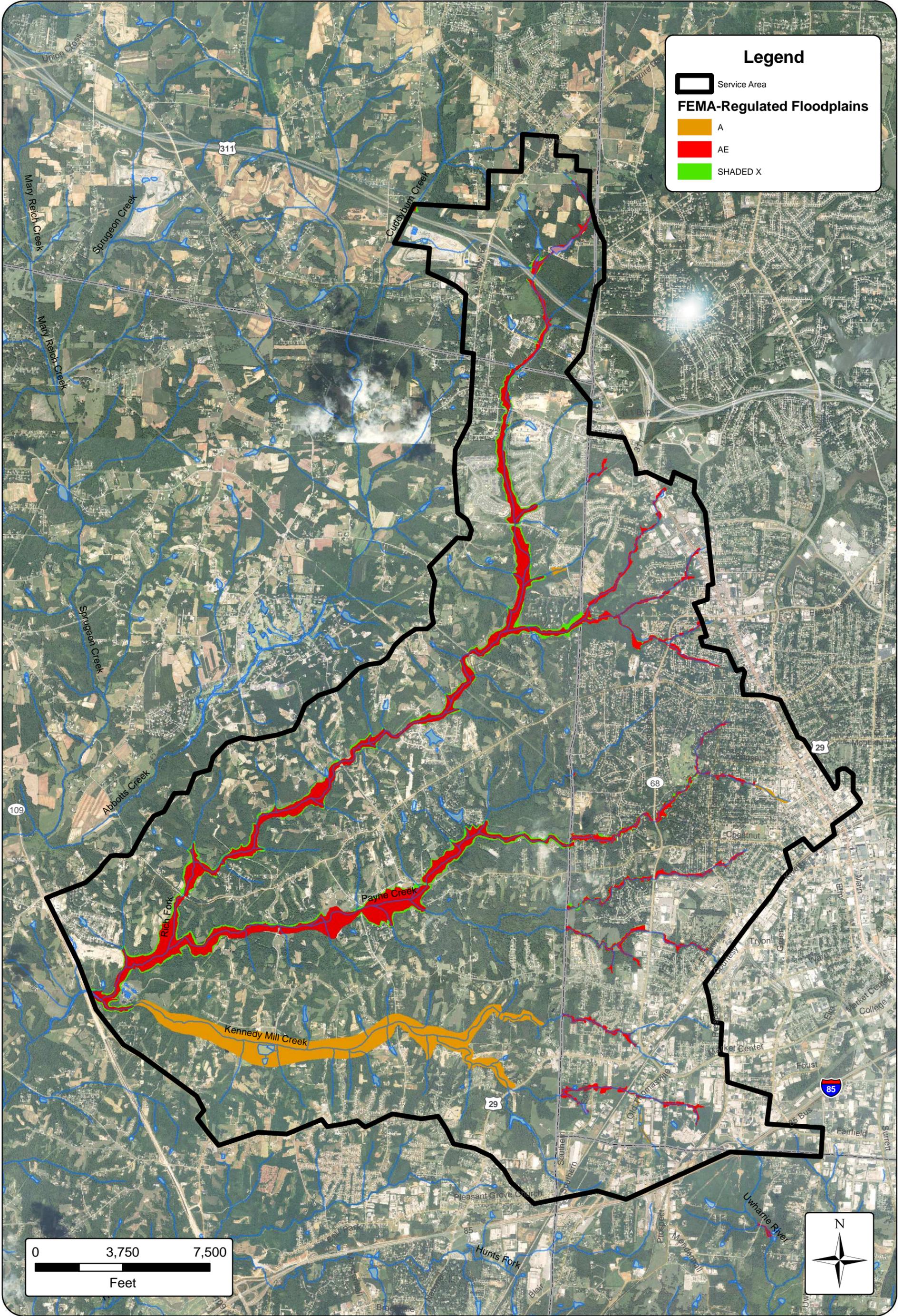


Legend

-  Service Area
-  Davidson Water Mains
-  High Point Water Mains





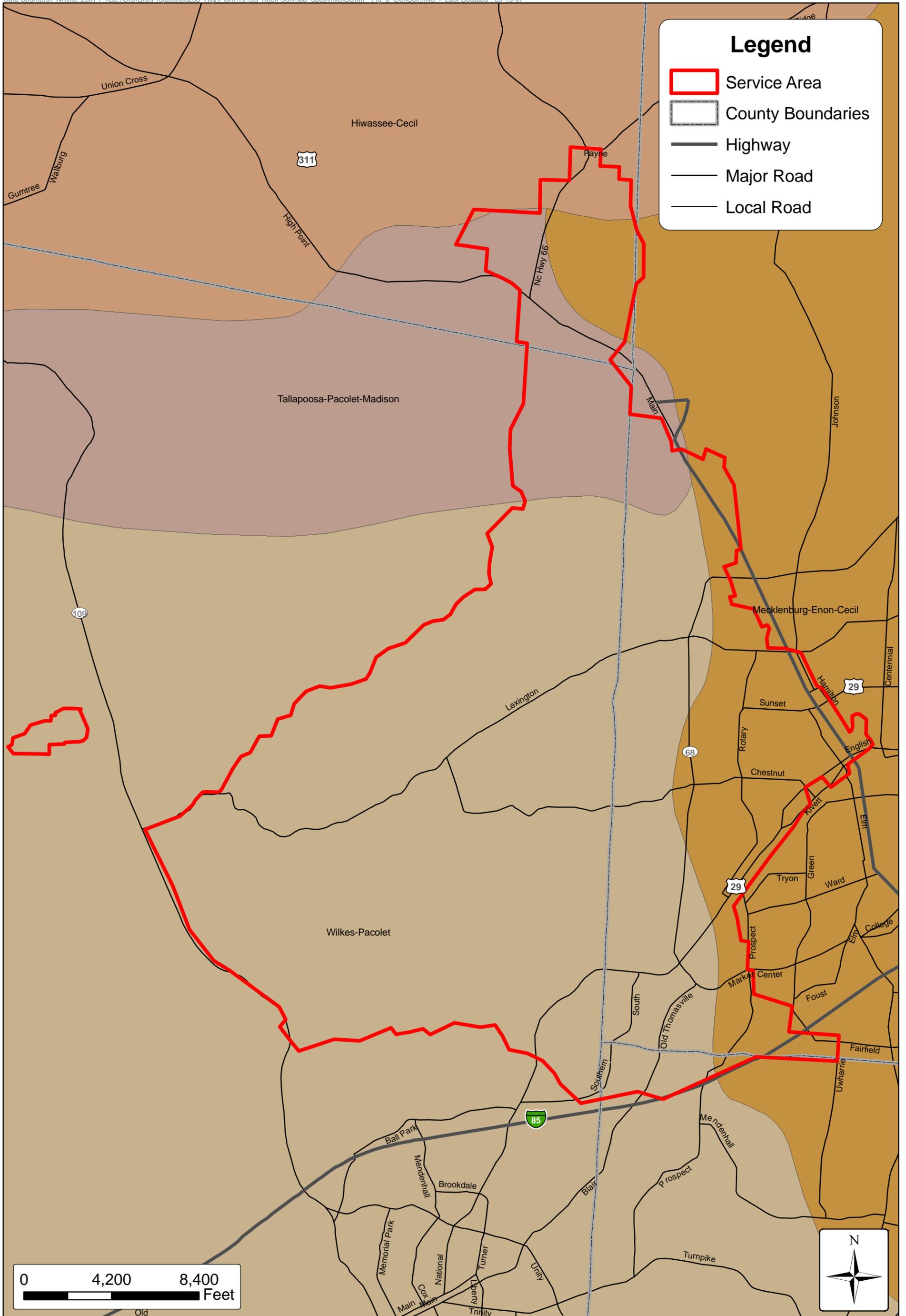


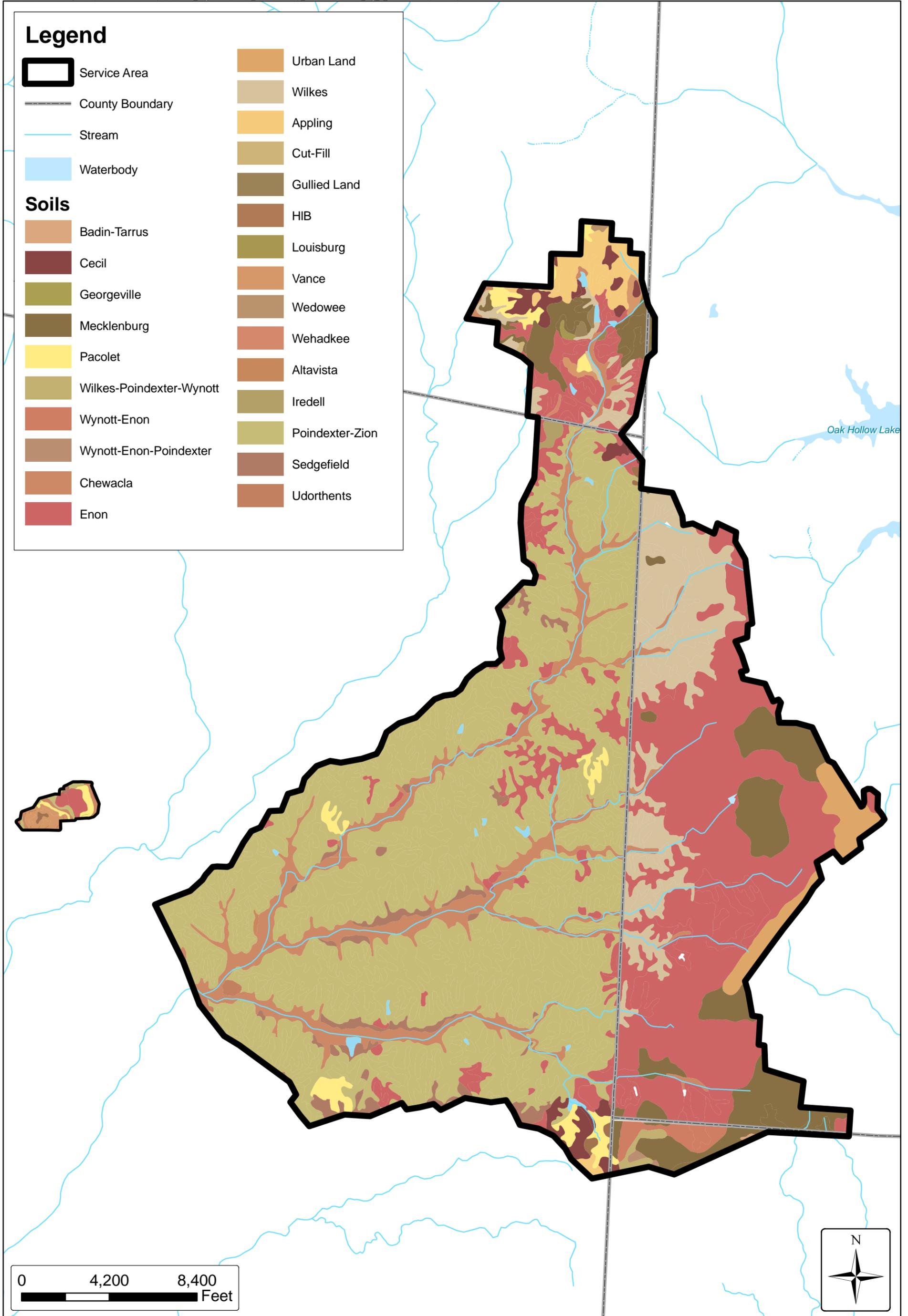
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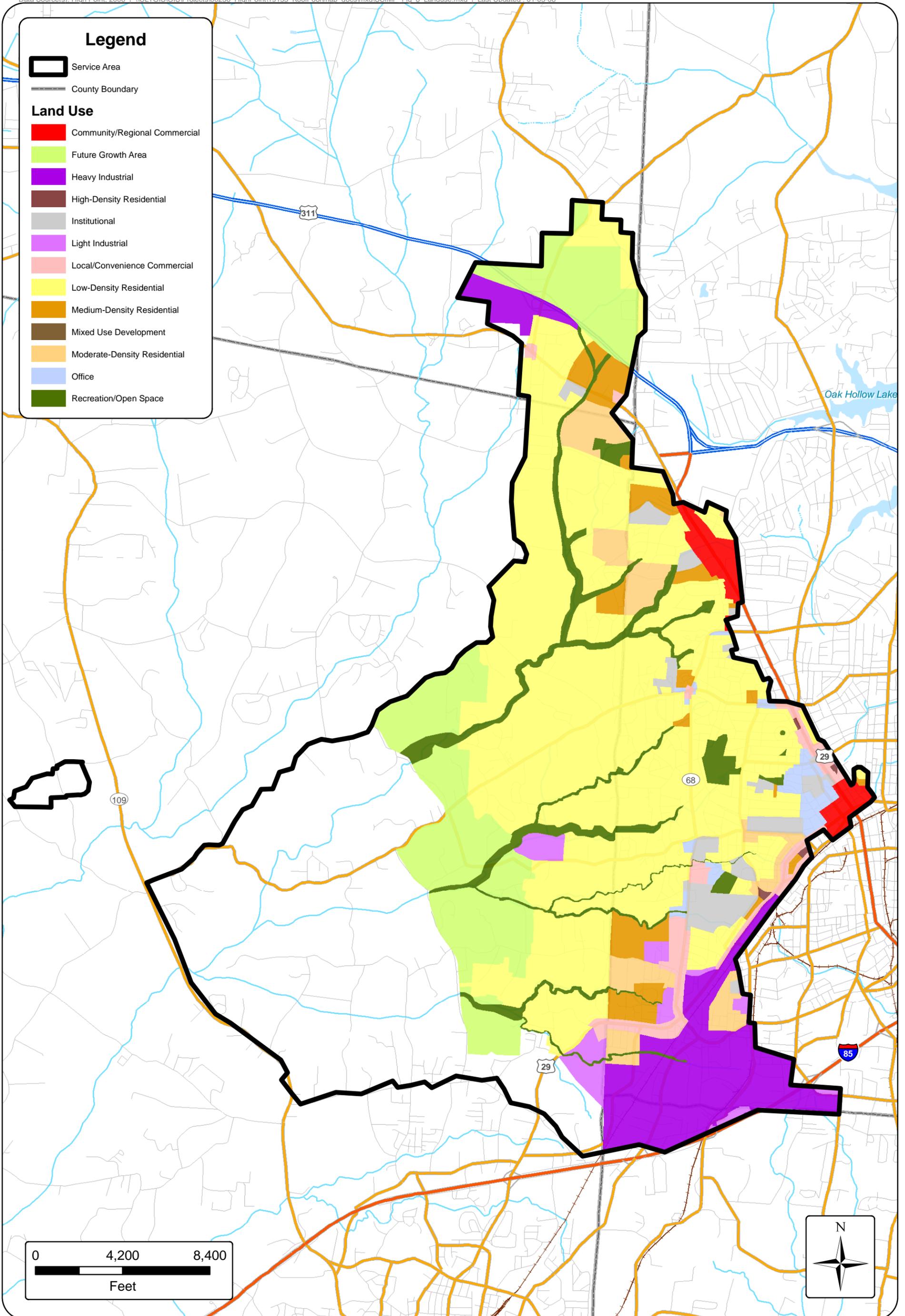
- Service Area
- FEMA-Regulated Floodplains**
 - A
 - AE
 - SHADED X

0 3,750 7,500
Feet



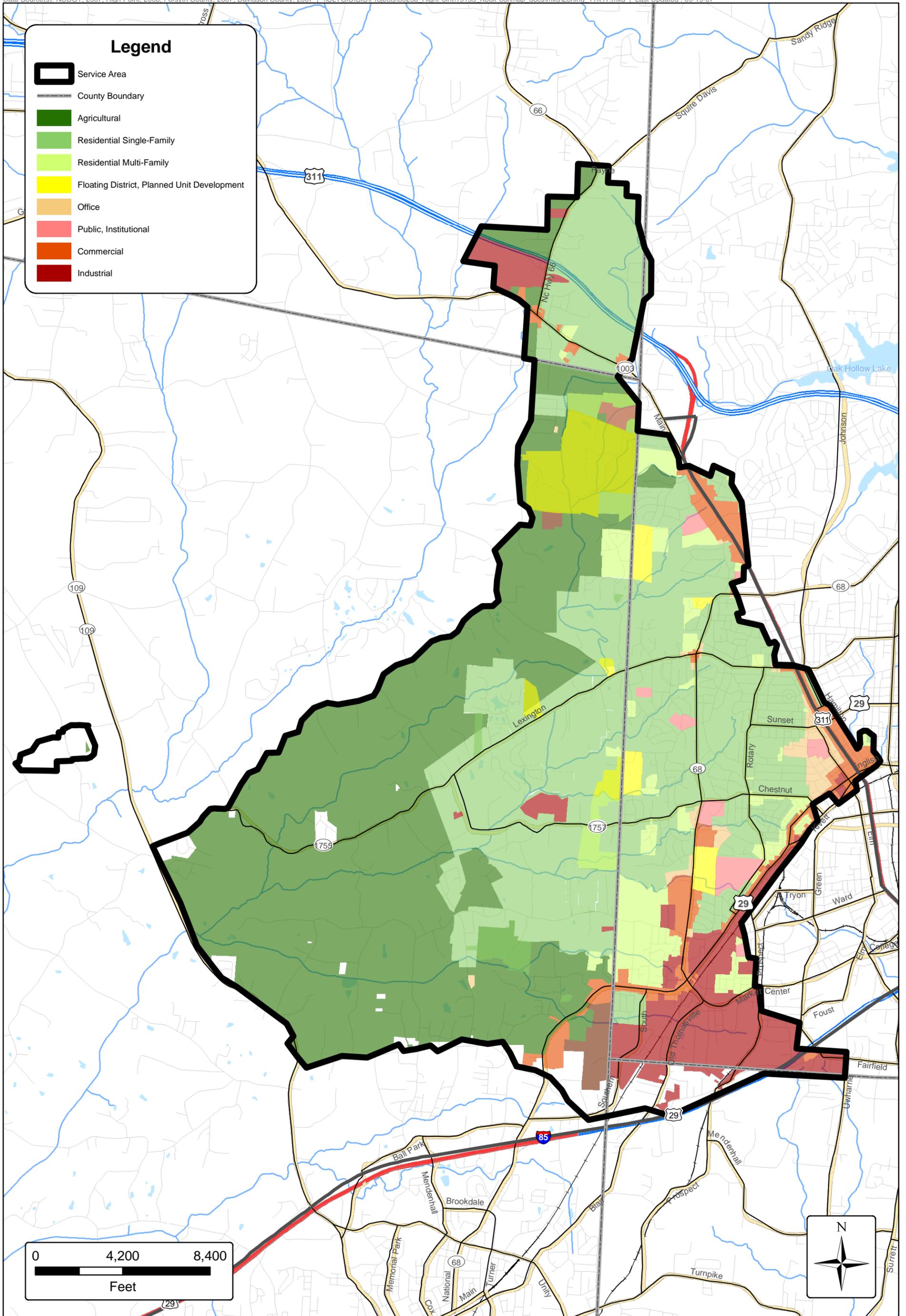






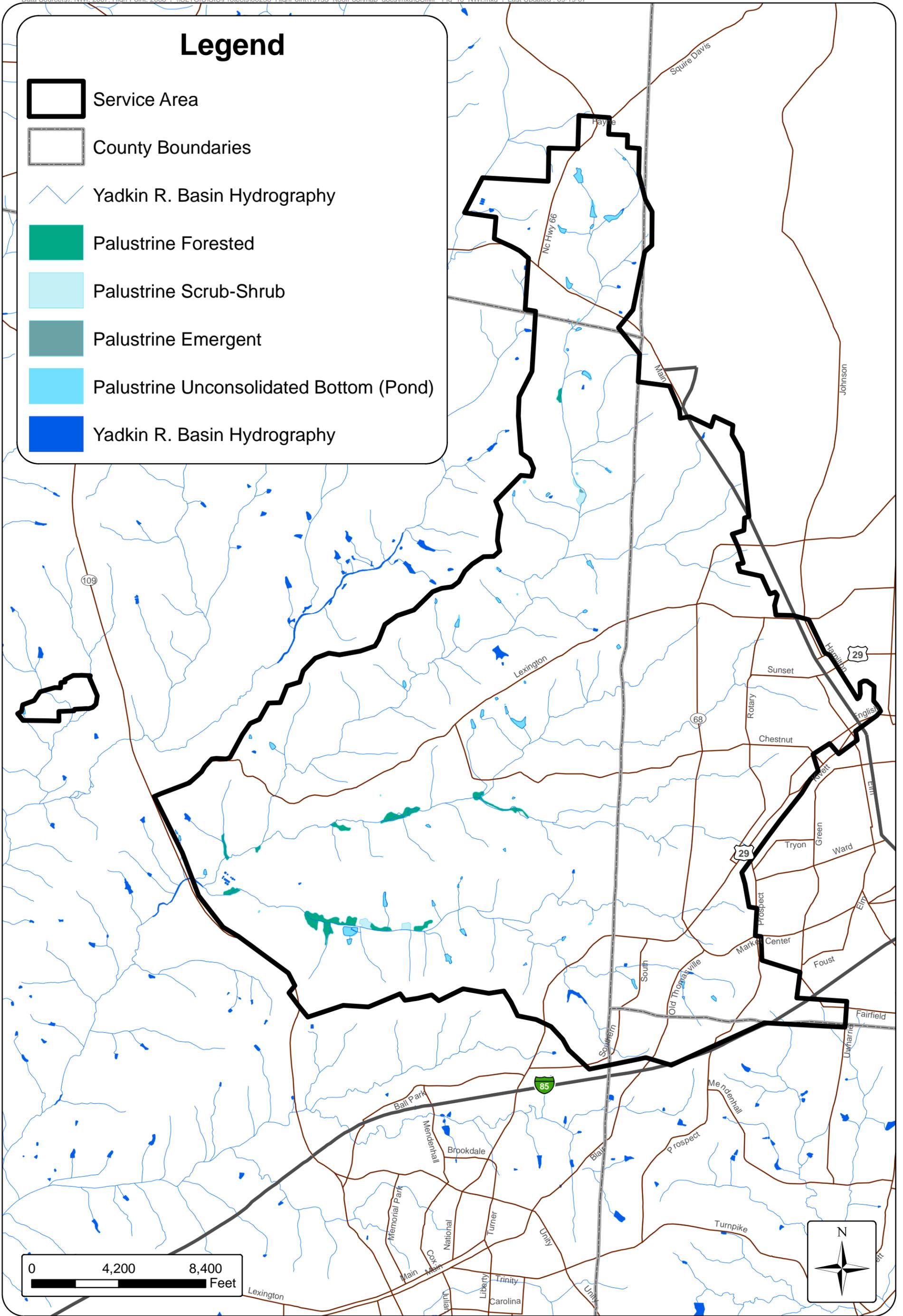
Legend

- Service Area
- County Boundary
- Land Use**
- Community/Regional Commercial
- Future Growth Area
- Heavy Industrial
- High-Density Residential
- Institutional
- Light Industrial
- Local/Convenience Commercial
- Low-Density Residential
- Medium-Density Residential
- Mixed Use Development
- Moderate-Density Residential
- Office
- Recreation/Open Space



Legend

-  Service Area
-  County Boundaries
-  Yadkin R. Basin Hydrography
-  Palustrine Forested
-  Palustrine Scrub-Shrub
-  Palustrine Emergent
-  Palustrine Unconsolidated Bottom (Pond)
-  Yadkin R. Basin Hydrography



APPENDIX A

Special Order by Consent

**NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION**

COUNTIES OF GUILFORD, DAVIDSON, FORSYTH and RANDOLPH

IN THE MATTER OF)
NORTH CAROLINA)
PERMIT NUMBER WQCS00010)
HELD BY THE CITY OF)
HIGH POINT)

SPECIAL ORDER BY CONSENT
EMC SOC S05-008

Pursuant to provisions of North Carolina General Statutes (G.S.) 143-215.2 and 143-215.67, this Special Order by Consent is entered into by the City of High Point, hereinafter referred to as the City, and the North Carolina Environmental Management Commission, an agency of the State of North Carolina created by G.S. 143B-282, and hereinafter referred to as the Commission:

1. The City and the Commission hereby stipulate the following:

- (a) The City holds North Carolina Permit Number WQCS00010 for operation of an existing wastewater collection system, but is unable to consistently comply with Condition 1.2. regarding sanitary sewer overflows (SSOs). Specifically, frequent and repetitive SSOs have occurred in the portion of the City's Eastside Collection System along the Deep River Outfall and in the portion of the City's Westside Collection System along the Kindergarten, Corbett and Kool Pool Outfalls. Compliance will require preparation of plans and specifications for collection system upgrades including, but not limited to, gravity sewer collection and outfall replacement and rehabilitation.
- (b) Noncompliance with this permit condition constitutes causing and contributing to pollution of the waters of this State, and the City is within the jurisdiction of the Commission as set forth in G.S. Chapter 143, Article 21.
- (c) The City's NPDES Permit Number NC0024228 for the Westside WWTP allows for a permitted flow of 6.2 million gallons per day (MGD). The current average daily flow to the plant is approximately 4.0 MGD. Due to the compliance issues stated above, prior to the completion of upgrades the City will be restricted to 0.20 million gallons per day (MGD) of additional wastewater to the Westside collection system and wastewater treatment plant through the issuance of sewer extension permits. The discharge of such additional wastewater shall not result in any significant degradation to the quality of any waters. At such time as the Kool Pool I Outfall is completed and put into service, an additional 0.20 million gallons per day (MGD) will be granted. Subsequently, an additional 0.20 million gallons per day (MGD) will be granted at the completion of the Kool Pool II Outfall. Finally, an additional 0.20 million gallons per day (MGD) will be granted at the completion of the Corbett Outfall. Each of these allocations are performance driven and will only be allowed at the completion and successful implementation of the new outfall sections.
- (d) The City's NPDES Permit Number NC0024210 for the Eastside WWTP allows for a permitted flow of 26 MGD and the plant currently operates at approximately 13 MGD. Due to the compliance issues stated above, the City will be restricted to the addition of 0.5 MGD of wastewater flow prior to the completion of the Deep River Section III project. This amount of additional wastewater to the Eastside collection system and wastewater treatment plant is approved subject to limits contained in the permit, and the discharge of such additional wastewater will not result in any significant degradation to the quality of any waters.
- (e) The City has secured or will secure financing for planning, design, or construction of a new or improved wastewater collection system which, once constructed and operated, will be sufficient to adequately collect wastewater presently being made tributary to the collection system in the Deep River, Kindergarten, Corbett and Kool Pool collection subsystems, such that the City will be able to comply with final permit conditions.
- (f) Since this Special Order is by Consent, neither party will file a petition for a contested case or for judicial review concerning its terms.

2. The City, desiring to comply with the Permit identified in paragraph 1(a) above, hereby agrees to do the following:
- (a) Provide the Winston-Salem Regional Office of the North Carolina Division of Water Quality (DWQ), located at 585 Waughtown Street, Winston-Salem, NC 27107, with a list of all additions of flow under the City's Special Order by Consent, and update this list quarterly.
- (b) Undertake the following activities in accordance with the indicated time schedule:
- I) Operation and Maintenance requirements:
- i) Continue to respond to all SSOs as per conditions found in Permit No. WQCS00010.
- ii) Adhere to the schedule for rights-of-way accessibility contained in Permit No. WQCS00010 which requires that all segments be made accessible by September 14, 2006. These high priority segments must also be inspected visually twice per year.
- II) Schedules (engineering, construction & compliance):
- i) **Deep River Outfall Section 3:**
- a. Submit permit applications and all supporting materials for any necessary regulatory permits required for outfall repairs/replacement by **November 2005**; (MET)
- b. Award construction contract and issue Notice to Proceed within **120 days** of receipt of all necessary permits, easements, and authorization to construct are acquired;
- c. Once a construction contract has been awarded and the contractor given Notice to Proceed "construction" shall be deemed to have started for the purpose of this Special Order by Consent;
- d. If insufficient bidders prevent the City from lawfully awarding a contract or legal action by prospective bidders prevents the City from lawfully awarding or giving Notice to Proceed with the contracts within the time frame stated in paragraph II i) (b) above the City shall notify the Winston-Salem Regional Office of the Division of Water Quality (WSRO-DWQ). Such a circumstance will be deemed a force majeure event and this order shall be amended to accommodate any such delays that are beyond the control of the City;
- e. Complete construction of **Deep River Outfall Section 3** within **600 days** of giving Contractor Notice to Proceed.
- ii) **Deep River Outfall Section 5:**
- a. Submit permit applications and all supporting materials for any necessary regulatory permits required for outfall repairs/replacement by **February 2006**;
- b. Award construction contract and issue Notice to Proceed within **120 days** of the completion of Deep River Outfall Section 3;
- c. Once a construction contract has been awarded and the contractor given Notice to Proceed "construction" shall be deemed to have started for the purpose of this Special Order by Consent;
- d. If insufficient bidders prevent the City from lawfully awarding a contract or legal action by prospective bidders prevents the City from lawfully awarding or giving Notice to Proceed with the contracts within the time frame stated in paragraph II ii) (b) above the City shall notify WSRO-DWQ. Such a circumstance will be deemed a force majeure event and this order shall be amended to accommodate any such delays that are beyond the control of the City;
- e. Complete construction of **Deep River Outfall Section 5** within **500 days** of giving Contractor Notice to Proceed.
- iii) **Deep River Outfall Section 6:**
- a. Submit permit applications and all supporting materials for any necessary regulatory permits required for outfall repairs/replacement by **April 2006**;
- b. Award construction contract and issue Notice to Proceed within **120 days** of the completion of Deep River Outfall Section 5;
- c. Once a construction contract has been awarded and the contractor given Notice to Proceed "construction" shall be deemed to have started for the purpose of this Special Order by Consent;

- d. If insufficient bidders prevent the City from lawfully awarding a contract or legal action by prospective bidders prevents the City from lawfully awarding or giving Notice to Proceed with the contracts within the time frame stated in paragraph II (iii) (b) above the City shall notify WSRO-DWQ. Such a circumstance will be deemed a force majeure event and this order shall be amended to accommodate any such delays that are beyond the control of the City;
- e. Complete construction of Deep River Outfall Section 6 within 500 days of giving Contractor Notice to Proceed.

iv) Kool Pool Outfall (Sections I & II):

- a. Submit Environmental Assessment and all supporting documents necessary for regulatory permits required for outfall repairs/replacement by November 2005; The permit application must be submitted immediately upon issuance of a FONSI and the City must take all actions necessary, in a timely manner, to support review of the EA. (EA Submitted)
- b. This project is subject to an Environmental Assessment, and the parties to this agreement recognize the difficulty in assigning a specific completion date to these projects. The City shall quarterly report to WSRO-DWQ the status of the project until such time as a specific authorization to construct from the Department of Environment and Natural Resources is acquired;
- c. Award construction contract and issue Notice to Proceed within 120 days of receipt of all necessary permits, easements, and authorization to construct;
- d. Once a construction contract has been awarded and the contractor given Notice to Proceed "construction" shall be deemed to have started for the purpose of this Special Order by Consent;
- e. If insufficient bidders prevent the City from lawfully awarding a contract or legal action by prospective bidders prevents the City from lawfully awarding or giving Notice to Proceed with the contracts within the time frame stated in paragraph II iv) (c) above the City shall notify WSRO-DWQ. Such a circumstance will be deemed a force majeure event and this order shall be amended to accommodate any such delays that are beyond the control of the City;
- f. Complete construction of Kool Pool Outfall (Sections I & II) within 600 days of giving Contractor Notice to Proceed.

v) Kindergarten Outfall (Sections 1B & 1C):

- a. Submit Environmental Assessment and all supporting documents necessary for regulatory permits required for outfall repairs/replacement by November 2005. The permit application must be submitted immediately upon issuance of a FONSI and the City must take all actions necessary, in a timely manner, to support the review of the EA. (EA Submitted)
- b. Award construction contract and issue Notice to Proceed within 120 days of the completion of Kool Pool Section I;
- c. Once a construction contract has been awarded and the contractor given Notice to Proceed "construction" shall be deemed to have started for the purpose of this Special Order by Consent;
- d. If insufficient bidders prevent the City from lawfully awarding a contract or legal action by prospective bidders prevents the City from lawfully awarding or giving Notice to Proceed with the contracts within the time frame stated in paragraph II v) (b) above the City shall notify WSRO-DWQ. Such a circumstance will be deemed a force majeure event and this order shall be amended to accommodate any such delays that are beyond the control of the City;
- e. Complete construction of Kindergarten Outfall (Sections 1B & 1C) within 400 days of giving Contractor Notice to Proceed.

vi) Kindergarten Outfall (Section 1A):

- a. Submit permit applications and all supporting materials for any necessary regulatory permits required for outfall repairs/replacement by April 2006;
- b. Award construction contract and issue Notice to Proceed within 120 days of completion of Kindergarten Sections 1B and 1C;

- c. Once a construction contract has been awarded and the contractor given Notice to Proceed "construction" shall be deemed to have started for the purpose of this Special Order by Consent;
 - d. If insufficient bidders prevent the City from lawfully awarding a contract or legal action by prospective bidders prevents the City from lawfully awarding or giving Notice to Proceed with the contracts within the time frame stated in paragraph II vi) (b) above the City shall notify WSRO-DWQ. Such a circumstance will be deemed a force majeure event and this order shall be amended to accommodate any such delays that are beyond the control of the City;
 - e. Complete construction of Kindergarten Outfall (Section 1A) within 600 days of giving Contractor Notice to Proceed.
- vii) **Corbett Outfall (Sections A & B):**
- a. Submit permit applications and all supporting materials for any necessary regulatory permits required for outfall repairs/replacement by January 2006;
 - b. Award construction contract and issue Notice to Proceed within 180 days of the completion of Kool Pool Section I;
 - c. Once a construction contract has been awarded and the contractor given Notice to Proceed "construction" shall be deemed to have started for the purpose of this Special Order by Consent;
 - d. If insufficient bidders prevent the City from lawfully awarding a contract or legal action by prospective bidders prevents the City from lawfully awarding or giving Notice to Proceed with the contracts within the time frame stated in paragraph II vii) (b) above the City shall notify WSRO-DWQ. Such a circumstance will be deemed a force majeure event and this order shall be amended to accommodate any such delays that are beyond the control of the City;
 - e. Complete construction of Corbett Outfall (Sections A & B) within 600 days of giving Contractor Notice to Proceed
- (c) No later than thirty (30) calendar days after any date identified for accomplishment of any activity listed in 2(b) above, submit to the Director of DWQ written notice of compliance or noncompliance therewith. In the case of noncompliance, the notice shall include a statement of the reasons(s) for noncompliance, remedial actions(s) taken, and a statement identifying the extent to which subsequent dates or times for accomplishment of listed activities may be affected.
3. The City agrees that unless executed under paragraph four (4), the City will pay the Director of DWQ, by check payable to the North Carolina Department of Environment and Natural Resources, stipulated penalties according to the following schedule for failure to meet deadlines set out in paragraphs 2(b) and 2(c).

Violation Description	Stipulated Penalty
Failure to meet any milestone date identified in paragraph 2 (b) above.	\$5,000 per day
Failure to submit any report required by paragraph 2 (c) above.	\$5,000 per day
Any reportable spill (SSO) in the Kool Pool, Corbett, and/or Kindergarten drainage basins (bounded by the Westside Plant downstream and Westchester Drive upstream.) and Deep River drainage basin from Section Six to the Eastside Plant.	\$1,000 per event

4. The City and the Commission agree stipulated penalties are not due if the City satisfies the Division of Water Quality noncompliance was caused by extraordinary circumstances:
 - (a) An act of God;
 - (b) An act of war;
 - (c) An intentional act or omission of a third party, but this defense shall not be available if the act or omission is that of an employee or agent of the defendant or if the act or omission occurs in connection with a contractual relationship with the City;
 - (d) An extraordinary event beyond the City's control; or
 - (e) Any combination of the above causes.
 - (f) Failure within thirty (30) days of receipt of written demand to pay the penalties, or challenge them by a contested case petition pursuant to G.S. 150B-23, will be grounds for a collection actions, which the Attorney General is hereby authorized to initiate. The only issue in such an action will be whether the thirty (30) days has elapsed.
5. In accordance with provisions of G.S. 143-215.67(b), the Commission allows the City to accept 0.8 MGD additional wastewater to the Westside collection system and wastewater treatment plant, through Division issued sewer extension permits or through City taps, while this Special Order by Consent is in effect as described in 1 (c) above. Additional flow may be granted if the City demonstrates that flow in the form of I&I has been reduced by the completion of specific collection sewer repair projects. If the City should fail to meet any agreed upon milestone date contained in paragraph 2 (b) above, the Division may prohibit new sources of wastewater from being introduced into the collection system until such time as the milestone activities are accomplished. Per G.S. 143-215.67(a), upon expiration of this Special Order by Consent, the City shall not knowingly introduce new sources of wastewater into any part of the collection system or treatment works, which lacks adequate capacity to convey and/or treat such waste.
6. In accordance with provisions of G.S. 143-215.67(b), the Commission allows the City to accept 0.5 MGD of additional wastewater, within the requirements of allowable permissible flow, to the Eastside collection system and wastewater treatment plant, through Division issued sewer extension permits or through City taps, prior to completion of the replacement of Deep River Outfall Section III. Additional flow may be granted if the City demonstrates that flow in the form of I&I has been reduced by the completion of specific collection sewer repair projects. If the City should fail to meet any agreed upon milestone date contained in paragraph 2 (b) above, the Division may further prohibit new sources of wastewater from being introduced into the collection system until such time as the milestone activities are accomplished. Per G.S. 143-215.67(a), upon expiration of this Special Order by Consent, the City shall not knowingly introduce new sources of wastewater into any part of the collection system or treatment works, which lacks adequate capacity to convey and/or treat such waste.
7. This Special Order by Consent and any terms and conditions contained herein, hereby supersede any and all previous Special Orders, Enforcement Compliance Schedule Letters, terms and conditions contained therein issued in connection with Permit No. WQCS00010. In the event of a Permit modification or renewal, requirements contained therein shall supersede those contained in this Special Order by Consent, except as modified and contained herein.
8. Noncompliance with the terms of this Special Order by Consent are subject to enforcement action in addition to the above-stipulated penalties, including injunctive relief pursuant to G.S. 143-215.6(C).
9. The City, upon signature of this Special Order by Consent, will be expected to comply with all schedule dates, terms, and conditions of this document.
10. This Special Order by Consent shall expire 90 days after completion of all the outfall improvements along the City's Deep River, Kindergarten, Corbett and Kool Pool Outfalls.

FOR THE CITY OF HIGH POINT:

Rebecca R. Smothers, Mayor

Print Name and Title of Signing Official

Rebecca R. Smothers

Signature of Signing Official

Date: 1-13-06

FOR THE NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION:

David H. ...

Chairman of the Commission

Date: 2-1-06

APPENDIX B

Agency Correspondence



North Carolina Department of Administration

Beverly Eaves Perdue, Governor

Britt Cobb, Secretary

November 12, 2009

Ms. Hannah Stallings
NCDENR, Water Quality
1617 Mail Service Center
Raleigh, NC 27699-1617

Re: SCH File # 10-E-4300-0109; DEIS; Westside Wastewater Treatment Plant, City of High Point, Secondary and Cumulative Impacts Management Plan

Dear Ms. Stallings:

The above referenced environmental impact information has been reviewed through the State Clearinghouse under the provisions of the North Carolina Environmental Policy Act.

Attached to this letter are comments made in the review of this document. The comment(s) need to be addressed in the Final Environmental Impact Statement. This document should be submitted to the State Clearinghouse upon completion for compliance with the North Carolina Environmental Policy Act.

Best regards.

Sincerely,

Valerie W. McMillan (576)

Valerie W. McMillan, Director
State Environmental Review Clearinghouse

Attachments

cc: Region G

Mailing Address:
1301 Mail Service Center
Raleigh, NC 27699-1301

Telephone: (919)807-2425
Fax (919)733-9571
State Courier #51-01-00
e-mail valerie.w.mcmillan@doa.nc.gov

Location Address:
116 West Jones Street
Raleigh, North Carolina

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

DB 101

COUNTY: DAVIDSON
GUILFORD

H02: WASTEWATER TREATMENT
FACILITIES

STATE NUMBER: 10-E-4300-0109
DATE RECEIVED: 09/18/2009
AGENCY RESPONSE: 11/05/2009
REVIEW CLOSED: 11/10/2009

CLEARINGHOUSE COORDINATOR
CC&PS - DIV OF EMERGENCY MANAGEMENT
FLOODPLAIN MANAGEMENT PROGRAM
MSC # 4719
RALEIGH NC

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DENR LEGISLATIVE AFFAIRS
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION
PIEDMONT TRIAD COG

PROJECT INFORMATION

APPLICANT: NCDENR, Water Quality
TYPE: State Environmental Policy Act
Draft Environmental Impact Statement

DESC: Westside Wastewater Treatment Plant, City of High Point, Secondary and Cumulative
Impacts Management Plan - addresses the secondary and cumulative impacts that may
result from growth and development induced and supported by infrastructure
projects within the city's Westside Wastewater Plant Service Area

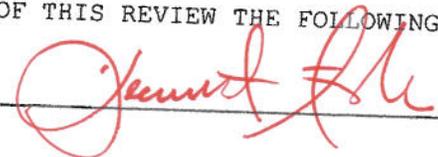
CROSS-REFERENCE NUMBER: 07-E-4300-0308

The attached project has been submitted to the N. C. State Clearinghouse for
intergovernmental review. Please review and submit your response by the above
indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY:



DATE:

10/7/09

RECEIVED

SEP 21 2009

N.C. Floodplain Mapping Program





North Carolina Department of Crime Control and Public Safety
 Division of Emergency Management
 Office of Geospatial and Technology Management

Beverly Eaves Perdue, Governor
 Reuben F. Young, Secretary

H. Douglas Hoell, Jr., Director

September 28, 2009

Ms. Valerie McMillan
 State Clearinghouse
 N.C. Department of Administration
 1301 Mail Service Center
 Raleigh, North Carolina 27699-1301



Subject: Intergovernmental Review State Number: 10-E-4300-0109
 Proposed wastewater infrastructure improvements, Westside Wastewater Treatment Plant (WWTP) service area, High Point Davidson County and Guilford County

Dear Ms. McMillan:

As requested by the North Carolina State Clearinghouse, the North Carolina Department of Crime Control and Public Safety Division of Emergency Management Office of Geospatial and Technology Management Office (GTM) reviewed the proposed project listed above and comments are provided below. We understand that the City of High Point is preparing for wastewater system infrastructure improvements throughout the WWTP service area. System improvements have the potential to impact existing floodplains in Davidson and Guilford Counties.

The GTM Office has the following comments:

- 1) As shown on Figure 5 of the Clearinghouse documents, the WWTP service area includes the Special Flood Hazard Areas (SFHAs) of Cuddybum Creek, Kennedy Mill Creek, Rich Fork and Payne Creek (and their tributaries) in Davidson and Guilford Counties. SFHAs are mapped in detail on the Digital Flood Insurance Rate Maps listed below, available for download at <http://www.ncfloodmps.com>:

Mail:
 4719 Mail Service Center
 Raleigh, NC 27699-4719
 Telephone: 919-715-5711



Location:
 1812 Tillery Place, Suite 105
 Raleigh, NC 27604
 Fax: 919-715-0408

www.NCCrimeControl.org

A Nationally Accredited Agency

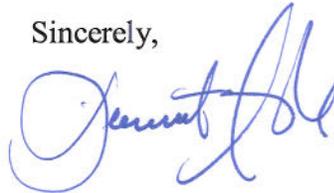
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3710678900J	3710688100J	3710689100J
3710679900K	3710688200K	3710689200J
3710687000J	3710688300J	

- 2) Any proposed construction within floodway areas of the SFHAs shown on these maps may require, prior to construction, approval of either a no-rise study with a no-rise certification for projects that do not increase base flood elevation or, for projects that result in an increase in base flood elevations, the approval of a Conditional Letter of Map Revision. Please contact Davidson and/or Guilford County's floodplain administrator for guidance on flood plain development permitting in their respective counties, and for any additional local requirements.

Thank you for your cooperation and consideration. If you have any questions concerning the above comments, please contact Randy Mundt, AICP, CFM, the Acting NC NFIP State Coordinator at (919) 715-5711, by email at rmundt@ncem.org or at the address shown on the footer of this documents.

Sincerely,



Kenneth W. Ashe, P.E., CFM
Assistant Director

cc: Randy Mundt, Acting NC NFIP State Coordinator

Mail:
4719 Mail Service Center
Raleigh, NC 27699-4719
Telephone: 919-715-5711

www.NCCrimeControl.org



Location:
1812 Tillery Place, Suite 105
Raleigh, NC 27604
Fax: 919-715-0408

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NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

Vernia

COUNTY: DAVIDSON
GUILFORD

H02: WASTEWATER TREATMENT
FACILITIES

STATE NUMBER: 10-E-4300-0109
DATE RECEIVED: 09/18/2009
AGENCY RESPONSE: 11/05/2009
REVIEW CLOSED: 11/10/2009

MS SHIRLEY FOYE
CLEARINGHOUSE COORDINATOR
DEPT OF TRANSPORTATION
STATEWIDE PLANNING - MSC #1554
RALEIGH NC

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DENR LEGISLATIVE AFFAIRS
DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION
PIEDMONT TRIAD COG

PROJECT INFORMATION

APPLICANT: NCDENR, Water Quality
TYPE: State Environmental Policy Act
Draft Environmental Impact Statement

DESC: Westside Wastewater Treatment Plant, City of High Point, Secondary and Cumulative Impacts Management Plan - addresses the secondary and cumulative impacts that may result from growth and development induced and supported by infrastructure projects within the city's Westside Wastewater Plant Service Area

CROSS-REFERENCE NUMBER: 07-E-4300-0308

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY: *Vernia Wilson*

DATE: *11/4/09*





STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION



BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

November 4, 2009

MEMORANDUM TO: Chrys Baggett
NC State Clearinghouse
Administrative Building, 5th Floor, Room #5026

FROM: Vernia Wilson 
Transportation Engineer
Triad Group, – Transportation Planning Branch

SUBJECT: 10-E-4300-0109

These are comments from the NCDOT – Transportation Planning Branch regarding North Carolina State Clearinghouse of Administration Intergovernmental Review #10-E-4300-0109.

The NCDOT, Transportation Planning Branch would like to make The NC Department of Commerce aware that there is a TIP project listed in 2009-2015 TIP list, which is in close proximity of the reviewed study area.

Please review project U-2537 will be a north-south connector, I-85 to US 311/ Future I-74, which will be multi-lanes a new location.

- *U-2537-NORTH-SOUTH CONNECTOR, I-85 TO US 311 / FUTURE I-74.
MULTI-LANES ON NEW LOCATION.*

Please see the attached graphic for a better view of these proposals. If you have any further questions, please do not hesitate to contact me at 733-4705 or email at vrwilson1@ncdot.gov.

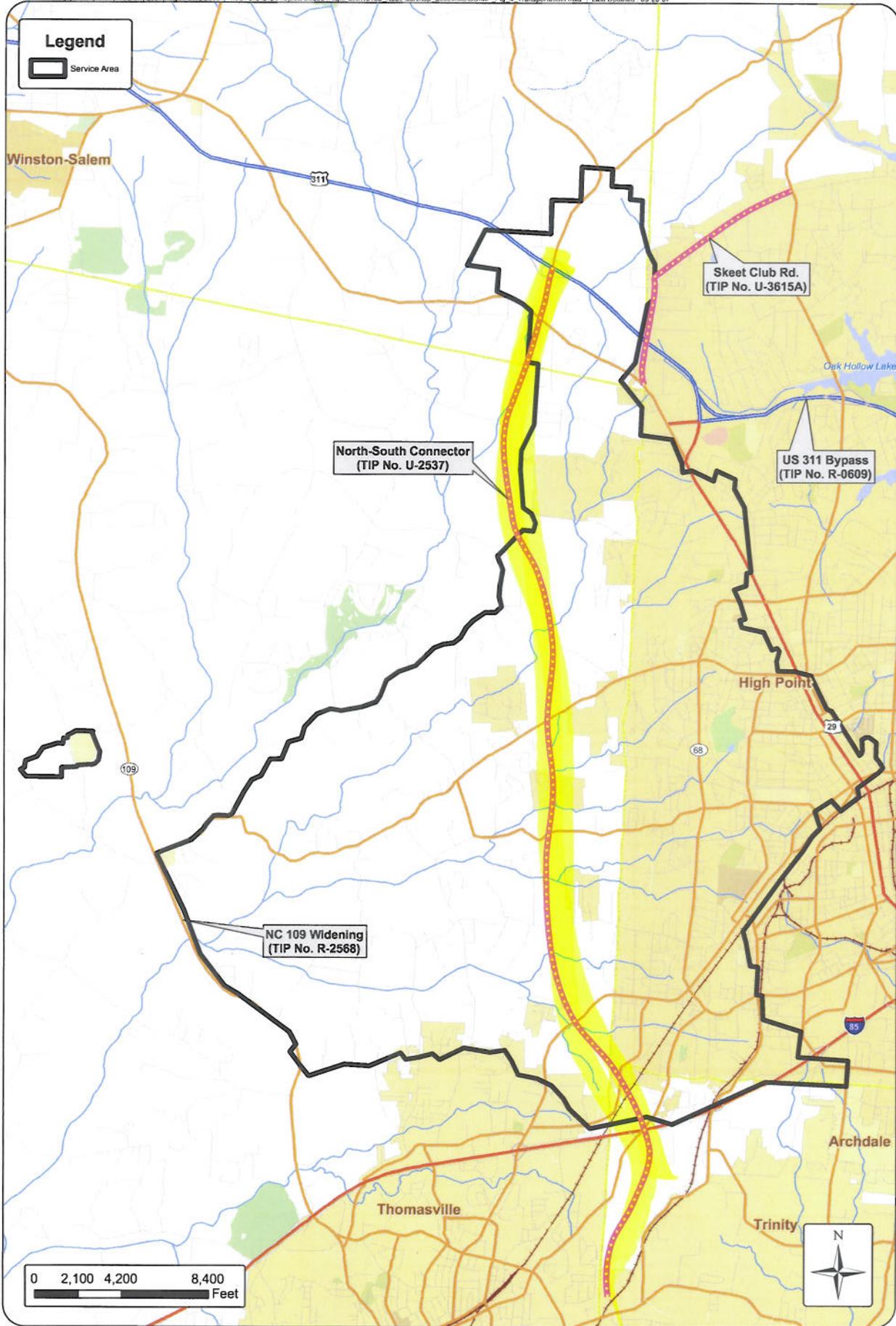
Attachments:
TIP No. U-2537 Figure 4

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
TRANSPORTATION PLANNING BRANCH
1554 MAIL SERVICE CENTER
RALEIGH NC 27699-1554



www.NCDOT.ORG

LOCATION:
TRANSPORTATION BUILDING
1 SOUTH WILMINGTON STREET
RALEIGH, NC 27601
Phone: 919-733-4705
Fax: 919-733-2417



NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

COUNTY: DAVIDSON
GUILFORD

H02: WASTEWATER TREATMENT
FACILITIES

STATE NUMBER: 10-E-4300-0109
DATE RECEIVED: 09/18/2009
AGENCY RESPONSE: 11/05/2009
REVIEW CLOSED: 11/10/2009



MS RENEE GLEDHILL-EARLEY
CLEARINGHOUSE COORDINATOR
DEPT OF CULTURAL RESOURCES
STATE HISTORIC PRESERVATION OFFICE
MSC 4617 - ARCHIVES BUILDING
RALEIGH NC

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DEPT OF TRANSPORTATION
PIEDMONT TRIAD COG

PROJECT INFORMATION

APPLICANT: NCDENR, Water Quality
TYPE: State Environmental Policy Act
Draft Environmental Impact Statement

DESC: Westside Wastewater Treatment Plant, City of High Point, Secondary and Cumulative Impacts Management Plan - addresses the secondary and cumulative impacts that may result from growth and development induced and supported by infrastructure projects within the city's Westside Wastewater Plant Service Area

CROSS-REFERENCE NUMBER: 07-E-4300-0308

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

ER 07-0413
~~CHLOE 222~~
A - JM
AR 6/15
9/29/09
S - (NU) 10/5/09
Due 10/26/09

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY: Renee Gledhill-Earley

DATE: 10.6.09

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

COUNTY: DAVIDSON
GUILFORD

H02: WASTEWATER TREATMENT
FACILITIES

STATE NUMBER: 10-E-4300-0109
DATE RECEIVED: 09/18/2009
AGENCY RESPONSE: 11/05/2009
REVIEW CLOSED: 11/10/2009

MS MELBA MCGEE
CLEARINGHOUSE COORDINATOR
DENR LEGISLATIVE AFFAIRS
ARCHDALE BLDG - MSC # 1601
RALEIGH NC

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DEPT OF CULTURAL RESOURCES
DEPT OF TRANSPORTATION
PIEDMONT TRIAD COG

PROJECT INFORMATION

APPLICANT: NCDENR, Water Quality
TYPE: State Environmental Policy Act
Draft Environmental Impact Statement.

DESC: Westside Wastewater Treatment Plant, City of High Point, Secondary and Cumulative Impacts Management Plan - addresses the secondary and cumulative impacts that may result from growth and development induced and supported by infrastructure projects within the city's Westside Wastewater Plant Service Area

CROSS-REFERENCE NUMBER: 07-E-4300-0308

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If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED: NO COMMENT COMMENTS ATTACHED

SIGNED BY:

A handwritten signature in black ink, appearing to be 'M. McGee', written over a horizontal line.

DATE:

A handwritten date '9/22/09' written in black ink over a horizontal line.

**Secondary and Cumulative Impacts
Management Plan
City of High Point
Davidson and Guilford Counties, North Carolina**

Response to Comments

October 23, 2008

This document addresses specific comments from the North Carolina Department of Environment and Natural Resources (NCDENR) review of the Secondary and Cumulative Impacts Management Plan (Plan) for the Westside Wastewater Treatment Plant operated by the City of High Point. Comments were received from the: Division of Water Quality (DWQ) on January 31, 2008, North Carolina Wildlife Resources Commission (NCWRC) on November 9, 2007, Division of Water Resources (DWR), and the US Fish and Wildlife Service (USFWS) on March 10, 2008. Specific comments are in **bold** with the response following each one. Copies of these letters are included in Appendix B of the Plan.

North Carolina Division of Water Quality Comments (1/31/08)

1. A Memorandum of Agreement (MOA) will be necessary among all parties to ensure understanding of the shared and reciprocal responsibilities under the SCIMP. DWQ will be preparing one for review and agreement once the State Clearinghouse (SCH) review is complete.

Melba McGee requested we draft a MOA with Shari Bryant (NCWRC). Communication with Shari on the MOA has occurred and a draft MOA is currently under review by the City.

2. Because the SCIMP will undergo an SCH review that is typical of an Environmental Impact Statement, it will be necessary for the City to hold a Public Hearing on the subject document prior to its approval, with notice of the hearing provided in local media and the Environmental Bulletin.

We are currently discussing this requirement with NCDWQ and will determine if, when, and where this meeting will occur at a later date.

3. DWQ will prepare a Record of Decision (ROD) for this Plan once all agency concerns are addressed. The ROD and the SCIMP will then be submitted to the SCH for a 45-day review period. Once any comments generated in the SCH review are resolved, the MOA will be signed and SCIMP will be a binding document.

Agreed.

4. Please include all referenced documents, such as local ordinances and stormwater plans, in the Appendix for easy reference. CD copies are acceptable.

Referenced documents are included on the attached CDs and website references are included in the document.

5. Page 1 – Introduction: Please change the department’s name to “North Carolina Department of Environment and Natural Resources”.

This has been corrected (Page 1).

6. Section 1.1

- a. Please amend the first sentence to reflect that the Service Area is likely to change/grow with the addition of sewer lines.

The geographical extent of the Service Area is not anticipated to grow since it encompasses the areas that can be supplied by gravity sewer, and no pump stations are anticipated. Future land use changes within the Service Area are addressed in the appropriate section of the document.

- b. In the second paragraph, please note that the U.S. Fish and Wildlife Service (USFWS) may also determine that the secondary and cumulative impacts (SCI) of a project may adversely affect species protected under Section 7 of the Endangered Species Act.
- c. The document needs to indicate that while most impacts on water resources associated with installing water, wastewater, and transportation infrastructure are direct impacts, there are also cumulative direct impacts from previous and other future installation/rehabilitation projects. Because the City does not have access to all of the data to review for potential impact(s) to protected species for Westside Service Area, it should commit to a review by USFWS for cumulative direct impact(s) in future EAs and EISs.
- d. For future infrastructure projects that may impact listed species, the Town should work with USFWS to determine whether surveys are needed to evaluate potential impacts. Please contact USFWS officials with its Asheville Field Office (828-258-3939) for occurrences in Forsyth and Randolph Counties and in its Raleigh Field Office (919-856-4520) for occurrences in Davidson and Guildford Counties. Please be aware that the USFWS may require amendments to this Plan should new populations of protected species occur within the Service Area.

The City is aware that the USFWS reserves the right to comment on future SEPA documents as they see fit. In addition, the USFWS will be provided an opportunity to address any population changes during the annual update of the SCIMP supplied by the City. Additional agreements and resolutions do not seem to be needed to address this issue.

7. Page 2 states “Future development within the Service Area that will utilize the sewer infrastructure may be incorporated into the City of High Point jurisdiction.” Page 32 states that “The City requires that all development tying onto their wastewater infrastructure must go through [its] administrative approval process” to ensure that City ordinances “will apply to all development within the Service Area”. Please clarify whether new connections to the WWTP system will be subject to this Plan.

All new connections to the City sewer service will either be annexed into the High Point jurisdiction or will be required to comply with their ordinances (Page 2).

8. Section 2.1.1
 - a. Please state into which water body the WWTP discharges. Also, if the WWTP has/plans a reuse program, please include text and maps on these areas.

The WWTP discharges into Rich Fork. The City does not currently have a reuse plan but is considering reuse options in the future in combination with WWTP expansion alternatives. If reuse is proposed, it will be included in the annual SCIMP update as well as other required documents and permit applications (Page 3).

- b. Please state the permitted NPDES discharge volume and the current average daily flow at the WWTP.

This information has been included (Page 2).

- c. The document mentions several trademarked items. Per G.S. 133-3, specifying sole sources for materials is not allowed in environmental documents to permit a fair bidding process. So that future projects and policy are not affected by the contents of this Plan, please remove these references from the text and used generalized descriptions of the processes instead.

These references have been removed (Page 3).

- d. Please provide information on that collection system that feeds the WWTP, including lengths and diameters of gravity sewer and force mains and capacities of pump stations.

Figure 2 has been updated to illustrate the City of High Point’s collection system with diameters included.

9. Section 2.1.2 – Please provide a map of the future Service Area

The future Service Area is the same as the current Service Area, since that entails all areas that could be serviced by gravity sewer to the WWTP.

10. Please add a section 2.1.3 to detail any reclaimed water program plans.

The City does not currently have any reclaimed water programs, but will be considering this in conjunction with their evaluation of WWTP expansion alternatives. Additional information will be included in the SCIMP update on an annual basis (Page 3).

11. Section 2.2.1

- a. Please name the water treatment plant's (WTP) raw water source.

The raw water sources for the City have been included in this section (Page 4).

- b. How will the City control SCI related to the provision of potable water, especially in those areas where this service is not in its jurisdiction?

The City does not have the authority to control SCI related to potable water service outside of its jurisdiction. Potable water is supplied by Davidson Water, Inc. which is a private company and not under the authority of the City of High Point's regulations. For those areas within the City's jurisdiction, the measures included in the SCIMP will adequately address SCI issues.

- c. From which aquifer do the wells draw?

This is difficult to determine without detailed knowledge of the depth of each individual well within the Service Area. This data is not easy to obtain and therefore any determination of the aquifer being drawn from would be highly speculative. Based on the 2007 Guilford County Groundwater Monitoring Network Status Report, most wells in the County draw from the fractured crystalline rock aquifer system. The Davidson County portions of the project should be similar.

12. Section 3.0 needs to address the goals/purposes of the water, wastewater, and transportation projects.

This has been added to the document (Page 6).

13. Section 4.0 needs to address the SCI of the water, wastewater, and transportation system expansions.

Section 4 describes the existing environment within the Service Area. Section 5 qualitatively addresses the future SCI of the Service Area.

14. Section 4.1

- a. Please define what flood zones A and AE designate.

This has been added to the document (Page 7).

- b. Please label Cuddybum Creek on Figure 5.

This has been added to the figure.

15. Section 4.7 – Please list those properties that are currently on the Study List for eligibility or have been Determined Eligible for the National Register. As the SCIMP is a planning document, it is wise to include these properties on the SCIMP and consider protection for these sites since they could be placed on the Register in the future.

We agree that these properties are important as they could be placed on the National List in the future; however, we do not want this list to appear exclusive or all inclusive as all the properties eligible for listing may not have been identified. We would prefer that others check the list at the time of a project rather than deferring to this document as a source for this information.

16. Section 4.10
 - a. Please include the 14-digit HUC code for the surface waters in table 5.

This has been added to the document (Page 16).

- b. Please discuss the quality of groundwater in the area, including any specific problems with contaminants.

There are no specific problems known with groundwater in the Service Area but a general discussion of groundwater in the Piedmont has been included in this section. Should issues arise with groundwater in the future; this section of the Plan will be updated to address those (Page 16).

17. Section 4.13 and 4.14 need discussion of plant species in the Service Area.

Information on the Natural Communities that exist within the Service Area have been added to the document (Page 17).

18. Section 5.3
 - a. What is the planning horizon for The Northeast Davidson Area Plan?

High Point hasn't traditionally established planning horizon years for its land use plans; however, the City typically views the plans to be effective for a minimum of 10 years up to 20 years from plan development. This plan is anticipated to have a 15 year horizon and tie to 2018, the same horizon year at the SCIMP. If another SCIMP is needed in 10 years for that area, then the City anticipates updating the Northeast Davidson Area Plan prior to that time.

- b. Please include discussion of the environmental impacts of changes in land use, such as increased impervious surface and increased runoff to streams.

Changes in land use have been addressed in this section including indirect effects of impervious surfaces and increased runoff. These items are further addressed in the appropriate section of the document.

19. Section 5.4 – Please state what the SCI are that “can result from utility maintenance activities and land use changes along stream channels where many wetlands occur in the Service Area.

This sentence was reworded for clarification (Page 20).

20. Section 5.7 – Many types of projects require review by the State Historic Preservation Office (SHPO), not just those involving 404/401 Permits. Please visit its website (<http://www.hpo.dcr.state.nc.us/er.htm>) for full listing of projects types requiring SHPO consultation.

The typical SHPO review and jurisdiction has been added to this section (Page 22).

21. Section 5.8 – Did the EAC Ozone Action Plan enable the area to achieve attainment status? If not, are there any other/new plans to improve air quality?

This information has not officially been released at this time; however the final ruling is to be released soon (Page 22).

22. The first sentence of section 6.0 is incomplete.

The sentence is now complete (Page 27).

23. Section 6.1 – Please consider whether discussion of the City’s efforts on EPA’s 2000 Compliance and Enforcement Strategy Addressing Combined Sewer Overflows and Sanitary Sewer Overflows should be added to Table 8.

Table 8 was intended to cover federal, state, and local regulations that generally address SCI issues and will be in place unless future rule changes amend them. The above-referenced document is a compliance action and will be completed at some point in the near future, and not relevant in future years. Therefore, we feel it should not be included in a general review of future regulations.

24. Section 6.2.3.1

- a. The acronym LID typically stands for “low impact development”. Amend as necessary.

The City’s ordinance describes “low impact design” rather than the commonly used “low impact development”. The LID acronym has been removed from the document to avoid confusion (Page 33).

- b. Please clarify whether new lots are not allowed that impact any portion of a stream buffer or if new lots are not allowed that would totally be within the buffer area.

New lots are not allowed that contain any portion of the buffer. This has been clarified in the document (Page 33).

25. Section 6.2.5

- a. Please specify the section in which the Conditional Use Permit process is explained in the SCIMP.

The Conditional Use Permit process is a part of the zoning approval for the City. It is the method by which the City places conditions on the zoning approvals of a project. Therefore, it is addressed in Section 6.2.1 under the Zoning Ordinance.

- b. Is development allowed in a floodway fringe that exists in a buffer zone?

Lots are not allowed within the buffer zone, therefore they are also not allowed in the floodway fringe within the buffer zone.

26. Section 7.0 – Table 9 – Please include information for local ordinances relating to Archaeological /Historical Sites.

There are limited local ordinances related to Archaeological or Historical sites. The City's Historic Commission has been added to the Table (Page 36).

North Carolina Wildlife Resources Commission Comments (11/9/08):

We offer the following comments and recommendations regarding the Plan:

1. Section 1.1 SCI Mitigation Plan Process (p.1): The Plan states for a given infrastructure project, NDENR may determine the programs described in the document are insufficient to address the SCI of that individual project. In this case, the document will still be used to meet SEPA requirements, but additional requirements could be placed in the specific project's permit conditions. In addition, this Plan is to be considered applicable for ten years from the finalization date. At that point, the Plan will be re-evaluated and adopted or amended if necessary. While we are not opposed to the Plan being valid for 10 years, we feel periodic reports (e.g., biennial) should be submitted to document whether any additions, deletions, or changes have occurred to infrastructure project or the strategies (e.g., ordinances related to riparian buffers, stormwater management, or floodplain protection) detailed in the Plan. In addition, there should be a provision that allows the Plan to be re-evaluated and updated at any time if significant changes in aquatic or terrestrial wildlife populations are documented. Significant changes may include, but are not

limited to, the listing or change in listing (e.g., from threatened to endangered) of a species; significant declines (e.g., numbers or health) in known populations; or significant changes in habitat (e.g., water quality) that could be detrimental to aquatic and terrestrial wildlife resources.

The City will be providing updates to the Plan on an annual basis. This update will include changes discussed above and will allow agency comments regarding any population changes that may affect the Service Area.

2. Section 1.2 Project Service Area (p. 2): The Plan states future development within the Service Area that will use the sewer infrastructure may be incorporated into the City of High Point. IF the entire service area is not within the City's jurisdiction and it is possible for water or sewer infrastructure to be extended to areas outside the City without first being incorporated into the City, then the strategies (i.e., riparian buffer and floodplain protection, stormwater management, sediment and erosion control) for the overseeing jurisdiction (e.g., Davidson County) in which this development occurs need to be detailed in this Plan.

The City requires that any development connecting to their sewer system be incorporated into their jurisdiction. In the event that an exception to this standard is granted, the City commits to requiring the development to comply with their environmental ordinances discussed in the SCIMP.

3. Section 2.1.2 Future Wastewater System (p.3): The Plan states no additional major outfalls or interceptors are planned for the Service Area. It is unclear whether this implies only within the next 10 years, the time frame to which this Plan applies. It is also unclear whether there are any proposed new pump stations or upgrades to pump stations or outfalls/interceptors that may facilitate growth. A table or list of proposed new wastewater infrastructure or improvements and the expected date of construction would be helpful information. Again, if the entire Service Area is not within the City's jurisdiction, and there are proposed sewer infrastructure projects by other jurisdictions, these should be listed with the projected date of construction and the strategies (i.e., riparian buffer and floodplain protection, stormwater management, sediment and erosion control) that would be applied to these areas.

The SCIMP was created to address SCI within the Service Area on a broad scale, and specifically to comply with SEPA requirements for the Kool Pool EA and potential future WWTP expansion. Currently, there are no plans for additional gravity sewer or pump stations within the Service Area. Minor sewer lines may be designed and constructed to connect future development projects but no new major lines are proposed within the next 10 years.

4. Section 2.2.2 Future Water System (p.4): The Plan states no additional water lines are proposed or currently being built. Again, it is unclear whether this implies only within the next 10 years, the time frame to which this Plan applies. Also, according to Figure 3, Davidson Water has several water mains within the service area.

Discussion on plans for water system expansions within the Service Area by Davidson Water over the next 10 years should be included in this section. If Davidson Water proposes expansion of the water infrastructure within the service area, then the strategies (i.e., riparian buffer and floodplain protection, stormwater management, sediment and erosion control) that would be applied to areas need to be detailed in the Plan. A table or list of proposed new wastewater infrastructure or improvements and the expected date of construction would be helpful information.

Davidson Water, Inc. is a private company and not under the jurisdiction of the City. Future expansion of their system is driven by market forces and difficult to predict. If they expand within the City's jurisdiction or provide service to a development that is connecting to the City sewer system, then the SCI measures provided in the SCIMP will apply to that development. However, if water supply is provided privately outside the City's jurisdiction without sewer service, the City has no authority to require SCI measures be put in place.

5. Figure 8, Land Use Plan: The legend does not describe what each of the colors on the figure represent.

This has been updated in the document.

6. Appendix B, Scoping comments: Portions of DWR and NCWRC scoping comments are missing from the document.

All comments provided for the SCIMP have been included in Appendix B. Earlier comments provided for the Kool Pool EA were included in that document and have been incorporated by reference into the SCIMP.

We offer the following comments and recommendations regarding the measures detailed in the Plan:

1. Section 5.3 Land Use (p. 19) and Section 6.2.1 Zoning Ordinance (p. 32): The City references the Northeast Davidson Area Plan and provides examples of the City's implementation of this process in Appendix C. Section 6.2.1 lists the standard conditions that have been applied to all subdivisions, and Appendix C shows a table of developments that appear to have been reviewed through this process. In the table, there are boxes for stream buffers, floodplain protection, steep slope protection and common area open space. The boxes only indicate whether these are present (e.g. yes). Please clarify if the stream buffers, floodplain protection, steep slope protection and common area open space that are detailed for the Northeast Davidson Area Plan are or will be the same as the strategies described in this Plan. If these are different, please provide a detailed description of each strategy.

The previous requirements varied from project to project, and therefore the details were left out of the Table to keep it legible. This information was included in the SCIMP to show the City's commitment to environmental stewardship prior to the

requirements of the SEPA process. Additional details are available if necessary for the review, but do not relate to the current ordinances that will set standard requirements on all future developments.

2. Section 5.10 303(d) Listed Streams (p. 23): Rich Fork is listed as an impaired stream. The Plan states it would be difficult to attain a healthy aquatic community in Rich Fork, even with no future development. The City is upgrading and repairing the sewer outfalls in the Rich Fork watershed which may improve water quality; however, increases in runoff may further degrade these streams. This is a situation where existing strategies or measures apparently were not protective of the stream. As stated above, we are concerned that continued degradation in area streams may occur without the implementation of more extensive measures. We encourage the City or monitor the effectiveness of the strategies detailed in this Plan. If continued degradation of area streams is observed, then we encourage the City to take action to minimize these impacts through the adoption of more protective strategies or measures.

The City will continue to monitor and update their environmental protection measures as need arises. They are committed to improving the quality of Rich Fork, as evidenced by their participation in efforts to restore sections of the stream, including financial commitments for its study and restoration. SCIMP updates will address the adequacy of the measures, and allow an opportunity for comments to address the effectiveness of these measures.

3. Section 6.0 Mitigation for Secondary and cumulative Impacts (p. 26): The Plan states the ordinances preserve open space. It does not appear that an open space ordinance is summarized in this section. If preservation of open space is encompassed within other ordinances (e.g., riparian buffer), this should be stated. If there is a separate ordinance for preservation of open space, this should be summarized in this section.

Open space requirements are placed on a development during the zoning approval or conditional use process. A stand-alone ordinance to address open space is not currently part of the City's development code. Due to the recent adoption of the buffer and Phase 2 stormwater ordinances, the City is reluctant to pursue additional ordinances in the upcoming months. This will be reevaluated at a later date, when it may be more publicly and politically practical to accomplish.

4. Section 6.2.3.1 Watershed Protection, Stream Buffers (p. 33): The City proposes 50-foot riparian buffers for perennial and intermittent streams for low density development and 50-foot buffers for intermittent streams and 100-foot buffers for perennial streams. Zones 1 and 2 (first 30 and 20 feet) must be undisturbed. Zone 3 (50-foot high density buffer) must remain vegetated. Low density development and high density development should be defined (e.g., dwellings per acre or built-upon-area). We are pleased to see that no new lots will be allowed within the buffers. Also, we encourage the Town to increase buffer widths and undisturbed area wherever possible.

Low density and high density development is defined in the City's ordinance and has been included in the SCIMP. Low density development is less than 2 dwellings per acre or 24% impervious area. High density development is more than 2 dwellings per acre or 24% impervious area.

5. Section 6.2.3.1 Watershed Protection, Steep Slope Protection (p. 33): Clarify whether the additional buffer requirements are added to the 50-foot (e.g., 15-25% slope would be an additional 15-foot and a total 65 foot riparian buffer), whether the additional buffer (e.g., 15-foot) to Zone 2 must be undisturbed, and whether the steep slope protection applies to both perennial and intermittent streams.

A new figure has been provided to clearly show how the steep slope protection requirements blend with the buffer requirements.

6. Section 6.2.3.1. Watershed Protection, Stormwater Requirements (p. 33): Although no information was provided regarding current and future impervious surface totals within the service area, the Wake County Watershed Management Plan Task Force correlation analysis of impervious surfaces to watershed classification found that watersheds of unimpaired streams averaged 8% imperviousness, impacted streams averaged 11%, and degraded streams averaged 24% (<http://projects.ch2m.com/WakeCounty/>). While we are pleased to see implementation of the alternative stormwater measures described for <24% BUA, we question if these are sufficient to protect streams within the service area; particularly for developments that exceed 10% impervious surface.

As discussed above, the City has made extensive progress in the development of additional environmental protection within its jurisdiction, including their Phase 2 stormwater and riparian buffer regulations. The alternative stormwater controls, along with more stringent stream buffer protection than the Phase 2 requirements, will combine to protect downstream waters to the maximum extent practical. While we do not dispute the results of the Wake County study, scientific data and technical issues must also be weighed in conjunction with public needs and politics. If the measures implemented in the SCIMP are not adequately protecting the waters, the City will revisit this issue at a later date.

7. Section 6.2.5 Flood Damage Prevention: The City allows development in the floodplain provided the structure is flood proofed and the finished floor is elevated 1-foot above base flood elevation. It was stated that the City's flood damage prevention ordinance complies with FEMA regulations. FEMA regulations are designed to protect property owners from damage and to allow them to purchase insurance protection against losses from flooding, not for the protection of natural resources. Undeveloped floodplains strongly influence aquatic systems and provide many important functions. We encourage the City to consider prohibiting development within the 100-year floodplain throughout the service area.

The City has been limiting development in the floodplain well beyond the measures described in their flood damage prevention ordinance. As shown in Appendix C, the City has not allowed development within the floodplain through their conditional use permit process since January 1, 2003. While we agree with the intention of making this requirement a part of the development code, it would be difficult at this juncture to place this requirement across the entire City jurisdiction. A number of ordinance changes, including much stricter environmental requirements described in this document, have recently been approved by the City despite significant opposition to the changes. At this time, it may not be politically or publicly acceptable to attempt additional changes in the rules.

North Carolina Division of Water Resources Comments (1/11/08):

1. The proposed project as described may involve interbasin transfer (IBT) of surface water. DWR will need additional information to determine whether IBT certification is needed. High Point submitted in 2003 water balance tables and a grandfathered capacity worksheet. Updated water balance tables and an updated grandfathered capacity worksheet should be prepared and submitted to DWR.

The City of High Point has included the updated grandfathered capacity worksheet below and will provide the updated water balance tables to DWR under separate cover.

2. The Piedmont Triad Regional Water Authority (PTRWA) holds an interbasin transfer certificate to transfer up to 30.5 million gallons per day (MGD) from the Deep River Basin to the Haw and Yadkin River Basins for the operation of Randleman Lake. It is not clear to me whether the City of High Point is a member of the PTRWA. Please clarify whether the interbasin transfer that occurs under the proposed project is covered under this IBT certificate. The above mentioned updated worksheets will help to confirm and document High Point's compliance with IBT law.

The City is a member of the PTRWA and will have 19% of the plant at final build out (approximately 9.12 MGD from the 48 MGD plant); however the final build out date has not yet been determined. In the near future, the City will receive approximately 2.3 MGD which should happen between 2010 and 2012. The City does not believe that the IBT for PTRWA affects the City of High Point IBT as these are two different agreements.

GRANDFATHERED INTERBASIN TRANSFER WORKSHEET

PWS ID: 02-41-020
Water system: City of High Point

Date: 5/29/2008
Prepared By: Wendell Pickett/ Plant Superintendent

Section A. Average Daily Transfer (ADT) for the Year Ending July 1, 1993

- (1) Amount of Surface Water Transferred from 7/1/92 to 6/30/93: 720 million gallons
[transfer amount = (water moved from the source basin to receiving basin)-(water returned to source basin)]
- (2) Total Number of Days that Transfers Occurred during the year (7/1/92 to 6/30/93): 365 days
- (3) Average Daily Transfer for the Year [(3)= (1)(2)]: 1.97 MGD
- (4) 25% increase in Average Daily Transfer for the Year Ending 6/30/93 [(4)= 1.25*(3)] 2.5 MGD

1 If the transfer includes both surface and ground water, include only the surface water portion of the transfer.

Section B. Transfer Capacity as of July 1, 1993

- (5) Capacity of Transfer System Elements (existing or under construction as of July 1, 1993)
- (5-1) Water Treatment Plant (permitted capacity) 16 MGD
- (5-2) Transmission/Distribution System 10 MGD
(For transferring water from the source to the receiving basin.)
- (5-3) Discharge Capacity (in receiving basin)[Sum of a, b, and c] 11.74 MGD
- a. Max Day WWTP Permitted Capacity 10.97 MGD
(permitted capacity 6.22 x max day/max month ratio 1.77)
- b. Max Day Consumptive Loss .77 MGD
(excluding VWWrP flows)
- c. Other (specify) _____ MGD
- (6) Transfer Capacity (minimum Capacity listed in (5-1), (5-2) or (5-3)): 10.00 MGD
- (7) Enter the greater of amount shown in (6) or 2.0 MGD: 10.00 MGD

Section C. Estimating Certification Requirements

- (8) Estimate the Year when Certification will be required based on a 25% increase in ADT:

(This is the year the average daily transfer exceeds the amount listed in (4). Attach an average daily transfer water balance table starting in 1992.) 1992

- (9) Estimate the Year when Certification will be required based on Transfer Capacity:

(This is the year the daily maximum transfer exceeds the amount listed in (7). Attach a maximum daily transfer water balance table starting in 1992.) 2040

Section D. Identify River Basins Involved in Transfer (refer to attached basin map)

Source Basin: Deep River (2-2)
Receiving Basin(s): Yadkin River (18-1)

North Carolina Division of Water Resources
1611 Mail Service Center, Raleigh, NC 27699-1611
Contact: Tom Fransen, 919-715-0386
Email: tom.fransen@ncmail.net





North Carolina Department of Environment and Natural Resources

William G. Ross Jr., Secretary

Michael F. Easley, Governor

Post-it® Fax Note		7671	Date 12/18	# of pages 5
To	Vickie	Co./Dept.	From Hannah	Co.
Phone #		Fax #		

MEMORANDUM

TO: Hannah Stallings
Division of Water Quality

FROM: Melba McGee
Environmental Review Manager

RE: Secondary and Cumulative Impact Mitigation Plan for Westside
Wastewater Treatment, City of High Point in Davidson and Guilford
Counties

DATE: December 18, 2007

The Department of Environment and Natural Resources has reviewed the proposed Secondary and Cumulative Impacts (SCI) Mitigation Plan for the Town of High Point. The attached comments are from the N.C. Wildlife Resources Commission. The department request that consultation be held with the Commission to discuss possible resolutions to their issues.

In reviewing the document, it is noted that development could occur in floodplains. The department supports local policies to discourage inappropriate industrial, commercial and residential development in 100-year floodplains. Facilities that use or store hazardous materials and wastes should not be located in the 100-year floodplain.

Since the development of the first SCI Master Mitigation Plan the department has recommended that the name be changed to SCI Management Plan. It is also suggested that a Memorandum of Agreement be drafted and reviewed by the department prior to final approval.

Thank you for the opportunity to review.

Attachments

1601 Mail Service Center, Raleigh, North Carolina 27699-1601
Phone: 919-733-4984 \ FAX: 919-715-3060 \ Internet: www.enr.state.nc.us/ENR/





North Carolina Wildlife Resources Commission

Fred A. Harris, Interim Executive Director

MEMORANDUM

TO: Melba McGee, Environmental Coordinator
Office of Legislative and Intergovernmental Affairs

FROM: Shari L. Bryant, Piedmont Region Coordinator *Shari L. Bryant*
Habitat Conservation Program

DATE: 9 November 2007

SUBJECT: Secondary and Cumulative Impact Mitigation Plan for Westside Wastewater Treatment Plant, City of High Point, Davidson and Guilford Counties, North Carolina, DENR Project No. 1414.

Biologists with the North Carolina Wildlife Resources Commission (NCWRC) have reviewed the subject document and we are familiar with the habitat values of the area. Our comments are provided in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), North Carolina Environmental Policy Act (G.S. 113A-1 through 113A-10; 1 NCAC 25), and North Carolina General Statutes (G.S. 113-131 et seq.).

The City of High Point (City) has developed a mitigation plan (Plan) to address the secondary and cumulative impacts for the Westside Wastewater Treatment Plant (WWTP) service area. The WWTP is being evaluated for future expansion, and associated outfall replacements and repairs are ongoing to comply with a Special Order by Consent. The Plan uses qualitative analyses of available data and literature to determine whether impacts to a given resource may occur. The Plan outlines mitigation strategies to address impacts identified in the analysis. The Plan is considered to be applicable for 10 years from the finalization date. At that point, the Plan will be re-evaluated and adopted or amended, if necessary.

The service area lies within the Yadkin-Pee Dee River basin. Payne Creek, Rich Fork, Kennedy Mill Creek and Cuddybum Creek flow through the service area. Rich Fork is listed as impaired. The cause for impairment is low dissolved oxygen, fecal coliform, and impaired biological integrity. In addition, the Yadkin-Pee Dee River Basinwide Water Quality Plan (2003) states the majority of the waters within the subbasin have some level of impact to water quality and many streams are impaired by point and non-point source pollution. There are records for the federal species of concern and state special concern Eastern small-footed myotis (*Myotis leibii*) and the state special concern Greensboro burrowing crayfish (*Cambarus catagius*) within the service area.

We appreciate the City's effort to develop a comprehensive document that identifies strategies to minimize secondary and cumulative impacts. The Plan addresses environmental concerns related to open

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DENR Project No. 1414

space, water, wastewater, transportation and stormwater. The Plan states ordinances preserve open space, protect floodplain and riparian buffers, steep slopes and maintain water quality through erosion and sediment control and stormwater programs.

We offer the following comments and recommendations regarding the Plan:

- Section 1.1 SCI Mitigation Plan Process (p.1): The Plan states for a given infrastructure project, NCDENR may determine the programs described in the document are insufficient to address the SCI of that individual project. In this case, the document will still be used to meet SEPA requirements, but additional requirements could be placed in the specific project's permit conditions. In addition, this Plan is to be considered applicable for ten years from the finalization date. At that point, the Plan will be re-evaluated and adopted or amended if necessary. While we are not opposed to the Plan being valid for 10 years, we feel periodic reports (e.g., biennial) should be submitted to document whether any additions, deletions, or changes have occurred to infrastructure projects or the strategies (e.g., ordinances related to riparian buffers, stormwater management, or floodplain protection) detailed in the Plan. In addition, there should be a provision that allows the Plan to be re-evaluated and updated at any time if significant changes in aquatic or terrestrial wildlife populations are documented. Significant changes may include, but are not limited to, the listing or change in listing (e.g., from threatened to endangered) of a species; significant declines (e.g., numbers or health) in known populations; or significant changes in habitat (e.g., water quality) that could be detrimental to aquatic and terrestrial wildlife resources.
- Section 1.2 Project Service Area (p. 2): The Plan states future development within the Service Area that will use the sewer infrastructure may be incorporated into the City of High Point. If the entire service area is not within the City's jurisdiction and it is possible for water or sewer infrastructure to be extended to areas outside the City without first being incorporated into the City, then the strategies (i.e., riparian buffer and floodplain protection, stormwater management, sediment and erosion control) for the overseeing jurisdiction (e.g., Davidson County) in which this development occurs need to be detailed in this Plan.
- Section 2.1.2 Future Wastewater System (p. 3): The Plan states no additional major outfalls or interceptors are planned for the Service Area. It is unclear whether this implies only within the next 10 years, the time frame to which this Plan applies. It is also unclear whether there are any proposed new pump stations or upgrades to pump stations or outfalls/interceptors that might facilitate growth. A table or list of proposed new wastewater infrastructure or improvements and the expected date of construction would be helpful information. Again, if the entire Service Area is not within the City's jurisdiction, and there are proposed sewer infrastructure projects by other jurisdictions, these should be listed with the projected date of construction and the strategies (i.e., riparian buffer and floodplain protection, stormwater management, sediment and erosion control) that would be applied to these areas.
- Section 2.2.2 Future Water System (p. 4): The Plan states no additional water lines are proposed or currently being built. Again, it is unclear whether this implies only within the next 10 years, the time frame to which this Plan applies. Also, according to Figure 3, Davidson Water has several water mains within the service area. Discussion on plans for water system expansions within the Service Area by Davidson Water over the next 10 years should be included in this section. If Davidson Water proposes expansion of the water infrastructure within the service area, then the strategies (i.e., riparian buffer and floodplain protection, stormwater management, sediment and erosion control) that would be applied to areas need to be detailed in the Plan. A table or list of proposed new wastewater infrastructure or improvements and the expected date of

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SCI Mitigation Plan - High Point
DENR Project No. 1414

construction would be helpful information.

- Figure 8, Land Use Plan: The legend does not describe what each of the colors on the figure represent.
- Appendix B, Scoping comments: Portions of DWR and NCWRC scoping comments are missing from the document.

We are encouraged by the City's adoption of the strategies (or measures) detailed in the Plan and will support these as an appropriate starting point. Although these measures often exceed those stipulated by state and federal programs, we are concerned that as increased development occurs throughout the service area, continued degradation in area streams may occur without the implementation of the more extensive measures described in NCWRC's *Guidance Memorandum to Address and Mitigate Secondary and Cumulative Impacts to Aquatic and Terrestrial Wildlife Resources and Water Quality* (August 2002; http://www.ncwildlife.org/pg07_WildlifeSpeciesCon/pg7c3_impacts.pdf)

We offer the following comments and recommendations regarding the measures detailed in the Plan:

- Section 5.3 Land Use (p. 19) and Section 6.2.1 Zoning Ordinance (p. 32): The City references the Northeast Davidson Area Plan and provides examples of the City's implementation of this process in Appendix C. Section 6.2.1 lists the standard conditions that have been applied to all subdivisions, and Appendix C shows a table of developments that appear to have been reviewed through this process. In the table, there are boxes for stream buffers, floodplain protection, steep slope protection and common area open space. The boxes only indicate whether these are present (e.g., yes). Please clarify if the stream buffers, floodplain protection, steep slope protection and common area open space that are detailed for the Northeast Davidson Area Plan are or will be the same as the strategies described in this Plan. If these are different, please provide a detailed description of each strategy.
- Section 5.10 303(d) Listed Streams (p. 23): Rich Fork is listed as an impaired stream. The Plan states it would be difficult to attain a healthy aquatic community in Rich Fork, even with no future development. The City is upgrading and repairing the sewer outfalls in the Rich Fork watershed which may improve water quality; however, increases in runoff may further degrade these streams. This is a situation where existing strategies or measures apparently were not protective of the stream. As stated above, we are concerned that continued degradation in area streams may occur without the implementation of more extensive measures. We encourage the City to monitor the effectiveness of the strategies detailed in this Plan. If continued degradation of area streams is observed, then we encourage the City to take action to minimize these impacts through the adoption of more protective strategies or measures.
- Section 6.0 Mitigation for Secondary and Cumulative Impacts (p. 26): The Plan states the ordinances preserve open space. It does not appear that an open space ordinance is summarized in this section. If preservation of open space is encompassed within other ordinances (e.g., riparian buffer), this should be stated. If there is a separate ordinance for preservation of open space, this should be summarized in this section.
- Section 6.2.3.1 Watershed Protection, Stream Buffers (p. 33): The City proposes 50-foot riparian buffers for perennial and intermittent streams for low density development and 50-foot buffers for intermittent streams and 100-foot buffers for perennial streams. Zones 1 and 2 (first 30 and 20 feet) must be undisturbed. Zone 3 (50-foot high density buffer) must remain vegetated. Low density development and high density development should be defined (e.g., dwellings per acre or

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built-upon-area). We are pleased to see that no new lots will be allowed within the buffers. Also, we encourage the Town to increase buffer widths and undisturbed area wherever possible.

- Section 6.2.3.1 Watershed Protection, Steep Slope Protection (p. 33): Clarify whether the additional buffer requirements are added to the 50-foot (e.g., 15-25% slope would be an additional 15-foot and a total 65 foot riparian buffer), whether the additional buffer (e.g., 15-foot) to Zone 2 must be undisturbed, and whether the steep slope protection applies to both perennial and intermittent streams.
- Section 6.2.3.1 Watershed Protection, Stormwater Requirements (p. 33): Although no information was provided regarding current and future impervious surface totals within the service area, the Wake County Watershed Management Plan Task Force correlation analysis of impervious surfaces to watershed classification found that watersheds of unimpaired streams averaged 8% imperviousness, impacted streams averaged 11%, and degraded streams averaged 24% (<http://projects.ch2m.com/WakeCounty/>). While we are pleased to see implementation of the alternative stormwater measures described for <24% BUA, we question if these are sufficient to protect streams within the service area; particularly for developments that exceed 10% impervious surface.
- Section 6.2.5 Flood Damage Prevention: The City allows development in the floodplain provided the structure is flood proofed and the finished floor is elevated 1-foot above base flood elevation. It was stated that the City's flood damage prevention ordinance complies with FEMA regulations. FEMA regulations are designed to protect property owners from damage and to allow them to purchase insurance protection against losses from flooding, not for the protection of natural resources. Undeveloped floodplains strongly influence aquatic systems and provide many important functions. We encourage the City to consider prohibiting development within the 100-year floodplain throughout the service area.

Again, we are encouraged by the City's adoption of the strategies (or measures) detailed in the Plan and will support these as an appropriate starting point. However, we feel there should be clarification regarding the jurisdictional authorities within the Service Area. If the City does not have jurisdiction over the entire Service Area, then the other jurisdictions should be identified and the strategies each of these implement for riparian buffer and floodplain protection, stormwater management, and sedimentation and erosion control should be summarized. This is particularly important if City water and sewer infrastructure can be extended to areas outside of the City limits where the strategies described in this Plan may not be applicable. Thank you for the opportunity to comment on this Plan. If we can be of further assistance, please contact our office at (336) 449-7625.



North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary

Post-It® Fax Note	7671	Date	01/14/08	# of pages	3
To	Vickie Miller	From	Hannah Stallings		
Co./Dept.		Co.			
Phone #		Phone #			
Fax #	785-1187	Fax #			

MEMORANDUM

TO: Hannah Stallings
Division of Water Quality

FROM: Melba McGee
Environmental Projects Officer

SUBJECT: #1414 Proposed Westside Wastewater Treatment Plant, City of High Point

DATE: January 14, 2008

The attached comments were received by this office after the response due date. These comments should be forwarded to the applicant and made a part of our previous comment package.

Thank you for the opportunity to respond.

Attachment



North Carolina Department of Environment and Natural Resources
Division of Water Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary
John Morris, Director

January 11, 2008

Melba McGee
Environmental Coordinator
North Carolina Department of Environment and Natural Resources
Office of Legislative & Intergovernmental Affairs
1611 Mail Service Center
Raleigh, NC 27699-1611

RE: Division of Water Resources' Comments on Proposed Westside Wastewater Treatment Plant - City of High Point

The Division of Water Resources (DWR) has reviewed the Secondary and Cumulative Impacts Mitigation Plan for the Westside Wastewater Treatment Plant submitted November 1, 2007 regarding the proposed Westside Wastewater Treatment Plant.

The proposed project as described may involve interbasin transfer (IBT) of surface water. DWR will need additional information to determine whether IBT certification is needed. High Point submitted in 2003 water balance tables and a grandfathered capacity worksheet. Updated water balance tables and an updated grandfathered capacity worksheet should be prepared and submitted to DWR.

The Piedmont Triad Regional Water Authority (PTRWA) holds an interbasin transfer certificate to transfer up to 30.5 million gallons per day (mgd) from the Deep River Basin to the Haw and Yadkin River Basins for the operation of Randleman Lake. It is not clear to me whether the City of High Point is a member of the PTRWA. Please clarify whether the interbasin transfer that occurs under the proposed project is covered under this IBT certificate. The above mentioned updated worksheets will help to confirm and document High Point's compliance with IBT law.

Some general comments regarding IBT:

1. The statute governing the interbasin transfer of surface waters, Statute 143-215.22I, mandates that no person, without first securing a certificate from the Environmental Management Commission (EMC), may initiate a transfer of 2,000,000 gallons or more per day (max day transfer) from one river basin to another. The IBT statute can be found at:

http://www.ncwater.org/Rules_Policies_and_Regulations/Regulation/H820v4.pdf

2. A certificate is not required to transfer water from one river basin to another up to the full capacity of a facility to transfer water if the facility was existing or under construction on or before July 1, 1993. Worksheets for determining the grandfathered transfer capacity and preparing water balance tables can be found at:

http://www.ncwater.org/Water_Supply_Planning/Local_Water_Supply_Plan/docs/ibt_worksheets.pdf

3. In determining whether or not an IBT certificate would be required for a proposed action, the Administrative Code for Interbasin Transfer should be considered. This code may be found at:

http://www.ncwater.org/Rules_Policies_and_Regulations/Regulation/TA0500.pdf

According to the administrative code, the following are not considered transfers:

- (1) The discharge point is situated upstream of the withdrawal point such that the water discharged will naturally flow past the withdrawal point, and
 - (2) The discharge point is situated downstream of the withdrawal point such that water flowing past the withdrawal point will naturally flow past the discharge point.
4. The process of obtaining an IBT certificate and the criteria used by the EMC to make its determination are explained in the IBT statute. The petition process can take from 18 months to more than 5 years, and it is not possible to know what determination the EMC may make.

Please contact me with questions at (919) 715-0389 or phil.fragapane@ncmail.net.



Phil Fragapane, PE
River Basin Management Section
NC Division of Water Resources

cc: Linwood Peele, and Woodrow Yonts, NCDWR



Michael F. Easley, Governor

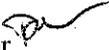
William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Coleen H. Sullins, Director
Division of Water Quality

January 31, 2008

MEMORANDUM

TO: Vickie Miller
HDR

THRU: Dianne Reid, Supervisor 
Basinwide Planning Unit and SEPA Program

FROM: Hannah Stallings, SEPA Coordinator 
Basinwide Planning Unit and SEPA Program

SUBJECT: City of High Point
Secondary and Cumulative Impacts Mitigation Plan (SCIMP) for
The Westside Wastewater Treatment Plant Service Area

The Division of Water Quality (DWQ) has reviewed the subject document and has the following concerns and comments:

1. A Memorandum of Agreement (MOA) will be necessary among all parties to ensure understanding of the shared and reciprocal responsibilities under the SCIMP. DWQ will be preparing one for review and agreement once the State Clearinghouse (SCH) review is complete.
2. Because the SCIMP will undergo an SCH review that is typical of an Environmental Impact Statement, it will be necessary for the City to hold a Public Hearing on the subject document prior to its approval, with notice of the hearing provided in local media and the Environmental Bulletin.
3. DWQ will prepare a Record of Decision (ROD) for this Plan once all agency concerns are addressed. The ROD and the SCIMP will then be submitted to the SCH for a 45-day review period. Once any comments generated in the SCH review are resolved, the MOA will be signed and the SCIMP will be a binding document.
4. Please include all referenced documents, such as local ordinances and stormwater plans, in the Appendix for easy reference. CD copies are acceptable.
5. Page 1 – Introduction: Please change the department’s name to “North Carolina Department of **Environment and Natural Resources.**”
6. Section I.1
 - a. Please amend the first sentence to reflect that the Service Area is likely to change/grow with the addition of sewer lines.
 - b. In the second paragraph, please note that the U.S. Fish and Wildlife Service (USFWS) may also determine that the secondary and cumulative impacts (SCI) of a project may adversely affect species protected under Section 7 of the Endangered Species Act.
The document needs to indicate that while most impacts on water resources associated with installing water, wastewater, and transportation infrastructure are direct impacts, there are also cumulative direct impacts from previous and other future installation/rehabilitation projects. Because the City does not have access to all of the data to review for potential impact(s) to protected species for Westside Service Area, it should commit to a review by USFWS for cumulative direct impact(s) in future EAs and EISs.

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For future infrastructure projects that may impact listed species, the Town should work with USFWS to determine whether surveys are needed to evaluate potential impacts. Please contact USFWS officials with its Asheville Field Office (828-258-3939) for occurrences in Forsyth and Randolph Counties and in its Raleigh Field Office (919-856-4520) for occurrences in Davidson and Guildford Counties.

Please be aware that the USFWS may require amendments to this Plan should new populations of protected species occur within the Service Area.

7. Page 2 states "Future development within the Service Area that will utilize the sewer infrastructure may be incorporated into the City of High Point jurisdiction." Page 32 states that "The City requires that all development tying onto their wastewater infrastructure must go through [its] administrative approval process" to ensure that City ordinances "will apply to all development within the Service Area." Please clarify whether new connections to the WWTP system will be subject to this Plan.
8. Section 2.1.1
 - a. Please state into which water body the WWTP discharges. Also, if the WWTP has/plans a reuse program, please include text and maps on these areas.
 - b. Please state the permitted NPDES discharge volume and the current average daily flow at the WWTP.
 - c. The document mentions several trademarked items. Per G.S. 133-3, specifying sole sources for materials is not allowed in environmental documents to permit a fair bidding process. So that future projects and policy are not affected by the contents of this Plan, please remove these references from the text and used generalized descriptions of the processes instead.
 - d. Please provide information on the collection system that feeds the WWTP, including lengths and diameters of gravity sewer and force mains and capacities of pump stations.
9. Section 2.1.2 – Please provide a map of the future Service Area.
10. Please add a section 2.1.3 to detail any reclaimed water program plans.
11. Section 2.2.1
 - a. Please name the water treatment plant's (WTP) raw water source.
 - b. How will the City control SCI related to the provision of potable water, especially in those areas where this service is not in its jurisdiction?
 - c. From which aquifer do the wells draw?
12. Section 3.0 needs to address the goals/purposes of the water, wastewater, and transportation projects.
13. Section 4.0 needs to address the SCI of the water, wastewater, and transportation system expansions.
14. Section 4.1
 - a. Please define what flood zones A and AE designate.
 - b. Please label Cuddybum Creek on Figure 5.
15. Section 4.7 – Please list those properties that are currently on the Study List for eligibility or have been Determined Eligible for the National Register. As the SCIMP is a planning document, it is wise to include these properties in the SCIMP and consider protection for these sites since they could be placed on the Register in the future.
16. Section 4.10
 - a. Please include the 14-digit HUC code for the surface waters in table 5.
 - b. Please discuss the quality of groundwater in the area, including any specific problems with contaminants.
17. Sections 4.13 and 4.14 need discussion of plant species in the Service Area.
18. Section 5.3
 - a. What is the planning horizon for The Northeast Davidson Area Plan?
 - b. Please include discussion of the environmental impacts of changes in land use, such as increased impervious surface and increased runoff to streams.
19. Section 5.4 – Please state what the SCI are that "can result from utility maintenance activities and land use changes along stream channels where many wetlands occur in the Service Area."

20. Section 5.7 – Many types of projects require review by the State Historic Preservation Office (SHPO), not just those involving 404/401 Permits. Please visit its website (<http://www.hpo.dcr.state.nc.us/er.htm>) for full listing of projects types requiring SHPO consultation.
21. Section 5.8 – Did the EAC Ozone Action Plan enable the area to achieve attainment status? If not, are there any other/new plans to improve air quality?
22. The first sentence of section 6.0 is incomplete.
23. Section 6.1 – Please consider whether discussion of the City’s efforts on EPA’s 2000 *Compliance and Enforcement Strategy Addressing Combined Sewer Overflows and Sanitary Sewer Overflows* should be added to Table 8.
24. Section 6.2.3.1
 - a. The acronym LID typically stands for “low impact development.” Amend as necessary.
 - b. Please clarify whether new lots are not allowed that impact any portion of a stream buffer or if new lots are not allowed that would totally be within the buffer area.
25. Section 6.2.5
 - a. Please specify the section in which the Conditional Use Permit process is explained in the SCIMP.
 - b. Is development allowed in a floodway fringe that exists in a buffer zone?
26. Section 7.0 – Table 9 – Please include information for local ordinances relating to Archaeological/Historical Sites.

Please contact me at 733-5083, ext. 555, if I can be of any additional help.
Thank you.

Cc: Steve Tedder – WSRO

Miller, Vickie M

From: Allen_Ratzlaff@fws.gov
Sent: Monday, March 10, 2008 10:25 AM
To: Miller, Vickie M
Cc: bryants5@earthlink.net
Subject: RE: High Point WWTP SCIMP

Vicki,

I received the CD you sent with the subject mitigation plan on February 13, 2008. Because of the delays in receiving the plan and in the interest of expediting our comments, I thought I would just send you a brief e-mail of our concerns.

The questions and concerns we had with the document were previously expressed in the North Carolina Wildlife Resources Commission's letter of November 9, 2007 and rather than repeat their comments, we will just agree with them. We do want to emphasize that we think there needs to be more floodplain protection than afforded in the SCIMP. We strongly recommend that no development be allowed within the 100-year floodplain.

Please feel free to contact me if you need any additional information or have any questions.

Allen Ratzlaff
USFWS
160 Zillicoa St.
Asheville, NC 28801

828/258-3939 x229



North Carolina
Department of Administration

Michael F. Easley, Governor

Britt Cobb, Secretary

March 23, 2007

Ms. Vickie Miller
HDR Engineering, Inc.
3733 National Drive
Suite 207
Raleigh NC 27612-4845

Dear Ms. Miller:

Subject: Scoping - Proposal to make improvements to the Westside Wastewater Treatment Plant (WWTP) located in Thomasville, North Carolina

The N. C. State Clearinghouse has received the above project for intergovernmental review. This project has been assigned State Application Number 07-E-4300-0308. Please use this number with all inquiries or correspondence with this office.

Review of this project should be completed on or before 04/23/2007. Should you have any questions, please call (919)807-2425.

Sincerely,

A handwritten signature in cursive script that reads "Chrys Baggett".

Ms. Chrys Baggett
Environmental Policy Act Coordinator

Mailing Address:
1301 Mail Service Center
Raleigh, NC 27699-1301

Telephone: (919)807-2425
Fax (919)733-9571
State Courier #51-01-00
e-mail: Chrys.Baggett@ncmail.net

Location Address:
116 West Jones Street
Raleigh, North Carolina



North Carolina Department of Administration

Michael F. Easley, Governor

Britt Cobb, Secretary

April 25, 2007

Ms. Vickie Miller
HDR Engineering, Inc.
3733 National Drive
Suite 207
Raleigh, NC 27612-4845

Dear Ms. Miller:

Re: SCH File # 07-E-4300-0308; Scoping; Proposal to make improvements to the Westside Wastewater Treatment Plant (WWTP) located in Thomasville, North Carolina

The above referenced environmental impact information has been reviewed through the State Clearinghouse under the provisions of the North Carolina Environmental Policy Act.

Attached to this letter are comments made by agencies reviewing this document which identify issues to be addressed in the environmental review document. The appropriate document should be forwarded to the State Clearinghouse for compliance with State Environmental Policy Act. Should you have any questions, please do not hesitate to call me at 807-2425.

Sincerely,

A handwritten signature in cursive script that reads "Chrys Baggett" followed by a date "4/25/07".

Ms. Chrys Baggett
Environmental Policy Act Coordinator

Attachments

cc: Region G

Mailing Address:
1301 Mail Service Center
Raleigh, NC 27699-1301

Telephone: (919)807-2425
Fax (919)733-9571
State Courier #51-01-00
e-mail Chrys.Baggett@ncmail.net

Location Address:
116 West Jones Street
Raleigh, North Carolina



North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary

MEMORANDUM

TO: Chrys Baggett
State Clearinghouse

FROM: Melba McGee *pm*
Environmental Review Coordinator

SUBJECT: 07-0308 Scoping, Improvements to the Westside Wastewater
Treatment Plant located in Thomasville

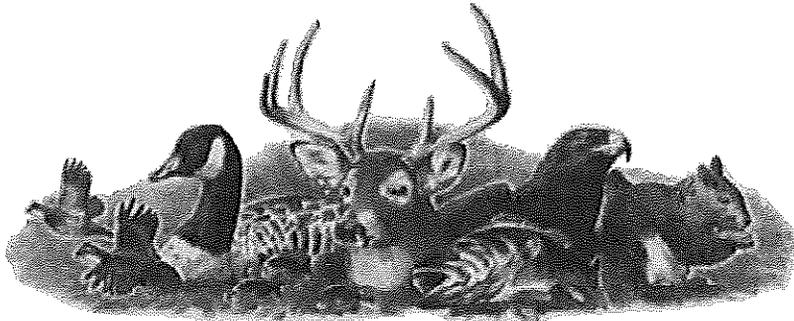
DATE: April 23, 2007



The Department of Environment and Natural Resources has reviewed the proposed information. The attached comments are for the applicant's information.

Thank you for the opportunity to review.

Attachments



North Carolina Wildlife Resources Commission

Richard B. Hamilton, Executive Director

MEMORANDUM

TO: Melba McGee, Environmental Coordinator
Office of Legislative and Intergovernmental Affairs

FROM: *Shari L. Bryant*
Shari L. Bryant, Piedmont Region Coordinator
Habitat Conservation Program

DATE: 17 April 2007

SUBJECT: Scoping for Secondary and Cumulative Impact Mitigation Plan for Westside Wastewater Treatment Plant and Kool Pool Outfall, City of High Point, Davidson and Guilford Counties, North Carolina, DENR Project No. 07-0308.



Biologists with the North Carolina Wildlife Resources Commission (NCWRC) have reviewed the subject document and we are familiar with the habitat values of the area. Our comments are provided in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the North Carolina Environmental Policy Act (G.S. 113A-1 through 113A-10; 1 NCAC 25), and North Carolina General Statutes (G.S. 113-131 et seq.).

The City of High Point proposes to develop a mitigation plan to address the secondary and cumulative impacts for the Westside Wastewater Treatment Plant (WWTP) and associated outfall repairs, replacements and extensions in Davidson and Guilford Counties. The proposed WWTP improvements and wastewater line replacements would address problems related to the aging sewer line outfalls, the increased need for capacity at the plant, and to comply with a Special Order by Consent (SOC) issued by the Division of Water Quality. This mitigation plan will be cited in future environmental documents developed to address projects within the WWTP service area.

The service area lies within the Yadkin-Pee Dee River basin. There are records for the federal species of concern and state special concern Eastern small-footed myotis (*Myotis leibii*) and the state special concern Greensboro burrowing crayfish (*Cambarus catagius*) within the service area.

We are supportive of the development of a Secondary and Cumulative Impact (SCI) Mitigation Plan for the service area. A SCI Mitigation Plan should result in a more proactive approach to mitigation for SCI and SCI issues will be addressed within a single document and will not need to be reproduced for each environmental document. The time frame the SCI Mitigation Plan (Plan) is valid should be based on the infrastructure projects and mitigation measures covered within the Plan. While we are not opposed to the Plan being valid for several years, periodic reports should be submitted to document any additions, deletions, or changes that may occur to infrastructure projects or mitigation measures detailed in the Plan.

17 April 2007
Scoping – High Point SCI Mitigation Plan
Project No. 07-0308

In addition, there should be a provision that allows the Plan to be re-evaluated and updated if significant changes in aquatic or terrestrial wildlife populations are observed. Significant changes may include, but are not limited to, the listing or change in listing (e.g., from threatened to endangered) of a species; significant declines (e.g., numbers or health) in known populations; or significant changes in habitat (e.g., water quality) that could be detrimental to aquatic and terrestrial wildlife resources.

The Plan should include the following information:

- A detailed listing of all existing and future infrastructure projects (i.e., water, wastewater, water reuse, and transportation) within the service area. Figures detailing the location of existing and future infrastructure should be included.
- Detailed information on existing and future natural areas (e.g., parks or greenways) within the service area. Figures detailing the location of these natural areas should be included.
- Three maps detailing environmental features, existing land use, and future land use within the service area. Examples of these maps can be found in the Town of Cary's Secondary and Cumulative Impact Master Mitigation Plan, Figures 4-1, 4-2, and 5-1. See <http://www.townofcary.org/depts/pwdept/scimastermitigation.htm>.
- Two tables detailing land use type (e.g., commercial) for existing and future land use. For each land use type include total square miles of the service area, percent of the service area, percent imperviousness, and impervious square miles. Examples of these tables can be found in the Town of Cary's Secondary and Cumulative Impact Master Mitigation Plan, Tables 4-2 and 5-1. See <http://www.townofcary.org/depts/pwdept/scimastermitigation.htm>.
- Information on the average percent imperviousness for the existing and future service area. Discuss the impact increased impervious surface will have on groundwater recharge and stream baseflow.
- A listing of all streams within the service area and the Division of Water Quality (DWQ) classification for each stream. Also, note whether any streams are on the 303(d) list of impaired waters. Include any proposed measures to improve water quality in impaired streams.
- NC GAP habitat land cover for the service area. The land use maps and NC GAP habitat land cover will be very useful in determining the impact that changes in land use will have on aquatic and terrestrial wildlife resources.
- Detailed information regarding current measures (e.g., state/federal regulations and/or local ordinances) and any proposed measures to mitigate secondary and cumulative impacts facilitated by additional development. We are particularly interested in measures related to riparian buffer, floodplain and open space protection; impervious surface limits and stormwater management; and sediment and erosion control.

We offer the following recommendations to help address secondary and cumulative impacts and to reduce impacts to aquatic and terrestrial wildlife resources. These recommendations are excerpted from NCWRC's *Guidance Memorandum to Address and Mitigate Secondary and Cumulative Impacts to Aquatic and Terrestrial Wildlife Resources and Water Quality* (August 2002). More information and the references cited for each recommendation can be found in the document which is located on the web at: http://www.ncwildlife.org/pg07_WildlifeSpeciesCon/pg7c3_impacts.pdf.

1. We recommend the maintenance or establishment of a minimum 100-foot native forested buffer along each side of perennial streams and 50-foot native forested buffer along each side of intermittent

17 April 2007

Scoping – High Point SCI Mitigation Plan

Project No. 07-0308

streams and wetlands throughout the present and future service areas or the entire municipal jurisdiction (EPA 2000; Stewart et al. 2000). We additionally encourage the implementation of buffers on ephemeral streams due to the important functions that they provide as headwater streams (Alexander et al. 2000; Peterson et al. 2001). Buffers should be measured horizontally from the edge of the stream bank (Knutson and Naef 1997), which may result in wider buffers on higher gradients, and must be provided over the entire length of stream, including headwater streams. Further, we recommend leaving 30% of the development area as greenspace, which would include buffers and wetlands and ensure that the greenspace is connected to natural resources.

Wide, contiguous riparian buffers have greater and more flexible potential than other options to maintain biological integrity (Horner et al. 1999) and could ameliorate many ecological issues related to land use and environmental quality (Naiman et al. 1993). As expansion of developed areas continues into the watershed, wildlife habitat can change, become fragmented, and even disappear. Riparian buffers provide travel corridors and habitat areas for wildlife displaced by development. In addition, riparian buffers serve to protect water quality by stabilizing stream banks, filtering capacity of stormwater runoff, and provide habitat for aquatic and fisheries resources.

2. We recommend that delineation of streams be conducted for the municipal service area according to U. S. Army Corps of Engineers (USACOE) or N. C. Division of Water Quality (NCDWQ) methodology. This information can be found at <http://h2o.enr.state.nc.us/nwetlands/strmfrm.html>. U. S. Geological Survey (USGS) maps underestimate the extent of streams. Recent research has shown that USGS maps can underestimate total stream length in the Piedmont of North Carolina by 25 % (Gregory et al. in press).
3. We recommend that sewer lines, water lines, and other utility infrastructure be kept out of riparian buffer areas (Knutson and Naef 1997; and references therein). All utility crossings should be kept to a minimum, which includes careful routing design and the combination of utility crossings into the same right-of-way (provided there is not a safety issue). Discontiguous buffer segments can impair riparian functions disproportionate to the relative occurrence of the breaks in the buffer (May and Horner 2000; Van Sickle 2000), and multiple crossings can result in cumulative impacts. The directional bore (installation of utilities beneath the riverbed, avoiding impacts to the stream and buffer) stream crossing method should be used for utility crossings wherever practicable, and the open cut stream crossing method should only be used when water level is low and stream flow is minimal. Manholes or similar access structures should not be allowed within buffer areas. Stream crossings should be near perpendicular (75° to 105°) to stream flow and should be monitored at least every three months for maintenance needs during the first 24 months of the project and then annually thereafter. Sewer lines associated with crossing areas should be maintained and operated at all times to prevent the discharge to land or surface waters. We recommend a minimum 50–100 feet setback on all streams, lakes, and wetlands for these structures, which falls in line with the recommended buffer widths. In circumstances where minimum setbacks cannot be attained, sewer lines shall be constructed of ductile iron or other substance of equal durability. Further, pesticides (including insecticides and herbicides) should not be used for maintenance of rights-of-way within 100 feet of perennial streams and 50 feet of intermittent streams, or within floodplains and wetlands associated with these streams.
4. Avoid the removal of large trees at the edges of construction corridors. Re-seed disturbed areas with seed mixtures that are beneficial to wildlife. Avoid fescue based mixtures because fescue is invasive and provides little benefit to wildlife. Native, annual small grains appropriate for the season are preferred and recommended (See http://h2o.enr.state.nc.us/esb/Wetplant/Wetland_Plants.htm). Where feasible, use woody debris and logs from corridor clearing to establish brush piles and downed logs adjacent to the cleared right-of-way to improve habitat for wildlife. Allowing the corridor area

17 April 2007

Scoping – High Point SCI Mitigation Plan

Project No. 07-0308

to revegetate into a brush/scrub habitat would maximize benefits to wildlife. For areas adjacent to residential areas, a native shrub/grass option may also be beneficial. Minimize corridor maintenance and prohibit mowing between April 1 and October 1 to minimize impacts to nesting wildlife. We suggest a maintenance schedule that incorporates only a portion of the area—one third of the area, for example—each year instead of the entire project every 3 or 4 years. Herbicides and pesticides should never be used in wetland areas or near streams, as described above in item 3.

5. We recommend that the local governments prohibit commercial or residential development within the 100-year floodplain. Undeveloped floodplains strongly influence aquatic systems, support a combination of riparian and upland vegetation used by aquatic and terrestrial wildlife, supply a rich source of food to aquatic communities (Junk et al. 1989), and provide an important sediment trapping function (Palik et al. 2000). The filling of floodplains increases the potential for flooding of adjacent properties and interferes with the natural hydrologic process of the waterways. It also disrupts the continuity of migration corridors for wildlife. Instead, we recommend that developers set aside a portion of the land to be developed as green space and concentrate these areas along the streams and rivers (see Item 1 above). In addition we encourage “infill” (new development in unused or underutilized land in existing urban areas) development in urbanized portions of the jurisdiction and recommend the site practices for infill and brownfield development issued by the U. S. Environmental Protection Agency (EPA) (<http://www.epa.gov>) and the Center for Watershed Protection (<http://www.cwp.org/>). Floodplain maps may need to be updated to reflect development of the watershed. Floodplain remapping studies in Charlotte showed that buildout conditions would result in a floodplain width change from an average of 429 feet to 611 feet (<http://www.charmeck.org/Departments/LUESA/Water+and+Land+Resources/Programs/Floodplains/Flood+Maps.htm>).
6. We recommend that the local government limit impervious surfaces to less than 10% of the watershed (Schueler 1994; Arnold and Gibbons 1996; Doll et al. 2000; Mallin et al. 2000; May and Horner 2000; Stewart et al. 2000; Paul and Meyer 2001). The construction of roadways and other impervious surfaces in new neighborhoods can produce short-term direct impacts as well as long-term cumulative effects. Multiple studies have shown that stream degradation occurs at approximately 10% coverage by impervious surfaces (Schueler 1994; Arnold and Gibbons 1996; Doll et al. 2000; Mallin et al. 2000; May and Horner 2000; Stewart et al. 2000; Paul and Meyer 2001). Likewise, the Wake County Watershed Management Plan Task Force performed a correlation analysis of impervious surfaces to watershed classification based on water quality data, and they found that watersheds of unimpaired streams averaged 8% imperviousness, impacted streams averaged 11%, and degraded streams averaged 24% (<http://projects.ch2m.com/WakeCounty/>).

We also recommend that the local government provide for sufficient open space to effectively reduce impervious surface so that predevelopment hydrographic conditions are maintained, limit curb and gutter in new developments, and prevent direct discharges of stormwater into streams. To achieve no net change in the hydrology of the watershed, we recommend installation of grassed swales in place of curb and gutter and on-site stormwater management (i.e. bioretention areas or other attenuation measures). These designs often cost less to install (Kwon 2000) and significantly reduce environmental impacts from residential development. Information regarding financing stormwater management can be found at <http://stormwaterfinance.urbancenter.iupui.edu/>.

Many of these recommendations have been applied in Maryland to protect the Chesapeake Bay from water quality degradation (MDE 2000). Suggested examples to accomplish the <10% impervious goal are using conventional designs at a level of <10% imperviousness or using conservation clusters with higher densities, with dedicated open space and other stormwater control measures to mimic the hydrograph consistent with an impervious coverage of less than 10%. Reduction of road widths is

one method to reduce overall impervious surface coverage. The N. C. Department of Transportation (NCDOT) has issued road guidelines that allow for the reduction in street widths when compared to standard secondary road guidelines. In addition, there are site planning practices that, when incorporated with the above mentioned road building guideline, can further reduce the amount of impervious surface within a site (see recommendations in the document Better Site Design (Center for Watershed Protection; <http://www.cwp.org/>).

7. Use bridges for all permanent roadway crossings of streams and associated wetlands to eliminate the need to fill and culvert, where practicable. If culverts must be used, the culvert should be designed to allow passage of aquatic organisms. Generally, this means that the culvert or pipe invert is buried at least one foot below the natural streambed. If multiple cells are required, the second and/or third cells should be placed so that their bottoms are at stream bankfull stage. This will allow sufficient water depth in the culvert or pipe during normal flows to accommodate movements of aquatic organisms. If culverts are long and sufficient slope exists, baffle systems are recommended to trap gravel and provide resting areas for fish and other aquatic organisms. If multiple pipes or cells are used, at least one pipe or box should be designed to remain dry during normal flows to allow for wildlife passage. In addition, culverts or pipes should be situated so that no channel realignment or widening is required. Widening of the stream channel at the inlet or outlet of structures usually causes a decrease in water velocity causing sediment deposition that will require future maintenance. Finally, riprap should not be placed on the streambed.
8. We recommend that municipalities incorporate the elements listed below into their erosion and sediment control plans (see Brown and Caraco 2000 for additional information). Sediment is considered the most important cause of water pollution in the United States (Waters 1995), and construction is considered the most damaging phase of the development cycle to aquatic resources (Brown and Caraco 2000).
 - a) Minimize clearing and grading and only perform these operations in the context of an overall stream protection strategy.
 - b) Protect waterways by preventing clearing adjacent to waterways, and stabilize drainage ways.
 - c) Phase construction for larger construction sites (≥ 25 acres) to reduce the time and area that disturbed soils are exposed.
 - d) Stabilize soils as rapidly as possible (< 2 weeks) by establishing a grass or mulch cover.
 - e) Protect steep slopes, and avoid clearing or grading existing steep slopes as much as possible.
 - f) Establish appropriate perimeter controls at the edge of construction sites to retain or filter concentrated runoff from relatively short distances before it leaves the site.
 - g) Employ advanced settling devices that contain design features which include greater wet or dry storage volume, perforated risers, better internal geometry, use of baffles, skimmers and other outlet devices, gentler side-slopes, and multiple cell construction.
 - h) Implement a certified contractors program so that trained and experienced contractors are on-site.
 - i) Sedimentation impacts should be minimized by regular inspection of erosion control measures, and sediment control devices should be maintained in good and effective condition at all times. Erosion and sediment controls should be reassessed after storms. The incorrect installation of erosion control structures and those not properly maintained can result in sedimentation impacts to nearby streams and wetlands.

Thank you for the opportunity to provide input in the early planning stages for this project. If we can be of further assistance, please contact our office at (336) 449-7625.

ec: Corey Oakley, WRC



Michael F. Easley, Governor
William G. Ross Jr., Secretary
North Carolina Department of Environment and Natural Resources

Alan W. Klimek, P. E. Director
Division of Water Quality
Coleen H. Sullins, Deputy Director
Division of Water Quality

March 29, 2007

MEMORANDUM

TO: Melba McGee
Department of Environment and Natural Resources

FROM: Hannah Stallings
Division of Water Quality

SUBJECT: Davidson and Guilford Counties
Thomasville
SCIMP for Westside Wastewater Treatment Plant
DENR#07-0308; DWQ#13823

From previous experience with reviewing Master Mitigation Plans for secondary and cumulative Impacts, the following out line for the SCIMP for the Westside Wastewater Treatment Plant is as follows:

- **Background and Description of Wastewater Infrastructure Master Plans**
 - Existing Wastewater System
 - Future Wastewater System
 - Reclaimed Water – if the Westside service area has any such programs
- **Purpose of and Need for Proposed Infrastructure**
- **Description of Existing Environment in Planning Area –Just as would be done for a regular EA – use the Department of Administration’s *EA Guidance* in developing this section.**
 - Topography (including discussion of Floodplain impacts)
 - Soils
 - Land Use
 - Wetlands
 - Prime or Unique Agricultural Lands
 - Public Lands and Scenic, Recreational, and State Natural Areas
 - Areas of Archaeological or Historical Value
 - Air Quality
 - Noise Levels
 - Water Resources
 - Surface Water
 - Groundwater
 - Forest Resources

- Shellfish or Fish and their Habitats
- Wildlife and Natural Vegetation
 - Rare, Threatened, or Endangered Species
- Introduction of Toxic Substances
- **Description of Secondary and Cumulative Impacts Related to Projected Growth in the Planning Area** – Just as would be done for a regular EA – use the Department of Administration’s *EA Guidance* in developing this section.
 - Topography (including discussion of Floodplain impacts)
 - Soils
 - Land Use
 - Wetlands
 - Prime or Unique Agricultural Lands
 - Public Lands and Scenic, Recreational, and State Natural Areas
 - Areas of Archaeological or Historical Value
 - Air Quality
 - Noise Levels
 - Water Resources
 - Surface Water
 - Groundwater
 - Forest Resources
 - Shellfish or Fish and their Habitats
 - Wildlife and Natural Vegetation
 - Rare, Threatened, or Endangered Species
 - Introduction of Toxic Substances
- **Mitigation for Secondary and Cumulative Impacts** – This is simply a list of possible programs that would be used to mitigate for CSI in the Westside service area, which by no means is either inclusive or exclusive of the programs and policies that may be chosen for this section.
 - Summary of Federal and State Regulations and Programs
 - Endangered Species Act
 - Fish and Wildlife Coordination Act
 - Section 303(d) of the Clean Water Act
 - Sections 404/401 of the Clean Water Act
 - Protection of Wetlands, Executive Order 11990
 - Isolated Wetland Protection
 - Safe Drinking Water Act
 - Clean Air Act
 - Floodplain Management, Executive Order 11988
 - National Flood Insurance Program
 - NPDES Stormwater Regulations
 - Wild and Scenic Rivers Act
 - Archaeological Protection
 - Farmland Protection Policy Act
 - Sediment and Erosion Control
 - Sanitary Sewer Overflows
 - North Carolina Clean Water Management Trust Fund
 - North Carolina Ecosystem Enhancement Program (formerly Wetlands Restoration Program)
 - Groundwater Protection
 - Neuse River Basin Nutrient Sensitive Waters Rules
 - Water Supply Watershed Protection Program
 - Conservation Reserve Enhancement Program

- Miscellaneous Incentive Programs
- Local Regulations and Programs
- Town of Apex Comprehensive Plan
- Open Space Preservation
- Riparian Buffers and Floodplain Protection
- Water Supply Watershed Protection Regulations
- Erosion and Sediment Control
- Stormwater Programs and Impervious Surface Limitations
- Water Conservation
- Air Quality Protection
- Tree Protection Ordinance
- Sanitary Sewer Installation
- **Summary of Secondary and Cumulative Impacts and Mitigation** – The previous section would describe the steps that are being taken to protect the environment within the Westside WWTP service area. The goal for this section would be to provide a summary of the anticipated CSI to the resources in the area and the mitigation programs in place to protect them.
 - Topography (including discussion of Floodplain impacts)
 - Soils
 - Land Use
 - Wetlands
 - Prime or Unique Agricultural Lands
 - Public Lands and Scenic, Recreational, and State Natural Areas
 - Areas of Archaeological or Historical Value
 - Air Quality
 - Noise Levels
 - Water Resources
 - Surface Water
 - Groundwater
 - Forest Resources
 - Shellfish or Fish and their Habitats
 - Wildlife and Natural Vegetation
 - Rare, Threatened, or Endangered Species
 - Introduction of Toxic Substances
- **References**
- **Figures**
 - Westside WWTP Service Area
 - Existing Wastewater Infrastructure
 - Proposed Expansions of Westside WWTP Service Area
 - Environmental Features of Westside WWTP Service Area
 - Existing Land Use of Westside WWTP Service Area
 - National Wetland Inventory maps for Westside WWTP Service Area
 - Water Resources in the Westside WWTP Service Area
 - Future Land Use in the Westside WWTP Service Area

v

Please contact me at 733-5083, ext. 555, if I can be of any additional help in resolving these issues. Thank you.



North Carolina
Department of Environment and
Natural Resources

Michael F. Easley, Governor
William G. Ross Jr., Secretary



North Carolina
Division of Forest Resources

Wib L. Owen, Director

April 16, 2007

MEMORANDUM

TO: Melba McGee, Office of Legislative Affairs

FROM: Michael Mann, NC Division of Forest Resources

SUBJECT: Scoping letter for the proposed improvements to the Westside Wastewater Treatment Plant located in Thomasville, NC.

PROJECT #: 07-0308

The North Carolina Division of Forest Resources has reviewed the referenced document and does not object to the project as proposed. Where woodlands will be impacted, NCDFR would like to see the following points addressed in the Environmental Assessment.

1. List, by timber type, the total forest land acreage that is removed or taken out of forest production as a result of the project. Fragmentation of woodlots into small sections can make forest management difficult and should be avoided where possible. If no impacts will occur please state so in the document.
2. Efforts should be made to avoid or minimize impact to forest resources. Areas to avoid include unique or unusual ecosystems, highly productive managed woodlands and wetlands. Additionally, efforts should be made to align corridors to minimize impacts to woodlands in the following order of priority:
 - Managed, high site index woodland
 - Productive forested woodlands
 - Managed, lower site index woodlands
 - Unique forest ecosystems
 - Unmanaged, fully stocked woodlands
 - Unmanaged, cutover woodlands
 - Urban woodlands

3. The EA should include a summary of the potential productivity of the forest stands affected by the proposed project. Potential productivity is quantified by the soil series, and is found in the USDA Soil Survey for the county involved.
4. The provisions the contractor will take to utilize the merchantable timber removed during construction. Emphasis should be on selling all wood products. However, if the wood products cannot be sold then efforts should be made to haul off the material or turn it into mulch with a tub grinder. This practice will minimize the need for debris burning, and the risk of escaped fires and smoke management problems to residences, highways, schools, and towns.
5. If woodland burning is needed, the contractor must comply with the laws and regulations of open burning as covered under G.S. 113-60.21 through G.S. 113-60.31. Davidson and Guilford Counties are classified as a non-high hazard counties, and G.S. 113-60.24 requiring a regular burning permit applies.
6. The provisions that the contractor will take to prevent erosion and damage to forestland. Trees, particularly the root system, can be permanently damaged by heavy equipment. Efforts should be to avoid skinning of the tree trunk, compacting the soil, adding layers of fill, exposing the root system, or spilling petroleum or other substances.

We appreciate the opportunity to comment on the proposed project.

cc: Barry New

State of North Carolina
 Department of Environment and Natural Resources

Reviewing Office: _____

INTERGOVERNMENTAL REVIEW - PROJECT COMMENTS

Project Number: 07-0308 Due Date: _____

After review of this project it has been determined that the ENR permit(s) and/or approvals indicated may need to be obtained in order for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office indicated on the reverse of the form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office.

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
<input type="checkbox"/>	Permit to construct & operate wastewater treatment facilities, sewer system extensions & sewer systems not discharging into state surface waters.	Application 90 days before begin construction or award of construction contracts. On-site inspection. Post-application technical conference usual.	30 days (90 days)
<input type="checkbox"/>	NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters.	Application 180 days before begin activity. On-site inspection. Pre-application conference usual. Additionally, obtain permit to construct wastewater treatment facility-granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later.	90-120 days (N/A)
<input type="checkbox"/>	Water Use Permit	Pre-application technical conference usually necessary	30 days (N/A)
<input type="checkbox"/>	Well Construction Permit	Complete application must be received and permit issued prior to the installation of a well.	7 days (15 days)
<input type="checkbox"/>	Dredge and Fill Permit	Application copy must be served on each adjacent riparian property owner. On-site inspection. Pre-application conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit.	55 days (90 days)
<input checked="" type="checkbox"/>	Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.0100, 2Q.0300, 2H.0600)	N/A	60 days
<input checked="" type="checkbox"/>	Any open burning associated with subject proposal must be in compliance with 15 A NCAC 20.1900		
<input checked="" type="checkbox"/>	Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 20.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-707-5950.	N/A	60 days (90 days)
<input type="checkbox"/>	Complex Source Permit required under 15 A NCAC 2D.0800		
<input checked="" type="checkbox"/>	The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres to be disturbed. Plan filed with proper Regional Office (Land Quality Section) At least 30 days before beginning activity. A fee of \$30 for the first acre and \$2000 for each additional acre or part must accompany the plan.		20 days (30 days)
<input type="checkbox"/>	The Sedimentation Pollution control Act of 1973 must be addressed with respect to the referenced Local Ordinance.		(30 days)
<input type="checkbox"/>	Mining Permit	On-site inspection usual. Surety bond filed with ENR Bond amount varies with type mine and number of acres of affected land. Any acre mined greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued.	30 days (60 days)
<input type="checkbox"/>	North Carolina Burning permit	On-site inspection by N.C. Division Forest Resources if permit exceeds 4 days	1 day (N/A)
<input type="checkbox"/>	Special Ground Clearance Burning Permit - 22 counties in coastal N.C. with organic soils	On-site inspection by N.C. Division Forest Resources required "if more than five acres of ground clearing activities are involved. Inspections should be requested at least ten days before actual burn is planned."	1 day (N/A)
<input type="checkbox"/>	Oil Refining Facilities	N/A	90-120 days (N/A)
<input type="checkbox"/>	Dam Safety Permit	If permit required, application 60 days before begin construction. Applicant must hire N.C. qualified engineer to: prepare plans, inspect construction, certify construction is according to ENR approved plans. May also require permit under mosquito control program. And a 404 permit from Corps of Engineers. An inspection of site is necessary to verify Hazard Classification. A minimum fee of \$200.00 must accompany the application. An additional processing fee based on a percentage of the total project cost will be required upon completion.	30 days (60 days)

PERMITS		SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
<input type="checkbox"/>	Permit to drill exploratory oil or gas well	File surety bond of \$5,000 with ENR running to State of NC conditional that any well opened by drill operator shall, upon abandonment, be plugged according to ENR rules and regulations.	10 days N/A
<input type="checkbox"/>	Geophysical Exploration Permit	Application filed with ENR at least 10 days prior to issue of permit. Application by letter. No standard application form.	10 days N/A
<input type="checkbox"/>	State Lakes Construction Permit	Application fees based on structure size is charged. Must include descriptions & drawings of structure & proof of ownership of riparian property.	15-20 days N/A
<input type="checkbox"/>	401 Water Quality Certification	N/A	60 days (130 days)
<input type="checkbox"/>	CAMA Permit for MAJOR development	\$250.00 fee must accompany application	55 days (150 days)
<input type="checkbox"/>	CAMA Permit for MINOR development	\$50.00 fee must accompany application	22 days (25 days)
<input type="checkbox"/>	Several geodetic monuments are located in or near the project area. If any monument needs to be moved or destroyed, please notify: N.C. Geodetic Survey, Box 27687 Raleigh, NC 27611		
<input checked="" type="checkbox"/>	Abandonment of any wells, if required must be in accordance with Title 15A. Subchapter 2C.0100.		
<input checked="" type="checkbox"/>	Notification of the proper regional office is requested if "orphan" underground storage tanks (USTS) are discovered during any excavation operation.		
<input type="checkbox"/>	Compliance with 15A NCAC 2H 1000 (Coastal Stormwater Rules) is required.		45 days (N/A)
<input type="checkbox"/>	Tar Pamlico or Neuse Riparian Buffer Rules required.		
* Other comments (attach additional pages as necessary, being certain to cite comment authority)			



REGIONAL OFFICES

Questions regarding these permits should be addressed to the Regional Office marked below.

Asheville Regional Office
2090 US Highway 70
Swannanoa, NC 28778
(828) 296-4500

Mooresville Regional Office
610 East Center Avenue, Suite 301
Mooresville, NC 28115
(704) 663-1699

Wilmington Regional Office
127 Cardinal Drive Extension
Wilmington, NC 28405
(910) 796-7215

Fayetteville Regional Office
225 North Green Street, Suite 714
Fayetteville, NC 28301-5043
(910) 433-3300

Raleigh Regional Office
3800 Barrett Drive, Suite 101
Raleigh, NC 27609
(919) 791-4200

Winston-Salem Regional Office
585 Woughtown Street
Winston-Salem, NC 27107
(336) 771-5000

Washington Regional Office
943 Washington Square Mall
Washington, NC 27889
(252) 946-6481

NORTH CAROLINA STATE CLEARINGHOUSE
DEPARTMENT OF ADMINISTRATION
INTERGOVERNMENTAL REVIEW

RECEIVED
MAR 30 2007

STATE NUMBER: 07-EH4300-0308 H02
DATE RECEIVED: 03/23/2007
AGENCY RESPONSE: 04/18/2007
REVIEW CLOSED: 04/23/2007

MS RENEE GLEDHILL-EARLEY
CLEARINGHOUSE COORD
DEPT OF CUL RESOURCES
ARCHIVES-HISTORY BLDG - MSC 4617
RALEIGH NC

REVIEW DISTRIBUTION
CC&PS - DEM, NFIP
DENR LEGISLATIVE AFFAIRS
DEPT OF CUL RESOURCES
DEPT OF TRANSPORTATION
PIEDMONT TRIAD COG



Ref. E07-0413

PROJECT INFORMATION

APPLICANT: HDR Engineering, Inc.

TYPE: State Environmental Policy Act

ERD: Scoping

Davidson/Guilford.

DESC: Proposal to make improvements to the Westside Wastewater Treatment Plant (WWTP) located in Thomasville, North Carolina

The attached project has been submitted to the N. C. State Clearinghouse for intergovernmental review. Please review and submit your response by the above indicated date to 1301 Mail Service Center, Raleigh NC 27699-1301.

If additional review time is needed, please contact this office at (919)807-2425.

AS A RESULT OF THIS REVIEW THE FOLLOWING IS SUBMITTED:

NO COMMENT

COMMENTS ATTACHED *See 3/18/07 letter*

SIGNED BY:

Renee Gledhill-Earley

DATE:

4-10-07



North Carolina Department of Cultural Resources
State Historic Preservation Office

Peter B. Sandbeck, Administrator

Michael F. Easley, Governor
Lisbeth C. Evans, Secretary
Jeffrey J. Crow, Deputy Secretary

Office of Archives and History
Division of Historical Resources
David Brook, Director

March 8, 2007

MEMORANDUM

TO: Hannah Stallings
NCDENR -Division of Water Quality

FROM: Peter Sandbeck *Peter Sandbeck*

SUBJECT: Kool Pool Sewer Outfall Improvements, Davidson and Guilford Counties, ER 07-0413



Thank you for your letter of February 16, 2007, concerning the above project. Based on the topographic and hydrological situation that exists within the undeveloped portion of the planned sewer line, we have determined that there is a very high probability that archaeological sites exist in the project area. We therefore recommend that if any earth moving activities are scheduled to take place, that a comprehensive archaeological survey be conducted by an experienced archaeologist to identify and evaluate the significance of any archaeological remains that may be damaged or destroyed by the proposed project. Please note that our office now requests consultation with the Office of State Archaeology to discuss appropriate field methodology prior to the archaeological field investigation.

If an archaeological field investigation is conducted, two copies of the resulting archaeological survey report, as well as one copy of the appropriate site forms, should be forwarded to us for review and comment as soon as they are available and well in advance of any earth moving activities.

A list of archaeological consultants who have conducted or expressed interest in contract work in North Carolina is available at www.arch.dcr.state.nc.us/consults. The archaeologists listed, or any other experienced archaeologists may be contacted to conduct the recommended survey.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and considerations. If you have any questions concerning the above comment, please contact Renee Gledhill-Earley, environmental review coordinator, at 919-733-4763 ext. 246. In all future communication concerning this project, please cite the above referenced tracking number.

bc: Claggett/Mintz
County

	Location	Mailing Address	Telephone/Fax
ADMINISTRATION	507 N. Blount Street, Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919)733-4763/733-8653
RESTORATION	515 N. Blount Street, Raleigh NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919)733-6547/715-4801
SURVEY & PLANNING	515 N. Blount Street, Raleigh, NC	4617 Mail Service Center, Raleigh NC 27699-4617	(919)733-6545/715-4801



North Carolina Department of Administration

Michael F. Easley, Governor

Britt Cobb, Secretary

May 4, 2007

Ms. Vickie Miller
HDR Engineering, Inc.
3733 National Drive
Suite 207
Raleigh, NC 27612-4845

Dear Ms. Miller:

Re: SCH File # 07-E-4300-0308; Scoping; Proposal to make improvements to the Westside Wastewater Treatment Plant (WWTP) located in Thomasville, North Carolina

The above referenced environmental impact information has been reviewed through the State Clearinghouse under the provisions of the North Carolina Environmental Policy Act.

Attached to this letter are **additional** comments made by agencies reviewing this document which identify issues to be addressed in the environmental review document. The appropriate document should be forwarded to the State Clearinghouse for compliance with State Environmental Policy Act. Should you have any questions, please do not hesitate to call me at 807-2425.

Sincerely,

A handwritten signature in black ink that reads "Chrys Baggett 1/576".

Ms. Chrys Baggett
Environmental Policy Act Coordinator

Attachments

cc: Region G

Mailing Address:
1301 Mail Service Center
Raleigh, NC 27699-1301

Telephone: (919)807-2425
Fax (919)733-9571
State Courier #51-01-00
e-mail Chrys.Baggett@ncmail.net

Location Address:
116 West Jones Street
Raleigh, North Carolina



North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary



MEMORANDUM

TO: Chrys Baggett
State Clearinghouse

FROM: Melba McGee *pm*
Environmental Projects Officer

SUBJECT: #07-0308 Westside Wastewater Treatment Plant, Davidson and Guilford Counties

DATE: April 26, 2007

The attached comments were received by this office after the response due date. These comments should be forwarded to the applicant and made a part of our previous comment package.

Thank you for the opportunity to respond.

Attachment



North Carolina Department of Environment and Natural Resources
Division of Water Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary
John Morris, Director

April 13, 2007

MEMORANDUM

TO: Melba McGee, Environmental Coordinator
Office of Legislative and Intergovernmental Affairs

FROM: John Sutherland *John Sutherland*
Water Projects Section Chief

SUBJECT: City of High Point WWTP SCI Scoping Comments
Project No. 07-0308



The Division of Water Resources (DWR) provides the following comments in response to the March 21, 2007, request for agency scoping comments concerning a secondary and cumulative impact (SCI) mitigation plan ("plan") for the service area of the City of High Point's Westside Wastewater Treatment Plant (WWTP). Although the proposed plan will be prepared during the environmental review of the Kool Pool Outfall repairs, the City of High Point ("applicant") intends to use the plan for other environmental reviews in the WWTP's service area. Repairs and replacement of WWTP collection infrastructure is associated with a Special Order of Consent issued by the N.C. Division of Water Quality.

- For clarification, the applicant should include a copy of the Special Order of Consent and discuss WWTP infrastructure improvements and replacements.
- SCI are not necessarily confined to a project's service area. SCI may extend downstream of the service area boundary or from infrastructure not within the service area. (The WWTP and portions of three outfalls do not lie within the service area.) The applicant should discuss plans to address SCI that may occur outside of the project service area.
- The applicant should report any existing ordinances or land use plans that it believes will avoid, minimize or mitigate SCI associated with the WWTP.
- The applicant should report any existing resources that are not currently attaining their state-designated uses or classification. This is an indication of the effectiveness of existing ordinances that may be proposed to address SCI.
- The applicant should provide maps that delineate both existing land use and projected land use in the service. If possible, the applicant should also provide existing and projected land use adjacent and/or downstream to the service area. Uses of these adjacent areas may contribute to SCI.

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- The applicant should discuss any monitoring programs, timetables or benchmarks that may be used to evaluate the efficacy of the plan.
- Since the plan is being developed in association with the Kool Pool Outfall project, the draft plan should be circulated with the draft environmental document for the outfall project.
- The applicant should contact Department of Environment and Natural Resources administration to determine the need for a memorandum of agreement to establish guidelines for the plan's applicability and time span.
- The Western Wake Partners—Apex, Cary, Holly Springs, Morrisville—each created SCI plans in associated with their proposed WWTP and discharge into the Cape Fear River. Cary's plan can be reviewed for guidance at the following link:
<www.townofcary.org/depts/pwdept/scimmp/default.htm>.
- The applicant should discuss any water conservation or wastewater reuse initiatives that will reduce the amount of discharge.
- The applicant should discuss its Phase II requirements and detail those measures that exceed Phase II requirements.

Thank you for the opportunity to comment. If you have additional questions or comments, please contact Fred Tarver at 919/715-5442 or at fred.tarver@ncmail.net.

cc: Linwood Peele, Fred Tarver, DWR
Shari Bryant, WRC
Hannah Stallings, DWQ

APPENDIX C

**High Point Commitment Letter and
Conditional Use Permit Implementation**

City of High Point

Strib Boynton
CITY MANAGER



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February 7, 2007

Allen Ratzlaff
US Fish and Wildlife Service
Asheville Field Office
160 Zillicoa Street
Asheville, NC 28801

Shari Bryant
North Carolina Wildlife Resources Commission
P.O. Box 129
Sedalia, NC 27342-0129

Dear Mr. Ratzlaff/Ms. Bryant:

The purpose of this letter is to update you on the status of the City of High Point Kool Pool Outfall Environmental Assessment (EA) and Westside Wastewater Plant Secondary and Cumulative Impact Mitigation Plan (Plan), and the commitments the City is making to help move these projects forward.

As you are already aware from our meeting on August 4, 2006, the City is proposing to move ahead with the EA for the Kool Pool Outfall while beginning to develop a Plan for the entire Westside Wastewater Treatment Plant service area. The intention of this approach is to enable the City to address the State Special Order by Consent (SOC) as quickly as possible to alleviate current water quality issues along the Kool Pool Outfall, while not allowing significant secondary and cumulative impacts (SCI) to occur within the service area. The results of this meeting were documented in letters from HDR and your responses.

The City understands the sensitive environmental issues at hand, and is appreciative of your willingness to work with us in order to address the existing and future environmental issues while moving forward with this important project in a proactive manner. In order for us to resubmit the Kool Pool EA while preparing the Plan, the City is committing to the following:

1. The City and their consultants will develop a Plan for the entire Westside Wastewater Treatment Plant service area, rather than just the Kool Pool outfall. This process has already begun and scoping will occur in January.
2. The City is currently performing an assessment of Rich Fork and has committed one million dollars to the stabilization and enhancement of the stream in association with the Westside Wastewater Treatment Plant project.

3. In order to allow the Kool Pool EA to move forward, while the Plan is being developed, the City will limit new development approvals and sewer connections in the Kool Pool service area to those that meet the following criteria:
 - a. Developments that are approved by the City's Technical Review Committee on or before February 1, 2007 that are allowable under the SOC; or
 - b. Developments where the developer is willing to adjust their designs to comply with the eventual requirements of the Plan.

After February 1, 2007, if a developer wishes to get approval of a development in the Kool Pool service area, then the development's design would have to meet the eventual standards of the Plan. This would be accomplished by either designing for the requested mitigation measures suggested in your previous responses or updated mitigation measures based on further negotiations that have achieved agency agreement. It should be noted that no land development within the Northeast Davidson County area that is under the City's jurisdiction has been approved without going through the Conditional Use Permit process, where conditions were attached to provide classified stream buffers, floodplain protection, steep slope protection and common area open space. The City has been implementing these policies of the Northeast Davidson Area Plan through conditional use zoning since January 1, 2003. Attached is a chart listing all the development approvals since January 1, 2003 confirming these protection measures. This documentation shows that the City has been, and will continue to be, proactive in the review and approval of development practices that protect the environment and comply with the Northeast Davidson County Land Use Plan.

We believe these commitments meet your requirements, and will allow us to move forward with the Kool Pool EA as a direct impact assessment, while minimizing SCI until such time as an approved Plan can be implemented. The commitments also allow carefully planned developments to move forward at their own risk with designs that will meet or exceed the eventual Plan requirements.

Thank you for your cooperation in this endeavor, and if you have any questions feel free to contact me at your earliest convenience.

Sincerely,



Strib Boynton
City Manager

Cc: Hannah Stallings, NCDWQ
Melba McGee, NCDENR
Chris Thompson, P.E., City of High Point
Lee Burnette, City of High Point
Matthew Schultz, P.E., HDR, Inc.
Philip May, Carolina Ecosystems, Inc.

CU Permit Number	Developer / Development Name	Street Location	Zoning District	Acreage	Stream Buffers	Floodplain Protection	Steep Slope Protection	Common Area Open Space	Single Family Dwellings	Townhome Dwellings	Multifamily Dwellings	Total Dwelling Units	Development Status
03-01	PHD Enterprises (Pennfield)	W. Lexington Avenue	CU PDR	27.20	Yes	Yes	Yes	Yes	-	51	-	51	Finalized
03-05	Shugart Management, Inc. (Ashebrook Place)	Old Plank Road.	CU RM-8	22.90	Yes	N/A	Yes	Yes	-	46	-	146	Phase 1 Finalized
03-09	Faith Properties of the Carolinas (Del Mar)	Hedgecock Road	CU PDR	69.00	Yes	Yes	Yes	Yes	205	-	-	205	Finalized
03-20	PHD Enterprises (Country Club Estates)	Country Club Drive	CU PDR	86.90	Yes	Yes	Yes	Yes	90	30	-	120	Townhomes Finalized / SF Phase 1 Finalized
04-12	Maynard Walsh LLC (Heritage Ridge)	Hedgecock Road	CU RM-8	34.14	Yes	Yes	Yes	Yes	-	106	-	106	Finalized
04-30	Cherokee Hills of High Point, Inc. (Swans Landing)	W. Lexington Avenue	CU RS-15	17.48	Yes	N/A	Yes	Yes	34	-	-	34	Finalized
05-18	Shugart Management, Inc. (Planters Walk)	Joe Moore Road	CU RS-15	97.00	Yes	Yes	Yes	Yes	136	-	-	202	Phases 1-3 Finalized
05-21	Kavanaugh Associates, Inc. (Westover Ridge)	Westover Drive	CU RM-8	41.30	Yes	N/A	Yes	Yes	-	75	156	231	Phase 1 Finalized (40 TH and 60 Condos)
06-01	Maynard/Walsh LLC (Cambridge Oaks)	Chestnut Drive	CU RM-5	64.30	Yes	Yes	Yes	Yes	22	94	-	116	Preliminary Approval
06-22	Carolland Dev.	Burton Road	CU RS-7 (pending approval)	39.00	Yes	Yes	Yes	Yes	99	-	-	99	Zoning approval pending Council action
06-25	Shugart Management, Inc.	Cedarwood Trail	CU RS-9 (pending approval)	20.30	Yes	Yes	Yes	Yes	52	-	-	52	Zoning approval pending Council action

APPENDIX D

**Surface Water Buffers,
Zone Buffers, and
Utility Extension Policy**

City of High Point

Water and Sewer Utility Extension Policy

I. Authority

Sections 8-2-26 and 8-2-69 of the High Point City Code authorize the provision of water and sewer utility services outside the corporate limits of the city under specified circumstances and with the approval of the City Council. This policy establishes the process by which such provision may be approved.

II. Purpose

This water and sewer utility extension policy is established to ensure a utility infrastructure that is efficient and operates in the best interests of the city and its residents.

III. General Policy

It is the general policy of the City of High Point to provide water and sewer utility services only to properties within the corporate limits of the city and to allow the extension of such lines to serve properties only within the corporate limits. No water or sewer service shall be provided to any property outside the corporate limits of the City of High Point unless the owner of that property petitions for voluntary annexation, and the City Council approves that annexation prior to the receipt of water and sewer services, or the owner applies for and the property meets an exception to this general policy. Those exceptions are provided for in Section IV, Exceptions to the General Policy, which follow.

IV. Exceptions to the General Policy

An owner of a property that is located outside the corporate limits may be permitted to connect onto existing City of High Point water and sewer lines when the owner applies for an exception to the general policy and the following requirements are met.

- A. The city's Technical Review Committee determines that the property meets one of the following conditions:
 - 1. Annexation of the property is prohibited due to statutory or legal constraints;
 - 2. The city is unable to effectively deliver all services to the property; or
 - 3. The location of the property, relative to the location of the primary corporate limits and city services, makes the delivery of city services to the property impractical due to costs or physical constraints.

- B. All the following requirements shall be met:
 - 1. All plumbing fixtures and facilities shall be in compliance with the appropriate building codes and/or County Health Department regulations.

2. The use of the property is limited to one dwelling unit or nonresidential establishment located on a property three acres or less in size. However, the City Council, upon a formal written request by the property owner, may approve service to a larger property or for more than one dwelling unit on a property if the City Council determines that such actions are not in conflict with city interests.
3. The owner executes a written agreement with the city, committing to submit a voluntary annexation petition upon request by the city, in accordance with Section IV D., Agreement, of this policy.

C. Connections to city water or sewer lines shall not be authorized until the City Council has received notice of the Technical Review Committee's decision and such decision shall not be effective until the day after the next regular meeting of the City Council.

D. Written Agreement

Prior to a property receiving water and/or sewer services as an approved exception to this policy, all owner(s) of such property must execute a written agreement with the city. In such agreement and in return for water and/or sewer service, the property owners shall declare and agree that as long as the property remains outside the corporate limits of the City of High Point:

1. That the property shall be subject to the city's outside rate schedule for water and/or sewer service;
2. That the property shall not be further divided or subdivided to create more lots or principal building sites;
3. That the property owner, or their successors or assigns, upon sufficient notice by the city, shall execute any and all documents required to accomplish voluntary annexation;
4. That if following notice, the owner fails to execute action to accomplish voluntary annexation, then the city shall terminate the water and/or sewer service to the property;
5. And, that the owner shall not oppose or support opposition to an annexation initiated by the City of High Point that includes any or all the property to which water and sewer service was provided by the City of High Point pursuant to this policy.

V. City-County Agreement

Under the terms of the "City-County Consolidated Water & Sewer Line Extension Agreement," the City Council may approve the extension of High Point utility lines into unincorporated areas of Guilford County. However, to receive water and/or sewer services, the property must be annexed into the corporate limits of High Point or be approved as an exception in accordance with this policy. A request for service under the City-County Agreement will not be approved if it conflicts with Section III, General Policy, Section IV, Exceptions to the General Policy, or with Section V, Randleman Lake Water Supply Watershed.

VI. Randleman Lake Water Supply Watershed

High density or intensive development is prohibited in most of the Randleman Lake Watershed Critical Area through the adoption of the "Deep River I Watershed Assessment and Stormwater Plan" and the NC Environmental Management Commission's approval of the city's alternative high density option regulations, which is part of the city's water supply watershed protection regulations. Consistent with that approved plan, the City of High Point will not allow the extension of water and/or sewer lines for new development in the Randleman Lake Watershed Critical Area except in portions of the Richland Creek and Business 85/Riverdale Road subbasins, as described in Section 9-7-4 of the High Point Development Ordinance. And, where such utility lines are present in the Randleman Lake Watershed Critical Area, service for new development will not be allowed. However, a connection to the city's water and/or sewer lines for an existing dwelling or business may be approved in accordance with Section III, General Policy or Section IV, Exceptions to the General Policy.

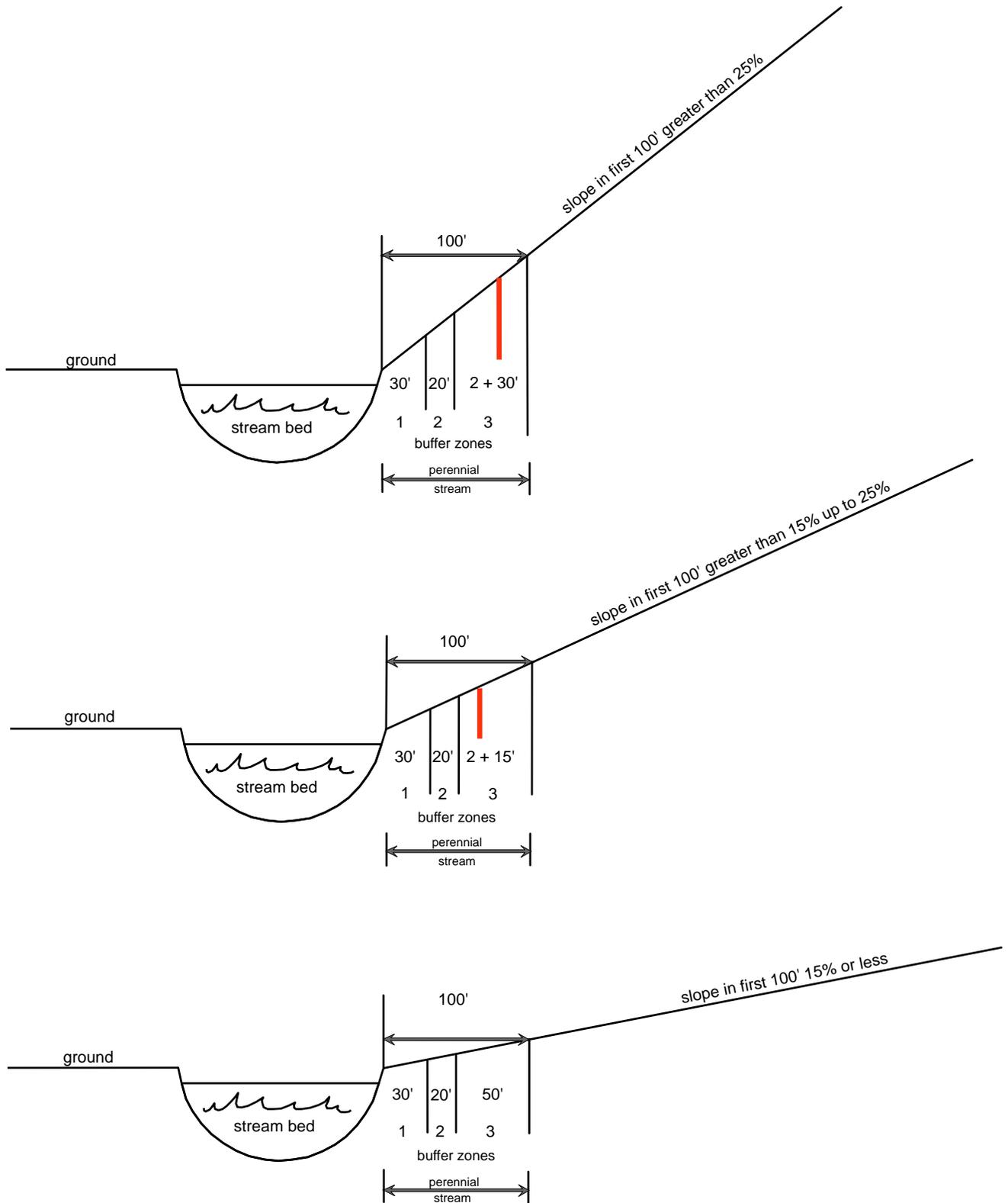
VII. Water and Sewer to Other Jurisdictions

Nothing in this policy shall preclude the City Council from approving the provision of water and sewer utility services to serve other jurisdictions or government entities.

Approved this 4th day of October 2001.
High Point City Council

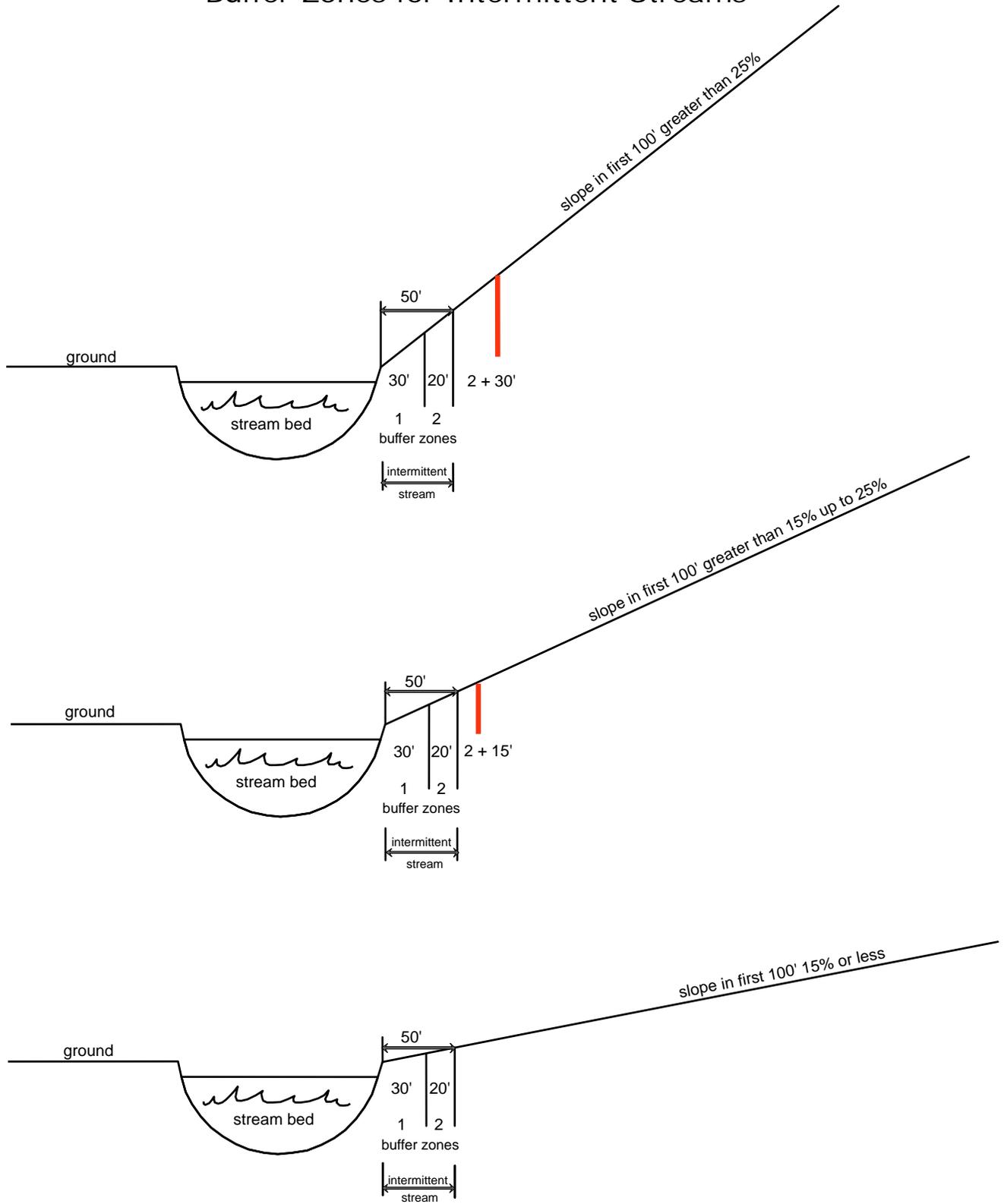
Amended December 19, 2002

Buffer Zones for Perennial Streams



Perennial Stream: Flows more than 90% of the time.

Buffer Zones for Intermittent Streams



Intermittent Stream: Flows only during wet periods (30 to 90% of the time) and flows in a continuous, well-defined channel.