APPENDIX C

CITY OF RALEIGH WATER AND WASTEWATER INFRASTRUCTURE

- City of Raleigh Merger Agreements
- Sample Bulk User Agreement
- City of Raleigh NPDES and Spray Irrigation Permits
- City of Raleigh Public Utility CIP Projects

City of Raleigh Merger Agreements

(Merger Agreements included on CD located behind Appendix K tab)

STATE OF NORTH CAROLINA

COUNTY OF WAKE

AMENDMENT NO. 1

GARNER WATER AND SEWER SYSTEM MERGER AGREEMENT

This AMENDMENT, made and entered into this _____ day of January, 2005, by and between the CITY OF RALEIGH, a municipal corporation existing under the laws of the State of North Carolina (hereinafter called the RALEIGH), and the TOWN OF GARNER, a municipal corporation existing under the laws of the State of North Carolina (hereinafter called the TOWN).

WITNESSETH

WHEREAS, RALEIGH and TOWN have an existing AGREEMENT specifying the rights, terms and conditions under which RALEIGH will merge the TOWN's water and sewer system with RALEIGH's water and sewer system, and

WHEREAS, said AGREEMENT, was executed on the 18th day of July, 2000, and approved by the respective Council of both RALEIGH and TOWN, and

NOW, THEREFORE, the TOWN and RALEIGH mutually agree to amend the AGREEMENT to increase the base capacity of water provided by RALEIGH to the TOWN by 0.38 million gallons per day (MGD) from 3.70 to 4.08 MGD and to increase the base capacity of wastewater by 0.38 MGD from 3.25 to 3.63 MGD.

Specifically, the AGREEMENT shall be amended in the sections noted below and the following sentences added to these sections:

(Section 5.1) Delete the paragraph numbered 1) entirely and replace as follows – "As of the execution date of this AMENDMENT, the wastewater flow allocation for the TOWN will be limited to 3.63 MGD for average daily demand (ADD) wastewater flow and the average day water use and peak day water use allocations will be limited to 4.08 MGD and 5.38 MGD, respectively".

(Section 5.1) Add to end of current section as follows – "The base water capacity cost for the additional 0.38 MGD is $1,140,000. The base wastewater capacity cost for the additional 0.38 MGD is $1,349,000. The total cost of additional water and wastewater base capacity is $2,489,000. The TOWN will make either a lump sum payment to RALEIGH of this amount or installment payments to RALEIGH which total this amount by January 1, 2006. Should the TOWN's installment payments not equal the total of $2,489,000 by January 1, 2006, then the additional base water and wastewater capacity provided by RALEIGH to the TOWN shall be reduced and pro-rated equal to the total amount of the installment payments."

All other sections of the AGREEMENT REMAIN UNCHANGED.

In testimony whereof, RALEIGH and TOWN have caused this amendment to the AGREEMENT as dated, to be executed by their respective City Manager and Mayor, their corporate seals to be affixed and attested by their respective Clerks, all by authority of the respective Councils, the day and year fist above written.

ATTEST:

CITY OF RALEIGH

_____
CITY CLERK

_____
CITY MANAGER

(attach municipal seal)

APPROVED:

_____
CITY ATTORNEY

ATTEST:

TOWN OF GARNER

_____
TOWN CLERK

_____
MAYOR

(attach municipal seal)

APPROVED:

_____
TOWN ATTORNEY

Merger Agreement

Merging

The Water and Sewer Utility Systems

of

Garner, North Carolina

And

Raleigh, North Carolina

July 2000

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STATE OF NORTH CAROLINA

COUNTY OF WAKE

AGREEMENT

This Agreement is made and entered into by and between the Town of Garner, a North Carolina municipal corporation, duly organized and existing under the laws of the State of North Carolina, hereinafter referred to as "Garner", and the City of Raleigh, a North Carolina municipal corporation, duly organized and existing under the laws of the State of North Carolina, hereinafter referred to as "Raleigh".

The purposes of this Agreement are to:

- Assure the continued provision of high quality, reliable, economical, safe and sanitary water and sewer service within the present and future corporate limits and Urban Service Area limits of Garner;
- Provide for the orderly and permanent transfer of responsibility for the ownership, construction, operation, maintenance, management, and financing of Garner's water and sewer utility system from Garner to Raleigh, and;
- Transfer the managerial, operational, and financial responsibility of operating, maintaining, and expanding the water and sewer utility systems serving the present and future corporate limits and Urban Service Area limits of Garner from Garner to Raleigh.

WHEREAS, Article 20, Interlocal Cooperation of North Carolina General Statutes 160A authorizes and empowers any units of local government to enter into interlocal agreements for the ownership, construction, operation, maintenance, management, and financing of all or portions of water and sewer utility systems within or outside the corporate limits of those units of local government;

WHEREAS, Garner owns, operates, and maintains water and sewer utility systems within and outside its corporate limits;

WHEREAS, Garner desires to transfer its water and sewer utility systems to Raleigh in accordance with the terms and conditions hereinafter stated;

WHEREAS, Raleigh agrees to assume full responsibility for the provision of water and sewer services in Garner, including responsibility for Garner's water and sewer utility systems and related equipment and property rights;

WHEREAS, Raleigh further agrees to operate, maintain and expand said water and sewer systems to accommodate planned growth and development within Garner's planning and zoning jurisdiction in accordance with the terms and conditions hereinafter stated;

NOW, THEREFORE, for the considerations hereinafter stated, the parties do agree as follows:

a) This Agreement shall be perpetual. Garner and Raleigh hereby agree that such perpetual duration is reasonable and necessary in light of the purposes of this Agreement.

b) No joint agency is established by this Agreement.

c) Raleigh shall have the sole responsibility and authority to appoint or otherwise employ the personnel necessary for the implementation of this Agreement.

d) The responsibility for financing the construction, operation and maintenance of the merged water and sewer system and any extensions thereof shall be in accordance with the terms of this Agreement. Raleigh shall be entitled to the receipt of all revenues from the merged water and sewer system and any extensions thereof.

e) Garner agrees and grants the authority for appropriate employees of Raleigh to work and act in Garner as necessary to carry out the purposes of this agreement as appropriate under the ordinances and regulations of both Raleigh and Garner.

f) Garner shall transfer to Raleigh and its assignees or successors, and Raleigh and its assignees and successors shall receive from Garner, in accordance with the terms and conditions set forth in this Agreement:

   i) All pipes, water lines, hydrants, sewer lines, pump stations, force mains, mains, meters, meter boxes, and service laterals, elevated water tanks, water treatment plants, wastewater treatment facilities, and all other appurtenances normally associated with, and owned by Garner, and presently in use within Garner's water and sewer system (See Exhibit A);

   ii) All of Garner's rights, titles and interests in land, easements, and encroachment agreements necessary to own and operate Garner's water and sewer systems. All of the property and rights described above shall be hereafter referred to as "the Property" (See Exhibit B);

   iii) All property currently used in the operation of the water and sewer system, but that is to be retained by Garner, will be identified prior to the Transfer Date as defined in this Agreement (See Exhibit C);

g) Raleigh shall have the right to exercise its power of eminent domain within the current and future municipal and planning limits of Garner for activities necessary to fulfill Raleigh's water and sewer service obligations defined in this Agreement; and

h) Cost of the transfer of ownership of the systems from Garner to Raleigh will be borne by Raleigh, and will be recovered through the water and sewer rates, fees, and charges that will be charged to Garner customers as set forth in this Agreement.

1.0 Definitions

The following words and phrases are defined as set forth below when used in this Agreement, unless a contrary meaning is clearly required by the context in which the word or phrase is used:

1.1 **Effective Date:** The date on which all of this Agreement is approved and signed by all parties.

1.2 **Transfer Date or Closing Date:** The date on which title or leasehold to the subject water and sewer system passes from Garner to Raleigh, which shall be a reasonable time after the Effective Date of this Agreement.

1.3 **Systems:** The real and personal property comprising Garner's water and sewer system which is to be transferred to Raleigh.

1.4 **Inside City Rate(s):** The rate(s) charged by Raleigh to the water and sewer customers inside the corporate limits of Raleigh.

1.5 **Outside City Rate(s):** The rate(s) charged by Raleigh to the water and sewer customers outside the corporate limits of Raleigh.

2.0 Transfer Date

The City Manager of Raleigh and the Town Manager of Garner, or their designees, shall be responsible for determining all implementation details related to this Agreement not specifically addressed in this Agreement. The Transfer Date for this Agreement is March 1, 2001, subject to the completion of a due diligence assessment as specified in Article 2.1. The Transfer Date shall not be delayed unreasonably by either party.

2.1 Due Diligence Assessment

Upon execution of the Agreement, the City of Raleigh and the Town of Garner will conduct a final due diligence assessment for the merger. The activities of the due diligence assessment will be completed by November 1, 2000.

The purpose of the due diligence assessment will be to verify that the merger can be accomplished in accordance with the assumptions used to develop the terms and conditions of the Agreement, including the revenue and expense projections used to develop the business/financial plan for the merger.

The due diligence assessment will include, but is not limited to, a review of the capital improvements plan, operations plan, employee transfer plan and customer information/billing migration plan required to implement the merger. The findings of the due diligence assessment will be submitted to the City Manager of Raleigh and the Town Manager of Garner in the form of a summary report.

2.2 Due Diligence Disposition

If the City Manager of Raleigh and the Town Manager of Garner determine that the merger can proceed in accordance with the terms and conditions of the Agreement, then the City Manager of Raleigh and the Town Manager of Garner will submit a letter to their respective governing boards documenting the completion of the due diligence assessment, and confirming that the Transfer Date for the merger will be March 1, 2001.

If the City Manager of Raleigh and the Town Manager of Garner determine that the merger can not proceed in accordance with the terms and conditions of the Agreement, then the City Manager of Raleigh and the Town Manager of Garner will notify their respective governing boards and conduct additional studies and analyses as required to address specific issues of concern. The Transfer Date will be deferred until the additional studies and analyses have been completed and the issues of concern have been addressed to the mutual satisfaction of the City Manager of Raleigh and the Town Manager of Garner.

If upon completion of the additional studies and analyses, the issues of concern can not be resolved to the mutual satisfaction of the City Manager of Raleigh and the Town Manager of Garner, then either party can terminate this Agreement by providing written notice to the other party.

3.0 Responsibility for Merged System

Upon the Transfer Date, Raleigh shall assume immediate and sole duty and responsibility for financing; operating; maintaining; improving; and expanding the water and sewer systems serving Garner's existing and future corporate limits and Urban Services Area. Garner water and sewer system planning activities will be performed in accordance with the terms of Section 3.1 of this Agreement. Prior to the Transfer Date, Garner will be responsible for the operation and maintenance of Garner's water and sewer system. After the Transfer Date, Garner's water and sewer system shall be fully incorporated into the water and sewer system operated and maintained by Raleigh. Said duty and responsibility shall be in accordance with current and future policies, standards, and procedures of Raleigh, and shall be applied in the same extent and in the same manner as applied to other inside city customers of Raleigh. Said duty shall involve the input and recommendations from the Water and Sewer Utility Advisory Committee addressed in Section 3.1 below.

3.1 Water and Sewer Utility Advisory Committee

Prior to the Transfer Date, a permanent Water and Sewer Utility Advisory Committee (UAC) will be established and shall meet periodically at a frequency to be determined by the City Manager of Raleigh and the Town Manager of Garner to review and develop planning recommendations for the upgrade, expansion, and extension of water and sewer utility services in Garner service areas. The Utility Advisory Committee will periodically report its findings and recommendations to the City Manager of Raleigh and Town Manager of Garner. The ultimate responsibility for the operation of the merged water and sewer system shall be the City of Raleigh. The role of the Utility Advisory Committee will be limited to an advisory role. The composition of the Utility Advisory Committee will initially be as follows:

- Two members appointed by the Raleigh City Manager
- Two members appointed by the Garner Town Manager
- Planning Director, Wake County

3.2 Name of Merged Water and Sewer Utility

The name of the merged water and sewer utility will be the City of Raleigh Public Utilities Department. Raleigh may, at its discretion, change the name of the utility to correspond to Raleigh's broader regional role as future growth or mergers with other water and sewer service providers occur.

3.3 Right to Operate

Garner hereby irrevocably grants Raleigh the right to design, construct, operate, maintain and perform all related activities required to operate, maintain, expand, upgrade and improve Garner's existing water and sewer utility system in accordance with Raleigh's water and sewer utility system standards and policies for operation and performance, level of service, reliability, and redundancy. Said Right to Operate includes the encroachment authority for Raleigh to operate in all public rights-of-way over which Garner has the sole authority or joint authority with the North Carolina Department of Transportation. Said water and sewer utility system standards and policies shall be applied in Garner to the same extent and in the same manner as applied to other customers of Raleigh's water and sewer utility system.

In all instances, Raleigh or its authorized contractor shall be required to restore and repair any street or other property of Garner upon the completion of any construction, operation,

maintenance, replacement, improvement or related activity causing damage thereto. Said restoration or repair shall be to the standards acceptable to Garner.

3.4 System Upgrades and Improvements

Raleigh shall undertake and complete all activities relating to the design; construction; startup; and operation of the system upgrade and improvement projects agreed upon as a part of this Agreement and listed in Exhibit D. Said upgrade and improvement projects will be undertaken and completed by Raleigh to upgrade and improve Garner's water and sewer system in accordance with Raleigh's water and sewer utility system standards for operation and performance, level of service, reliability, and redundancy. Raleigh may, at its discretion, undertake alternative upgrade and improvement projects that accomplish the same purposes as the projects agreed upon.

Any upgrades by Raleigh beyond those outlined in Exhibit D will be accomplished in accordance with Raleigh's normal operations and capital program prioritization process. Raleigh will notify in writing, and confer with representatives of Garner's governing Board and the UAC, before final adoption of any upgrade and improvement projects beyond those outlined in Exhibit D, any water and sewer utility system expansion program, or water and sewer system master plan or capital improvements plan affecting the water and sewer systems within the corporate or Urban Service Area limits of Garner.

The costs for the upgrade and improvement projects will be recovered from customers located in Garner's municipal corporate and Urban Services Area limits through the schedule of rates, fees and charges as described elsewhere in this Agreement.

3.5 Notices of Violation

In the event that fines or penalties are levied by the State of North Carolina for violation of Garner water or wastewater system permits during the five-year period following the Transfer Date, payment of fines for notices of violations will be paid jointly by Garner and Raleigh in accordance with the following schedule:

1) For the period extending from Transfer Date through February 28, 2003, 75 percent of the fine or penalty will be paid by the Town of Garner, and 25 percent of the fine will be paid by the City of Raleigh.

2) For the period extending from March 1, 2003 through February 28, 2006, 50 percent of the fine or penalty will be paid by the Town of Garner, and 50 percent of the fine will be paid by the City of Raleigh.

3) Beginning March 1, 2006, all fines or penalties for notices of violation will be paid by the City of Raleigh.

Any fines or penalties for actions prior to the Transfer Date will be paid completely by the Town of Garner.

3.6 Rates, Fees, Charges, and Penalties

Raleigh shall have the sole responsibility and authority to establish and set rates, fees, charges, and penalties necessary for the operation, maintenance, upgrade, improvement, and expansion of the water and sewer utility system. Subject to the provisions hereof, it is intended that the expansion, upgrade, improvement, operation and maintenance of the water and sewer system shall be on a self-sustaining basis. All revenues of Raleigh water and sewer utility shall be used exclusively by the water and sewer utility fund and shall not

be used to fund any other City operation or department. In maintaining and operating the water and sewer system, Raleigh will:

1) Set and charge reasonable rates, based on cost of service principles, to all classes of users of the water and sewer system;

2) Operate and maintain the water and sewer system at the lowest possible rates, consistent with Raleigh's obligation and commitment to provide proper, efficient, and environmentally sound water and sewer services now and in the future;

3) Use the revenues of the water and sewer system only for:

   a) The maintenance and operation of the water and sewer system,

   b) The payment of debt service or other debt instruments issued therefore, and the funding of resources in connection with the issuance of such debt for the water and sewer system,

   c) The expansion, extension, upgrade, and improvement of the water and sewer system and such other purposes as Raleigh may deem proper for the operation of the water and sewer system,

   d) Watershed protection activities, or

   e) Other lawful public purposes.

3.7 Schedules of Rates, Fees, Charges, and Penalties

Raleigh shall apply to customers located in Garner's corporate limits and Urban Services Area a schedule of rates, fees and charges sufficient to recover all of the costs, as determined by Raleigh, required to accomplish the water and sewer utility merger between Raleigh and Garner. Said costs will include, but not be limited to, capital improvements and upgrades, administration and other transfer costs directly related to the water and sewer utility merger. The cost recovery program for the water and sewer utility merger will be phased over a 20 year period, and the sequence of rate adjustments for customers located in Garner's corporate limits and Urban Services Area will be as follows:

1) For the period extending from the Transfer Date to July 1, 2010, the consumptive retail rate for Garner customers will not increase or decrease and will remain the same as in effect on the Transfer Date.

2) For the period extending from July 1, 2005 to July 1, 2010, a surcharge may be applied to the consumptive retail rate of Garner customers if the capital budget, and associated annual debt service, for the merger costs exceed the revenue projections.

3) For the period extending from July 1, 2010 to July 1, 2020, the consumptive retail rate for Garner customers will be the same as for Raleigh customers, with a surcharge to equal the difference between the annual debt service and the revenue from the Garner system capital fee payments.

Once all said merger costs have been fully recovered, Raleigh shall apply rates to customers located inside the municipal limits of Garner that are equivalent to those that are being charged to customers inside the municipal limits of Raleigh, and shall apply rates to customers located outside the municipal limits of Garner that are equivalent to those that are being charged to customers outside the municipal limits of Raleigh.

Raleigh will provide at least thirty (30) days written notice to Garner prior to adopting any revisions to the schedule of rates, fees, and charges.

4.0 Garner Existing Facilities and Property

Garner's water and sewer utility system provides water and sewer service to approximately 20,000 persons through approximately 6,600 accounts. Garner's water distribution system consists of approximately 122 miles of water mains, three booster-pumping stations for increasing the pressure of water supplied by Raleigh, and three elevated storage tanks. All of the water is supplied under contract with Raleigh.

Garner's wastewater management system consists of approximately 120 miles of gravity and pressure mains, 25 wastewater-pumping stations, and two wastewater treatment facilities. Garner treats 1 MGD at Garner's 201 Spray Irrigation Facility (the approximate capacity of the system), and has a contract with Raleigh to treat 2.25 MGD at Raleigh's Neuse River WWTP.

4.1 Representation and Warranties by Garner

Garner makes the following representations and warranties to Raleigh:

1) Garner is the sole owner of all water and sewer lines, pipes, meters, valves, meter boxes, laterals, and any other property transferred to Raleigh under the terms and conditions of this Agreement, and

2) Said facilities, property, land, equipment, information, and data is free and clear of all encumbrances (except as it may be included in the full, faith and credit of Garner as a part of existing bonded indebtedness). In the event that Garner's bonds have provisions that do not allow the sale of the systems while bonds are outstanding, Garner and Raleigh agree to enter into a long term leasing arrangement for the portions of the system that are affected until such time as the bonds are retired. Upon retirement of the bonds, the full ownership transfer will take place.

4.2 Property Transfer

Upon the Transfer Date of this Agreement, a Bill of Sale shall be executed by Garner to transfer ownership of all facilities, property, land, equipment, financial assets, information, and data subject to this Agreement to Raleigh. Such documents shall be sufficient to convey to Raleigh all of Garner's right, title, and interest in Garner's water and sewer system, including easements and rights-of-way, whether or not recorded. Said rights-of-way shall include the right to operate and maintain the subject water and sewer system within any public streets within Garner. Any documents needed to memorialize this passage of title shall not be required to contain any warranties of condition or title, except as expressly set forth herein. A quit-claim deed shall be executed by Garner to convey all interests in real property and improvements thereto which are subject to this Agreement.

Garner shall cooperate with Raleigh in establishing title to any portion of Garner's water and sewer system where ownership may be contested

4.3 Easements and Encroachments

Garner has fully-executed and properly recorded easements and encroachment agreements for portions of Garner's water and sewer utility system. As a condition of this Agreement, a complete list of all recorded easements and encroachment agreements will be provided to Raleigh. To the extent possible, all easements for Garner's water and sewer utility system

shall be conveyed by Garner to Raleigh by an appropriate instrument suitable for recording in the Office of the Register of Deeds for Wake County, North Carolina. As a condition of this Agreement, Garner will provide Raleigh with copies of any encroachment agreements it has with the North Carolina Department of Transportation and with any other utility companies (See Exhibit B).

Garner has some facilities installed on the properties of others for which it does not have express easements or encroachment agreements, and some facilities installed in streets and rights-of-way for which it has no encroachment agreements. In the event a landowner on whose land such a facility exists contests Raleigh's right to maintain such facilities, Raleigh shall notify Garner in writing and Garner shall be responsible to obtain at its expense the necessary easement, encroachment agreements or fee simple title across said land either by negotiation or by eminent domain. After Garner has obtained such easement or fee simple title, it shall transfer ownership thereof to Raleigh. Any reasonable and direct expense borne by Raleigh in resolution of these disputed easements shall be paid by Garner, and Garner shall also make adequate reservation for the necessary rights-of-way for all planned water and sewer facilities prior to closing any street. If Garner fails to comply with the provisions of this paragraph, Garner shall reimburse Raleigh in full for all expenses incurred in acquiring the necessary rights-of-way by purchase or condemnation.

4.4 Existing Water and Sewer Capacity Allocations

As of July 1, 2000, Garner has an interim (non-permanent) wastewater treatment allocation from Raleigh for 2.25 million gallons per day (mgd) for average daily demand (ADD) flows. Raleigh will construct additional wastewater treatment capacity as necessary to accommodate new growth and development within the corporate limits and Urban Service Area of Garner. Said additional wastewater treatment capacity will be financed by Raleigh using revenues generated by Raleigh's schedule of water and sewer rates, fees, and charges.

As of July 1, 2000, Garner has a water supply allocation from Raleigh for 4.45 mgd for peak daily demand flows. Raleigh will construct additional water supply capacity as necessary to accommodate new growth and development within the corporate limits and Urban Service Area of Garner. Said additional water supply capacity will be financed by Raleigh using revenues generated by Raleigh's schedule of rates, fees, and charges.

4.5 Financial Assets and Closeout

The financial records of the Town of Garner water and sewer enterprise fund will be closed as of the Transfer Date of this Agreement. As of this closeout, the full amount of the Garner utility fund equity will be transferred to the City of Raleigh to be held in escrow for utilization for payments of water/wastewater debt service costs or capital improvements for the Garner system. The accounting for all other asset and liability accounts will transfer at closeout to the Raleigh water and sewer enterprise fund, subject to audit verification by the Raleigh Internal Audits Division. Garner shall write-off all inactive accounts considered uncollectable and adjust other accounts to a current status prior to Raleigh's assumption of the financial accounts.

5.0 Expansion and Extension of Water and Sewer Services

Raleigh shall provide, maintain, and extend the water and sewer systems and facilities as may be required under applicable laws and regulations so as to serve present and future demands, and in particular so as not to impede the orderly growth and development of

Garner, except as provided in Paragraph 5.1 below. Nor shall Raleigh practice or permit any discrimination against Garner in the provision of such services based upon location of the point of service within Garner or its Urban Services Area.

5.1 Growth and Development Index

The City of Raleigh will provide water and sewer services to customers in the Town of Garner within the following parameters:

1) For the period extending from the Transfer Date to December 31, 2005, the wastewater flow allocation for Garner will be limited to 3.25 MGD average day wastewater flow, and the average day water use and peak day water use allocations will be limited to 3.7 MGD and 5.0 MGD, respectively.

2) For the period extending from January 1, 2006 to December 31, 2015, the annual growth rate in average day water use, peak day water use, and average day wastewater flow will be limited to 4 percent.

3) For the period extending from January 1, 2016 to December 31, 2025, the annual growth in average day water use, peak day water use and average day wastewater flow will be limited to 3 percent.

4) For the period extending beyond January 1, 2026, the annual growth in average day water demands, peak day water demands and average day wastewater flow will be the same as for the City of Raleigh service area as determined by the Raleigh City Council.

The calculation of Garner's water and wastewater flows will be based on the summation of estimated flows for new connection permits and actual flows metered for the Garner service area. An exceedance of the prescribed growth rate in any given year will be allowed, provided it is reconciled within the following 2 years.

These growth levels would be subject to modification by the City of Raleigh if problems are encountered with the implementation of treatment plant expansions. If such is necessary, Garner's water and sewer growth capacity would be no less than 6 percent of the total treatment capacity of the Raleigh system for water and for wastewater at that time.

The City of Raleigh may offer the town of Garner additional water and sewer capacity beyond the agreed-upon indexes, on a case-by-case basis, to accommodate major industrial or commercial projects that elect to locate within Garner's Urban Services Area and provide benefits to both Raleigh and Garner. Benefits may include, but are not limited to, tax base sharing.

5.2 Requests for Service

Upon the Transfer Date, all future requests for new service connections will be made to Raleigh. Request for new services that require extensions will be first presented to Garner to assure all zoning and land use issues have been addressed then forwarded to Raleigh for approval of water and sewer plans. Both Garner and Raleigh, in conjunction with the UAC, will provide information to customers and potential customers regarding details of service. Raleigh agrees to provide existing and future water and sewer customers located within Garner's corporate or Urban Services Area limits service of a quality comparable to the quality and quantity of service provided to water and sewer customers within the municipal boundaries of Raleigh. Raleigh specifically agrees that the geographical location of the water and sewer customers in Garner or in its Urban Services Area shall not have any substantial effect on the quality of service or timing of repairs to be made by Raleigh.

5.3 Developer-Requested Extensions to the System

Subject to the provisions of this Agreement, extensions of the subject water and sewer system that are undertaken by third-party developers shall be made under the policies published and used by Raleigh, and as may be amended from time to time. Said policies shall be uniform throughout Raleigh's water and sewer system, including those areas affected by this Agreement. Raleigh may, at its discretion, make changes to the extension policies as Raleigh determines to be appropriate. Said changes shall apply to all portions of the water and sewer system operated and maintained by Raleigh, including those areas located in Garner's corporate and Urban Services Area limits.

For water and sewer extensions outside of Garner's municipal corporate limits, all applicable water and sewer extension policies that apply outside of Raleigh's corporate municipal limits will apply.

Any third-party request to Raleigh for water and sewer service extensions in Garner's corporate limits, extra-territorial jurisdiction (ETJ), or Urban Services Area (USA) will require prior written approval by Garner's governing board before the service can be provided by Raleigh.

Neither Garner nor any other public entity will be allowed to directly, or indirectly, pay any fees or charges for new customers as a part of an economic development program. Violation of this condition will constitute a breach of the Agreement.

Approval for request for service or extension under provisions of this section will not be unreasonably withheld by either Raleigh or Garner.

5.4 Garner-Requested Extensions to the System

Garner-requested extensions to the merged water and sewer system or extensions thereof required by Garner beyond those included in the Raleigh Capital Improvement Program, shall be financed by Garner and shall be accomplished by contract between Garner and Raleigh. Reasonable notice to proceed with such extensions will be provided to Raleigh by Garner, such that applicable time limitations can be met. However, under no circumstances shall Raleigh be liable to Garner for the payment of damages, penalties, fines or any other monetary recovery as a result of any failure to satisfy such time limitations for Garner-requested extensions. For extensions required due to annexation, annexation plans shall be submitted by Garner to Raleigh to evaluate the feasibility thereof under then existing conditions.

Raleigh shall reimburse Garner for costs associated with extensions by Garner in accordance with established extension and reimbursement procedures applicable to developers and customers of Raleigh.

5.5 Annexations

Any annexation considerations will be resolved based on the existing annexation agreements between Raleigh and Garner. Prior to approval of extension of service to property outside the corporate limits of Garner, Garner must require application for annexation into Garner's municipal corporate limits. Garner must require application for annexation and act on an annexation petition prior to approval to add new water and sewer customers into Garner limits.

Raleigh will provide water and sewer services to areas that cannot be annexed, only by exceptions to be considered on a case-by-case basis, to address specific health-related

concerns. All required annexations must proceed within a reasonable amount of time of committing to the provision of water and sewer service.

6.0 Employee Transfer

All existing staff of Garner's water and sewer utility system will be offered employment with Raleigh's water and sewer utility system. Garner employees that elect to transfer to Raleigh will be offered a position as equivalent as possible to their present positions with Garner. Garner employees accepting positions with Raleigh will suffer no immediate loss of pay, annual leave, sick leave, retirement benefits, or other benefits.

Garner employees transferring to Raleigh will retain equivalent tenure and longevity for annual and sick leave, retirement, and other benefits at Raleigh, as they possessed at Garner. With the exception of longevity-pay, which is addressed in Section 6.1, the rate of accrual of longevity-dependent benefits for Garner employees transferring to Raleigh will be commensurate with the rate of accrual for Raleigh employees of similar longevity.

6.1 Longevity-Pay

Garner employees transferring to Raleigh will qualify for longevity pay in accordance with the policies and procedures outlined in the *"City of Raleigh Employee Handbook"* for employees hired after June 30, 1993.

6.2 Employee Probation Period

All transferring employees will serve a six (6) months probation period during which each employee must demonstrate proficiency in the job assigned. Following the probation period, each employee will receive a performance evaluation similar to that applicable to existing water and sewer utility employees of Raleigh. For employees requesting transfer from Garner to Raleigh, it will be necessary for the employees to successfully pass a criminal background check and a drug screening.

6.3 Fund Transfers for Annual and Sick Leave

Relative to the transfer of annual leave and sick leave, Garner will transfer funds necessary for the payment of all accrued annual leave and for the payment of all accrued sick leave in excess of 60 days for each employee. Information relative to the total number of hours of accrued leave and sick leave will be provided to Raleigh prior to the Transfer Date of this Agreement.

7.0 Records Transfer

Garner shall transfer to Raleigh all available reproducible and electronic copies of any and all records, data, information, and models arising from the construction, operation and maintenance of Garner's water and sewer utility system and any other related activity, including projects in progress, and including, but not limited to, the following:

1) Construction contracts, drawings, maps, and all other related documents evidencing the condition or location of any portion of the subject water and sewer systems including such documents as may be in the possession of any engineer or other consultant of Garner;

2) Billing, collection and payment records on all present customers of the subject water and sewer systems;

3) An accurate tabulation or listing of all actual service locations in the Garner system to be transferred to Raleigh from Garner, to include:

   a) Address - Number and Street;

   b) Account Name (if active);

   c) Billing Address for Each Account Number;

   d) Account Numbers and all meter reading books and the history of all accounts for the past twelve (12) months;

   e) One Year's Account History;

   f) Meter Location Description;

4) Contracts or agreements for the supply of equipment, materials, supplies, and products;

5) Pending applications for water and sewer service;

6) Contracts or agreements to provide water and or sewer service currently in effect;

7) Receipts, accounts and other records of deposits made by all present and past customers of the subject water and sewer systems;

8) Any and all warranty information on any facilities, property, land, and equipment transferred to Raleigh pursuant to this Agreement;

9) Repair, maintenance, trouble, and emergency response records for all portions of Garner's water and sewer systems;

10) Any and all notices of violation, legal actions, and lawsuits pertaining to Garner's water and sewer system ;

11) Plans, permits, reports, specifications, surveys, etc., for water and sewer facilities and operations;

12) Number and locations of all unmetered services;

13) Copies of all water and sewer system maps;

14) Copies of all easements;

15) Copies of all encroachment agreements;

16) Identification of all inside Garner customers;

17) Identification of all outside Garner customers;

18) Record of all assessments for system extensions;

19) Identification of all taps for which payment has been made;

20) Identification of all backflow prevention installations;

21) Identification of all Pretreatment Program installations;

22) Copies of such records as are necessary to inform Raleigh of the location of all facilities of Garner for other utility operations;

23) Any other information, data, and records pertaining to Garner's water and sewer utility;

24) Accounts receivable records; and,

25) Accounts payable records.

Garner agrees that within a reasonable time after the Transfer Date, Garner shall submit to Raleigh such accounting, commercial, engineering, planning, personnel, and facility records pertaining to Garner's water and sewer utility system. Garner may make copies of said materials for Garner's records and archives. Prior to the Transfer Date, the City Manager of Raleigh and Town Manager of Garner, or their designees, shall determine mutually satisfactory administrative details for the transfer of the above-referenced records.

8.0 Customer Transfer

As of the Transfer Date, all customers and users of Garner's water and sewer system shall become subject to all rules, regulations and ordinances of Raleigh as the same apply to all users and customers of the water and sewer system of Raleigh, and as same are now or may hereafter be amended. Such rules, regulations and ordinances and schedule of rates, fees, charges and penalties shall constitute a part of the Agreement between Raleigh and any customer or user of the subject water and sewer system and any extensions thereof for the provision of water and sewer service.

A team comprised of Raleigh and Garner staff shall develop a seamless transfer of customer accounts at Transfer Date in order to provide continuity of account activity after the merger. All accounting after the Transfer Date shall be made within the Raleigh utility enterprise fund.

8.1 Customer Deposits

Garner, under the direction of the Garner Town Manager or their designee, shall apply customer's deposits held as credit against the final Town water and sewer bill.

8.2 Billing Cycles

The billing cycle for Garner water and sewer customers is currently a monthly cycle. The billing cycle for Raleigh water and sewer customers is currently a bi-monthly (every two months) cycle. As of the Transfer Date of this Agreement, Raleigh reserves the right to adjust the billing cycle for Garner water and sewer customers to a bi-monthly cycle at a time that Raleigh deems appropriate.

8.3 Water Meter Readings

Garner's water meters measure water volume in units of 1,000 gallons, and Raleigh's water meters measure water volume in units of 100 cubic feet. As of the Transfer Date of this Agreement, water and sewer customers in Garner will be billed for water and sewer service based on 100 cubic feet units. However, Raleigh will continue to collect water meter readings from Garner customers using 1,000 gallon units, and Raleigh's water billing system will convert the readings to 100 cubic feet units for the purposes of producing water and sewer bills. The replacement of Garner's gallon unit water meters with cubic feet water meters will be accomplished by Raleigh as part of Raleigh's regularly scheduled water-meter replacement program for the water system.

The transition of meter readings will be coordinated by the joint implementation team. At the Transfer Date, Raleigh shall assume all responsibility for reading all customer meters and for preparation of water and sewer bills.

9.0 Bonded Indebtedness

Raleigh agrees to pay Garner all amounts necessary to enable Garner to make all debt service payments when due and payable on all existing outstanding bonded indebtedness of Garner for water and sewer facilities covered under this Agreement. The payments required to be made in accordance with this provision of the Agreement shall be made in a timely manner, and Raleigh's obligation hereunder shall be a continuing one until all outstanding bonded indebtedness of Garner borrowed for such purposes shall have been paid in full. A statement of Garner's outstanding bonded indebtedness and a schedule of the debt service to be made pursuant to this provision of the Agreement shall be submitted to Raleigh prior to the Transfer Date of this Agreement (See Exhibit E). Garner agrees to cooperate with Raleigh in determining opportunities for early retirement or refinancing of any of the outstanding debt, when such adjustments are permitted by the bonding agencies, and Raleigh retains the right to exercise an option of debt refinancing or retirement if costs to the water and sewer utility can be lowered as a result.

10.0 Prior Agreements

All prior agreements between Garner and Raleigh pertaining to water and sewer services are rescinded as of the Transfer Date.

10.1 Existing Commitments

Garner has certain commitments to developers of residential and non-residential projects inside and outside the corporate boundaries of Garner.

Garner will install the meters, set the boxes, and collect tap fees in all of such developments to fulfill its existing commitments prior to Transfer Date. Such completed services shall become a part of the property to be conveyed herein from Garner to Raleigh. If any commitments are left outstanding as of the Transfer Date, Garner agrees to accept full financial responsibility to resolve the commitment.

10.2 Existing Agreements

Raleigh shall assume and honor all existing developer (as of the Transfer Date) contracts previously entered into by Garner concerning Garner's water and sewer system; provided that such contracts that require expenditure of Raleigh funds shall be reimbursed by Garner in full within thirty (30) days after receipt of an invoice from Raleigh. Any such contract or agreement with third parties entered into by Garner between the Effective Date and the Transfer Date shall require approval by Raleigh.

10.3 Discriminatory Agreement Disclaimer

No existing special, discriminatory agreements with specific customers will be continued, honored, or assumed by Raleigh.

Garner represents and warrants to Raleigh that there are no discriminatory agreements between Garner and any customer or user of Garner's water and sewer system which will nor may survive this Agreement and be binding upon Raleigh. For purposes of this Agreement, a discriminatory agreement is any agreement, contract or other understanding

between Garner and any customer or user of Garner's water and sewer system that provides that:

1. Water and sewer service be extended and provided in a different manner than such service is extended and provided to the remaining customers or users of Garner's water and sewer system as to quality, quantity, or any other aspect of extending and providing such service;

2. Water and sewer service be extended and provided upon the payment of a different schedule of rates, fees, charges, or penalties than is imposed upon the remaining customers or users of Garner's water and sewer system;

3. Water and sewer service be extended and provided at a different cost or schedule for reimbursement of costs or any other aspect of paying for the extension and provision of water and sewer service than is imposed upon the remaining customers or users of Garner's water and sewer system.

In the event that an unlawful discriminatory agreement exists and survives this Agreement, and is determined to be binding upon Raleigh, Garner shall indemnify and hold Raleigh harmless from any and all demands, claims, or actions (including the reasonable costs, expenses and attorney fees incurred by Raleigh), of such discriminatory agreement. Further, Garner shall indemnify and hold Raleigh harmless from any and all demands, claims, or actions, without regard to the relief sought or awarded and without regard to whether the claim, demand or action is raised by a party to the discriminatory agreement.

11.0 Conflict/ Default Resolution

In the event of conflict or default that might arise for matters associated with this Agreement, the parties involved agree to informally and formally communicate to resolve the conflict. If this communication is not successful in resolving the conflict, the matter will be presented to the City Manager of Raleigh and the Town Manager of Garner for resolution. If the Managers are unable to resolve the conflict, the matter will be presented to the respective governing boards for resolution.

12.0 Fire Protection Services

Raleigh shall be responsible for maintaining fire hydrants and services in a reasonable manner at a level equivalent to that maintained by Garner at time of transfer of the system. This level of service shall include hydrant spacing, hydrant maintenance, and water volume and pressure available at the hydrant. Raleigh shall coordinate with the Garner Fire Department for necessary testing to be done by the Garner Fire Department.

13.0 Ordinances to be Adopted

As a condition of entering into this Agreement, Garner shall adopt such ordinances as are reasonably necessary to regulate the proper use of the subject water and sewer system and any extensions thereof by the customers and users within the jurisdiction of Garner. Said ordinances shall be reviewed and approved by Raleigh prior to adoption by Garner, and will further grant to Raleigh all administrative, permitting, regulatory, and enforcement authority necessary for the regulation, operation, maintenance, and improvement of the water and sewer systems serving the corporate and Urban Services Area limits of Garner. Garner shall maintain updates and enforce such ordinances. Raleigh shall reimburse Garner for the reasonable expenses of enforcing such ordinances. Said ordinances shall have the same

or similar provisions as are included in Raleigh's use ordinance related to Raleigh's water and sewer utility system.

14.0 Amendment to Agreement

This agreement may be amended only by a document in writing, approved by the Town Council of Garner and the City Council of Raleigh and executed by the respective Mayors.

15.0 Customer Notification

Garner agrees to use all practical means, including direct mailing, to notify customers of changes associated with this merger. Such notification shall include information on schedule and mechanics of transfer and information concerning Raleigh's policies and procedures.

16.0 Severability

It is hereby the declared intention of Garner and Raleigh that the paragraphs, sections, sentences, clauses, and phrases of this agreement are severable. If one or more paragraphs, sections sentences, clauses, or phrases shall be declared void, invalid or otherwise unenforceable for any reason by the valid, final judgment or decree of any court of competent jurisdiction, such judgment or decree shall not affect the remaining provisions of this agreement and the same shall continue to be fully effective and enforceable on the basis that said remaining provisions would have been agreed to by Garner and Raleigh without the incorporation of such void, invalid or otherwise unenforceable paragraph, section, sentence, clause or phrase.

17.0 Notices

Whenever written notice is required under this agreement, said notice shall be sufficient when received by the Town Manager of Garner and the City Manager of Raleigh. Said notice may be mailed or hand-delivered but shall not be effective unless actually received.

Approved this _____day of _____2000

Town of Garner

BY:_____

Attest:

_____

Town Clerk

City of Raleigh

BY:_____

Attest:

_____

City Clerk

EXHIBITS

Exhibit A	Fixed Assets to be Transferred
Exhibit B	List of Real Property, Easements and Encroachments Agreements
Exhibit C	Water and Sewer Utility Property and Fixed Assets to be Retained by Garner
Exhibit D	Schedule of Upgrades and Improvements
Exhibit E	Bonded Indebtedness

Exhibit D

Schedule of Garner Water and Sewer System Upgrades and Improvements

EXHIBIT D-1
Summary of System Upgrade and Improvement Projects
Schedule of Water and Sewer System Upgrades and Improvements

Project Identifier	Project Description[1]	Estimated Construction Cost (2000 Dollars)	Engineering and Admin. Allowance (10%)	Total Estimated Project Cost	Estimated Year of Construction
Water System:					
WS-001	Diesel standby generators, Garner (75 KW) and K-Mart (125 KW) Booster Pump Stations	$118,000	$12,000	$130,000	2002
WS-002	Chemical feed system upgrades, Garner and K-Mart Booster Pump Stations, to City of Raleigh standards	$211,000	$21,000	$232,000	2002
WS-003	Telemetry upgrades, Garner/K-Mart/Jones Sausage Booster Pump Stations, to City of Raleigh standards	$105,000	$11,000	$116,000	2002
WS-004	Telemetry upgrades, elevated water storage tanks, to City of Raleigh standards	$105,000	$11,000	$116,000	2002
WS-005	12-inch line, Wilmington Rd from Jones Sausage Rd Pump Station to Creech Rd (~5,600 ft)	$585,000	$59,000	$644,000	2003
WS-006	Altitude Valve, Rand Mill Storage Tank	$53,000	$5,000	$58,000	2003
WS-007	Altitude Valve, Penny St Storage Tank	$53,000	$5,000	$58,000	2003
WS-008	8-inch line, East Garner Rd from existing 6-inch main to Jones Sausage Rd (~2,200 ft)	$178,000	$18,000	$196,000	2010
Total Estimated Cost, Water System Projects:				$1,550,000	

[1]For a narrative description of projects, please refer to Attachment 1B – Project Descriptions

EXHIBIT D-1
Summary of System Upgrade and Improvement Projects
Schedule of Water and Sewer System Upgrades and Improvements

Project Identifier	Project Description[1]	Estimated Construction Cost (2000 Dollars)	Engineering and Admin. Allowance (10%)	Total Estimated Project Cost	Estimated Year of Construction
Wastewater Collection, Conveyance and Pumping System:					
WW-001	Collection System Infiltration & Inflow Evaluations and follow-up repair projects	$500,000	$300,000	$800,000	2001
WW-002	Pump Station Standby Electrical Power upgrades	$602,000	$61,000	$663,000	2002
WW-003	Wastewater collection line upgrades, Northside and CP&L/Adams Branch outfalls, NAPA PS, approximately 4,100 ft of collection line, sizes from 10-inch to 15-inch	$480,000	$48,000	$528,000	2002
WW-004	Upgrades to Aversboro pump station to accommodate Eagle Ridge flows	$300,000	$30,000	$330,000	2002
WW-005	Replace existing Morris/Industrial Park pump station with duplex, wet pit submersible station	$279,000	$28,000	$307,000	2003
WW-006	Pump Station Telemetry upgrades	$456,000	$46,000	$502,000	2003
WW-007	New 20-inch DIP force main from NC 50 PS to Clifford Rd, ~4,900 ft	$841,000	$84,000	$925,000	2005
WW-008	New 24-inch DIP force main from New Bethel Ch Rd @ Clifford to Raleigh outfall @ PepsiCo	$5,433,000	$543,000	$5,976,000	2005
WW-009	Rehab/Upgrade NC 50 Pump Station (triplex centrifugal pumps, ~125 HP each)	$631,000	$63,000	$694,000	2005
WW-010	Remove Southside, Heather Hills and Tiffany Woods pump stations from service	$21,000	$2,000	$21,000	2006
WW-011	New 16-inch DIP force main from White Oak PS to Hebron Ch Rd , ~10,500 ft	$2,002,000	$200,000	$2,202,000	2007

EXHIBIT D-1
Summary of System Upgrade and Improvement Projects
Schedule of Water and Sewer System Upgrades and Improvements

Project Identifier	Project Description[1]	Estimated Construction Cost (2000 Dollars)	Engineering and Admin. Allowance (10%)	Total Estimated Project Cost	Estimated Year of Construction
WW-012	Replace existing Garner Park and Creech Road pump stations with a duplex, wet pit submersible station serving both areas, with connecting 8-inch sewer	$371,000	$37,000	$408,000	2007
Total Estimated Cost, Wastewater Collection, Conveyance & Pumping System Projects:				$13,356,000	
Wastewater Treatment Facilities:					
WT-001	Decommission 201 Spray Application Facility	$1,512,000	$152,000	$1,664,000	2005
WT-002	Decommission Wastewater Pretreatment Facility	$153,000	$15,000	$168,000	2005
Total Estimated Cost, Wastewater Treatment Facilities Projects:				$1,832,000	
Total Estimated Cost of Upgrade and Improvement Projects:				$16,738,000	

[1]For a narrative description of projects, please refer to Attachment 1B – Project Descriptions

EXHIBIT D-2
Schedule of System Upgrades and Improvements:
Project Descriptions
Schedule of Water and Sewer System Upgrades and Improvements

Project Identifier	Project Summary and Scope
WS-001	Project installs diesel standby generators for backup electrical supply at the Garner Water Booster Pump Station (75 KW generator) and K-Mart Booster Pump Station (125 KW). Projects include generators, above-ground fuel storage tanks, and concrete pads for generators and tanks.
WS-002	Project upgrades chemical feed systems at Garner and K-Mart Booster Pump Stations to City of Raleigh standards, including sodium hypochlorite and ammonia storage, mixing and metering, and permanent chemical storage areas.
WS-003	Project upgrades telemetry systems at existing Garner and K-Mart Booster Pump Stations and proposed Jones Sausage Road Booster Pump Station to City of Raleigh standards, including programmable logic controllers, radios, antennas, cabling and ancillary equipment to fabricate remote telemetry units at each location.
WS-004	Project upgrades telemetry systems at three existing elevated water storage tanks to City of Raleigh standards, including programmable logic controllers, radios, antennas, cabling and ancillary equipment to fabricate remote telemetry units at all three locations.
WS-005	Project installs a new 12-inch water distribution line along Wilmington Rd from Jones Sausage Rd Pump Station to Creech Rd (~5,600 ft), including pipe, bedding, excavation, backfill, and pavement repair.
WS-006	Project installs an altitude valve at the Town's Rand Mill elevated storage tank.
WS-007	Project installs an altitude valve at the Town's Penny St elevated storage tank.
WS-008	Project installs a new 8-inch water distribution line along East Garner Rd from existing 6-inch main to Jones Sausage Rd (~2,200 ft), including pipe, bedding, excavation, backfill, and pavement repair.

EXHIBIT D-2
Schedule of System Upgrades and Improvements:
Project Descriptions
Schedule of Water and Sewer System Upgrades and Improvements

Project Identifier	Project Summary and Scope
WW-001	Project completes a comprehensive evaluation of the Town's existing wastewater collection system, covering gravity sewers, force mains and pump stations, to address the following: 1. Review GIS/Mapping/Record Drawings to validate system maps and existing data on system 2. Conduct and document Preventive Maintenance Cleaning program for gravity sewers to include post-cleaning CCTV inspection to locate pipe defects. 3. Develop appropriate gravity sewer system rehabilitation program, based on the findings of the Preventive Maintenance Cleaning Program. 4. Conduct field hydraulic testing at pump stations to assess condition and operating parameters, including notation of structural issues Project includes a budget for repair of pipe defects discovered during cleaning and inspection.
WW-002	Project provides permanently installed backup electrical generators at 13 wastewater pump stations, including diesel or gasoline generators, above-ground fuel storage tanks, fencing and concrete pads for generators and tanks.
WW-003	Project upgrades wastewater collection lines for sections of Northside and CP&L/Adams Branch outfalls, to relieve existing capacity restrictions. Approximately 4,100 ft of collection line are targeted for replacement or installation of parallel lines, with sizes of new pipe ranging from 10-inch to 15-inch. Pump upgrades to be provided at NAPA pump station. Routing to be primarily along existing roads.
WW-004	Project installs new pumps at Aversboro pump station, a duplex, wet-pit submersible station (upgrade from three 29 HP pumps to ~50 HP each). Project includes all civil, mechanical, electrical and instrumentation work required to City of Raleigh standards; structural modifications to wet well are not anticipated. Project also provides piping upgrades to new Eagle Ridge pump station and force main to accommodate additional flows beyond Eagle Ridge Golf Community.
WW-005	Project replaces existing Morris/Industrial Park pump station, a simplex pump manhole installation, with a duplex, wet pit submersible station (pumps ~10 HP each) at adjacent location. Project includes rehabilitation of station discharge piping, electrical and control systems, and telemetry upgrades
WW-006	Project upgrades telemetry systems at 15 existing wastewater pump stations to City of Raleigh standards, including programmable logic controllers, radios, antennas, cabling and ancillary equipment to fabricate remote telemetry units at each location.

EXHIBIT D-2
Schedule of System Upgrades and Improvements:
Project Descriptions
Schedule of Water and Sewer System Upgrades and Improvements

Project Identifier	Project Summary and Scope
WW-007	Project installs new 20-inch DIP wastewater force main from existing NC 50 Pump Station along Oregon Tr and New Bethel Ch Rd to Clifford Rd Intersection (~4,900 ft). Routing to be primarily along existing roads and following routing of existing PVC force main. Following installation of this new force main, project abandons portion of existing PVC force main along same route to the 201 Facility (remainder of existing force main remains in use until projects WW-008 and WW-009 are completed).
WW-008	Project installs new 20-inch DIP wastewater force main from New Bethel Ch Rd @ Clifford Rd Intersection and continuing along Clifford Rd, terminating at intersection with Hebron Ch Rd , a distance of approximately 5,600 ft. Project also installs a new 24-inch DIP force main from the intersection of Hebron Ch Rd and Clifford Rd to outfall into the existing 24-inch City of Raleigh gravity sewer @ PepsiCo facility, a distance of approximately 22,900 ft. Routing to be primarily along existing roads. Downstream section of FM includes a siphon and boring installation under Interstate 40. Following installation of this new force main and project WW-009, project abandons existing PVC force main along New Bethel Ch Rd to 201 Facility.
WW-009	Project upgrades NC 50 Pump Station to increase firm capacity to approximately 4 mgd, to handle flows from south portion of Town collection system into City collection system. New pump arrangement is triplex, submersible centrifugal pumps, ~125 HP each. Project also includes rehabilitation and expansion of existing wet well, access and support steel, discharge piping, electrical and control systems, and telemetry upgrades.
WW-010	Project removes Beaver Dam, Southside, Heather Hills and Tiffany Woods wastewater pump stations from service by removing pumps, power supplies and level sensing equipment. Demolition of station wet wells or electrical/control panels is not included under this project.
WW-011	Project installs new 16-inch DIP wastewater force main from existing White Oak Pump Station to intersection of Winn Rd with Hebron Ch Rd, a distance of approximately 15,100 ft. Routing to be primarily along existing roads. Project includes boring installation under Interstate 40. Following installation of this new force main, project abandons existing PVC force main along same route to the 201 Facility.
WW-012	Project replaces existing Garner Park and Creech Road wastewater pump stations, both simplex pump manhole installations, with one duplex, wet pit submersible station (pumps ~10 HP each) at Garner Park which serves both areas. Project includes an 8-inch PVC connecting sewer from Creech Rd to the pump station wet well.

EXHIBIT D-2
Schedule of System Upgrades and Improvements:
Project Descriptions
Schedule of Water and Sewer System Upgrades and Improvements

Project Identifier	Project Summary and Scope
WT-001	Project decommissions Town of Garner 201 Spray Application Facility, including dredging, removal and disposal of wastes from two 25-acre flow stabilization ponds, salvage of pumping and irrigation equipment, and associated site work. Continuing groundwater monitoring program will be required for a period to be established by DENR.
WT-002	Project decommissions Town of Garner Pretreatment Facility, including dredging, removal and disposal of wastes from two treatment lagoons totaling 2.7 acres, salvage of pumping and aeration equipment, and associated site work. Continuing groundwater monitoring program will be required for a period to be established by DENR.

Merger Agreement

Merging
The Water and Sewer Utility Systems
of
Knightdale, North Carolina
And
Raleigh, North Carolina

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STATE OF NORTH CAROLINA

COUNTY OF WAKE

AGREEMENT

This Agreement is made and entered into by and between the Town of Knightdale, a North Carolina municipal corporation, duly organized and existing under the laws of the State of North Carolina, hereinafter referred to as “Knightdale”, and the City of Raleigh, a North Carolina municipal corporation, duly organized and existing under the laws of the State of North Carolina, hereinafter referred to as “Raleigh”.

The purposes of this Agreement are to:

- Assure the continued provision of high quality, reliable, economical, safe and sanitary water and sewer service within the present and future corporate limits and Urban Service Area limits of Knightdale;
- Provide for the orderly and permanent transfer of responsibility for the ownership, construction, operation, maintenance, management, and financing of Knightdale’s water and sewer utility system from Knightdale to Raleigh, and;
- Transfer the managerial, operational, and financial responsibility of operating, maintaining, and expanding the water and sewer utility systems serving the present and future corporate limits and Urban Service Area limits of Knightdale from Knightdale to Raleigh.

WHEREAS, Article 20, Interlocal Cooperation of North Carolina General Statutes 160A authorizes and empowers any units of local government to enter into interlocal agreements for the ownership, construction, operation, maintenance, management, and financing of all or portions of water and sewer utility systems within or outside the corporate limits of those units of local government;

WHEREAS, Knightdale owns, operates, and maintains water and sewer utility systems within and outside its corporate limits;

WHEREAS, Knightdale desires to transfer its water and sewer utility systems to Raleigh in accordance with the terms and conditions hereinafter stated;

WHEREAS, Raleigh agrees to assume full responsibility for the provision of water and sewer services in Knightdale, including responsibility for Knightdale’s water and sewer utility systems and related equipment and property rights;

WHEREAS, Raleigh further agrees to operate, maintain and expand said water and sewer systems to accommodate planned growth and development within Knightdale’s planning and zoning jurisdiction in accordance with the terms and conditions hereinafter stated;

NOW, THEREFORE, for the considerations hereinafter stated, the parties do agree as follows:

a) This Agreement shall be perpetual. Knightdale and Raleigh hereby agree that such perpetual duration is reasonable and necessary in light of the purposes of this Agreement.

b) No joint agency is established by this Agreement.

c) Raleigh shall have the sole responsibility and authority to appoint or otherwise employ the personnel necessary for the implementation of this Agreement.

d) The responsibility for financing the construction, operation and maintenance of the merged water and sewer system and any extensions thereof shall be in accordance with the terms of this Agreement. Raleigh shall be entitled to the receipt of all revenues from the merged water and sewer system and any extensions thereof.

e) Knightdale agrees and grants the authority for appropriate employees of Raleigh to work and act in Knightdale as necessary to carry out the purposes of this agreement as appropriate under the ordinances and regulations of both Raleigh and Knightdale.

f) Knightdale shall transfer to Raleigh and its assignees or successors, and Raleigh and its assignees and successors shall receive from Knightdale, in accordance with the terms and conditions set forth in this Agreement:

   i) All pipes, water lines, hydrants, sewer lines, pump stations, force mains, mains, meters, meter boxes, and service laterals, elevated water tanks, maintenance facilities, and all other appurtenances normally associated with, and owned by Knightdale, and presently in use within Knightdale's water and sewer system (See Exhibit A);

   ii) All of Knightdale's rights, titles and interests in land, easements, and encroachment agreements necessary to own and operate Knightdale's water and sewer systems. All of the property and rights described above shall be hereafter referred to as "the Property" (See Exhibit B);

   iii) All property currently used in the operation of the water and sewer system, but that is to be retained by Knightdale, will be identified prior to the Transfer Date as defined in this Agreement (See Exhibit C);

g) Raleigh shall have the right to exercise its power of eminent domain within the current and future municipal and planning limits of Knightdale for activities necessary to fulfill Raleigh's water and sewer service obligations defined in this Agreement; and

h) Cost of the transfer of ownership of the systems from Knightdale to Raleigh will be borne by Raleigh, and will be recovered through the water and sewer rates, fees, and charges that will be charged to Knightdale customers as set forth in this Agreement.

1.0 Definitions

The following words and phrases are defined as set forth below when used in this Agreement, unless a contrary meaning is clearly required by the context in which the word or phrase is used:

1.1 **Effective Date:** The date on which all of this Agreement is approved and signed by all parties.

1.2 **Transfer Date or Closing Date:** The date on which title or leasehold to the subject water and sewer system passes from Knightdale to Raleigh, which shall be a reasonable time after the Effective Date of this Agreement.

1.3 **Systems:** The real and personal property comprising Knightdale's water and sewer system which is to be transferred to Raleigh.

1.4 **Inside City Rate(s):** The rate(s) charged by Raleigh to the water and sewer customers inside the corporate limits of Raleigh.

1.5 **Outside City Rate(s):** The rate(s) charged by Raleigh to the water and sewer customers outside the corporate limits of Raleigh.

2.0 Transfer Date

The City Manager of Raleigh and the Town Manager of Knightdale, or their designees, shall be responsible for determining all implementation details related to this Agreement not specifically addressed in this Agreement. The Transfer Date for this Agreement is May 1, 2006. The Transfer Date shall not be delayed unreasonably by either party.

2.1 Due Diligence Assessment

Upon execution of the Agreement, the City of Raleigh and the Town of Knightdale will conduct a final due diligence assessment for the merger. The activities of the due diligence assessment will be completed by March 1, 2006.

The purpose of the due diligence assessment will be to verify that the merger can be accomplished in accordance with the assumptions used to develop the terms and conditions of the Agreement, including the revenue and expense projections used to develop the business/financial plan for the merger.

The due diligence assessment will include, but is not limited to, a review of the capital improvements plan, operations plan, employee transfer plan and customer information/billing migration plan required to implement the merger. The findings of the due diligence assessment will be submitted to the City Manager of Raleigh and the Town Manager of Knightdale in the form of a summary report.

2.2 Due Diligence Disposition

If the City Manager of Raleigh and the Town Manager of Knightdale determine that the merger can proceed in accordance with the terms and conditions of the Agreement, then the City Manager of Raleigh and the Town Manager of Knightdale will submit a letter to their respective governing boards documenting the completion of the due diligence assessment, and confirming that the Transfer Date for the merger will be May 1, 2006.

If the City Manager of Raleigh and the Town Manager of Knightdale determine that the merger can not proceed in accordance with the terms and conditions of the Agreement, then the City Manager of Raleigh and the Town Manager of Knightdale will notify their respective governing boards and conduct additional studies and analyses as required to address specific issues of concern. The Transfer Date will be deferred until the additional studies and analyses have been completed and the issues of concern have been addressed to the mutual satisfaction of the City Manager of Raleigh and the Town Manager of Knightdale.

If upon completion of the additional studies and analyses, the issues of concern can not be resolved to the mutual satisfaction of the City Manager of Raleigh and the Town Manager of

Knightdale, then either party can terminate this Agreement by providing written notice to the other party.

3.0 Responsibility for Merged System

Upon the Transfer Date, Raleigh shall assume immediate and sole duty and responsibility for financing; operating; maintaining; improving; and expanding the water and sewer systems serving Knightdale's existing and future corporate limits and Urban Services Area. Knightdale water and sewer system planning activities will be performed in accordance with the terms of Section 3.1 of this Agreement. Prior to the Transfer Date, Knightdale will be responsible for the operation and maintenance of Knightdale's water and sewer system. During the period after the Effective Date, but prior to the Transfer Date, Knightdale will be responsible for the expansions to the Knightdale water and sewer system, but will solicit participation from City of Raleigh staff regarding design standards and utility operations planning, to ensure that future expansions are in accordance with City of Raleigh policies, standards, and procedures. After the Transfer Date, Knightdale's water and sewer system shall be fully incorporated into the water and sewer system operated and maintained by Raleigh. Said duty and responsibility shall be in accordance with current and future policies, standards, and procedures of Raleigh, and shall be applied in the same extent and in the same manner as applied to other inside city customers of Raleigh. Said duty shall involve the input and recommendations from the Water and Sewer Utility Advisory Committee addressed in Section 3.1 below.

3.1 Water and Sewer Utility Advisory Committee

Prior to the Transfer Date, a permanent Water and Sewer Utility Advisory Committee (UAC) will be established and shall meet periodically at a frequency to be determined by the City Manager of Raleigh, the Town Manager of Garner, the Town Manager of Rolesville, the Town Manager of Wake Forest, and the Town Manager of Knightdale to review and develop planning recommendations for the upgrade, expansion, and extension of water and sewer utility services in Knightdale service areas. The Utility Advisory Committee will periodically report its findings and recommendations to the City/ Town Managers of all parties to the UAC. The ultimate responsibility for the operation of the merged water and sewer system shall be the City of Raleigh. The role of the UAC will be limited to an advisory role. The composition of the UAC will be as follows:

- Two staff members appointed by the Raleigh City Manager
- Two staff members appointed by the Garner Town Manager
- Two staff members appointed by the Rolesville Town Manager
- Two staff members appointed by the Wake Forest Town Manager
- Two staff members appointed by the Knightdale Town Manager
- Planning Director, Wake County

As other utilities join the merged water and sewer utility, additional members may be added to the Utility Advisory Committee.

3.2 Name of Merged Water and Sewer Utility

The name of the merged water and sewer utility will be the City of Raleigh Public Utilities Department. Raleigh may, at its discretion, change the name of the utility to correspond to Raleigh's broader regional role as future growth or mergers with other water and sewer service providers occur.

3.3 Right to Operate

Knightdale hereby irrevocably grants Raleigh the right to design, construct, operate, maintain and perform all related activities required to operate, maintain, expand, upgrade and improve Knightdale's existing water and sewer utility system in accordance with Raleigh's water and sewer utility system standards and policies for operation and performance, level of service, reliability, and redundancy. Said Right to Operate includes the encroachment authority for Raleigh to operate in all public rights-of-way over which Knightdale has the sole authority or joint authority with the North Carolina Department of Transportation. Said water and sewer utility system standards and policies shall be applied in Knightdale to the same extent and in the same manner as applied to other customers of Raleigh's water and sewer utility system.

In all instances, Raleigh or its authorized contractor shall be required to restore and repair any street or other property of Knightdale upon the completion of any construction, operation, maintenance, replacement, improvement or related activity causing damage thereto. Said restoration or repair shall be to the standards acceptable to Knightdale and shall be subject to inspection by Knightdale. As an alternative, Knightdale will provide street patching at Knightdale standards and charge Raleigh on a quarterly basis for such service.

3.4 System Upgrades and Improvements

Raleigh shall undertake and complete all activities relating to the design; construction; startup; and operation of the system upgrade and improvement projects agreed upon as a part of this Agreement and listed in Exhibit D, including the purchases of an additional 2.07 million gallons per day of water capacity (based on the maximum day usage) and an additional 0.9 million gallons per day of wastewater capacity (based on average day usage), to be included in exhibit D at $3.55 per gallon for water, for a total water capacity cost of $7,348,500; and at $3.60 per gallon for wastewater, for a total wastewater capacity cost of $3,240,000.

Said upgrade and improvement projects will be undertaken and completed by Raleigh to upgrade and improve Knightdale's water and sewer system in accordance with Raleigh's water and sewer utility system standards for operation and performance, level of service, reliability, and redundancy. Raleigh may, at its discretion, undertake alternative upgrade and improvement projects that accomplish the same purposes as the projects agreed upon. In the event the alternative project is an enhancement and more costly than the project as defined in Exhibit D based upon an up to date cost estimate and quote (and which is agreed to be a design upgrade beyond the original project scope which does not provide commensurate benefits to the present Knightdale service area), then the increased cost shall be borne by Raleigh.

Any upgrades by Raleigh beyond those outlined in Exhibit D will be accomplished in accordance with Raleigh's normal operations and capital program prioritization process. Raleigh will notify in writing, and confer with representatives of Knightdale's governing Board and the UAC, before final adoption of any upgrade and improvement projects beyond those outlined in Exhibit D, any water and sewer utility system expansion program, or water and

sewer system master plan or capital improvements plan affecting the water and sewer systems within the corporate or Urban Service Area limits of Knightdale.

The costs for the upgrade and improvement projects will be recovered from customers located in Knightdale's municipal corporate and Urban Services Area limits through the schedule of rates, fees and charges as described elsewhere in this Agreement. Cost-sharing for projects of mutual benefit to Knightdale and other municipalities will be reviewed on a case-by-case basis.

3.5 Notices of Violation

In the event that fines or penalties are levied by the State of North Carolina for violation of Knightdale water or wastewater system permits following the Transfer Date, payment of fines for notices of violations will be paid by Raleigh. Any fines or penalties for actions prior to the Transfer Date will be paid completely by the Town of Knightdale.

3.6 Rates, Fees, Charges, and Penalties

Raleigh shall have the sole responsibility and authority to establish and set rates, fees, charges, and penalties necessary for the operation, maintenance, upgrade, improvement, and expansion of the water and sewer utility system. Subject to the provisions hereof, it is intended that the expansion, upgrade, improvement, operation and maintenance of the water and sewer system shall be on a self-sustaining basis. All revenues of Raleigh water and sewer utility shall be used exclusively by the water and sewer utility fund for direct and indirect costs of the water and sewer utility operations. In maintaining and operating the water and sewer system, Raleigh will:

1) Set and charge reasonable rates, based on cost of service principles, to all classes of users of the water and sewer system;

2) Operate and maintain the water and sewer system at the lowest possible rates, consistent with Raleigh's obligation and commitment to provide proper, efficient, and environmentally sound water and sewer services now and in the future;

3) Use the revenues of the water and sewer system for:

    a) The maintenance and operation of the water and sewer system,

    b) The payment of debt service or other debt instruments issued therefore, and the funding of resources in connection with the issuance of such debt for the water and sewer system,

    c) The expansion, extension, upgrade, and improvement of the water and sewer system and such other purposes as Raleigh may deem proper for the operation of the water and sewer system,

    d) Watershed protection activities, or

    e) Other lawful public purposes.

3.7 Schedules of Rates, Fees, Charges, and Penalties

Raleigh shall apply to customers located in Knightdale's corporate limits and Urban Services Area a schedule of rates, fees and charges sufficient to recover all of the costs, as determined by Raleigh, required to accomplish the water and sewer utility merger between Raleigh and Knightdale. Said costs will include, but not be limited to, capital upgrades and

improvements, administration and other transfer costs directly related to the water and sewer utility merger.

Capital cost estimates for system upgrade and improvement projects are listed in Exhibit D. It is understood that the actual costs for the upgrade and improvement projects may vary from the estimated costs presented in Exhibit D because of changes in scope, site conditions, schedule or other factors beyond the control of Raleigh. Potential cost increases resulting from factors beyond the control of Raleigh will be recovered through the schedules of rates, fees and charges applied to customers in the Knightdale service area.

The cost recovery program for the water and sewer utility merger will be phased over a 12-year period. The schedule of estimated revenues and expenses for the Knightdale service area is presented in Exhibit E. The sequence of rates, fees and charges to be applied to customers in the Knightdale area during this period is scheduled as follows:

1) For the period extending from the Transfer Date to June 30, 2010, the consumptive retail rate for Knightdale customers will remain the same as in effect on the Transfer Date. For the period extending from July 1, 2010 to June 30, 2013, the base water and sewer charge and water and sewer consumptive retail rates for Knightdale customers will increase by 9 percent above the rate in effect on the Transfer Date. For the period extending from July 1, 2013 to March 31, 2018, the base water and sewer charge and water and sewer consumptive retail rate for Knightdale customers will increase by 9 percent.

2) For the period extending from July 1, 2010 to April 30, 2018, a surcharge may be applied to the consumptive retail rate of Knightdale customers if:

   a) The actual capital costs, and associated annual debt service, exceed the estimated capital costs for the upgrade and improvement projects identified in Exhibit D, or

   b) The actual revenue from the Knightdale service area is insufficient to recover all of the merger-related costs within the 12-year period.

   If a surcharge is required, then the surcharge will apply for a future period to be determined based upon the recovery period projected as of July 1, 2010.

3) After April 30, 2018, the consumptive retail rate for Knightdale customers will be same as for Raleigh customers, subject to any continuing surcharge that may be added to the rates in subparagraph 2 above.

4) If net revenues collected from the Knightdale service area during the approximate 10 year period exceed the merger-related costs as defined by Raleigh, and as verified by audit, then Raleigh shall offer one of two options to Knightdale, the choice being solely that of Knightdale. The first option is to apply the excess revenues toward the purchase of additional water and/or sewer capacity allocations beyond the agreed upon indexes specified in Section 5.1. The second option is to adjust the consumptive retail rate for Knightdale customers to the same as Raleigh customers prior to the date in paragraph 3.7.3, above. In the event the additional capacity allocations is chosen, the quantity of additional water and/or sewer capacity under this provision will be determined by dividing the excess revenues by the City of Raleigh water and/or wastewater capacity fee(s) in effect at the time that the calculation is taking place.

Knightdale's non-consumption fees and charges related to utility service, such as acreage fees, capacity fees, frontage fees, Neuse River nitrogen fees and utility connection ("tap")

charges will continue to be assessed and collected by the Knightdale customer service center, and remitted to Raleigh, until all said merger costs have been fully recovered.

Once all said merger costs have been fully recovered, Raleigh shall apply rates and non-consumption fees and charges to customers located inside the municipal limits of Knightdale that are equivalent to those that are being charged to customers inside the municipal limits of Raleigh, and shall apply rates and non-consumption fees and charges to customers located outside the municipal limits of Knightdale that are equivalent to those that are being charged to customers outside the municipal limits of Raleigh. During the approximate12-year period from May 1, 2006, through April 30, 2018, Raleigh shall provide Knightdale with an annual statement summarizing the status of Knightdale utility revenues and merger costs as compared to original estimates.

Raleigh will provide at least thirty (30) days written notice to Knightdale customers prior to adopting any revisions to the schedule of rates, fees, and charges.

4.0 Knightdale Existing Facilities and Property

Knightdale's water and sewer utility system provides water and sewer service to approximately 7300 persons through approximately 2800 water and 2554 sewer accounts. Knightdale's water distribution system consists of approximately 30 miles of water mains and 2 elevated storage tanks. Knightdale's water is supplied by contract with the City of Raleigh.

Knightdale's wastewater management system consists of approximately 30 miles of gravity and pressure mains and 7 wastewater-pumping stations. Wastewater is treated by contract with the City of Raleigh.

4.1 Representation and Warranties by Knightdale

Knightdale makes the following representations and warranties to Raleigh:

1) Knightdale is the sole owner of all water and sewer lines, pipes, meters, valves, meter boxes, laterals, and any other property transferred to Raleigh under the terms and conditions of this Agreement, and

2) Said facilities, property, land, equipment, information, and data is free and clear of all encumbrances (except as it may be included in the full, faith and credit of Knightdale as a part of existing bonded indebtedness or loans). In the event that Knightdale's bonds have provisions that do not allow the sale of the systems while bonds are outstanding, Knightdale and Raleigh agree to enter into a long term leasing arrangement for the portions of the system that are affected until such time as the bonds are retired. Upon retirement of the bonds, the full ownership transfer will take place.

4.2 Property Transfer

Upon the Transfer Date of this Agreement, a Bill of Sale shall be executed by Knightdale to transfer ownership of all facilities, property, land, equipment, financial assets, information, and data subject to this Agreement to Raleigh. Such documents shall be sufficient to convey to Raleigh all of Knightdale's right, title, and interest in Knightdale's water and sewer system, including easements and rights-of-way, whether or not recorded. Said rights-of-way shall include the right to operate and maintain the subject water and sewer system within any public streets within Knightdale. Any documents needed to memorialize this passage of title shall not be required to contain any warranties of condition or title, except as expressly

set forth herein. A quit-claim deed shall be executed by Knightdale to convey all interests in real property and improvements thereto which are subject to this Agreement.

Knightdale shall cooperate with Raleigh in establishing title to any portion of Knightdale's water and sewer system where ownership may be contested.

A detailed list of real property and easements and encroachment agreements is included as Exhibit B. A list of water and sewer utility property and fixed assets to be retained by Knightdale is included as Exhibit C. If at any time in the future property transferred to Raleigh is no longer used for water and sewer purposes, Raleigh shall return the land to Knightdale.

4.3 Easements and Encroachments

Knightdale has fully-executed and properly recorded easements and encroachment agreements for portions of Knightdale's water and sewer utility system. As a condition of this Agreement, a complete list of all recorded easements and encroachment agreements will be provided to Raleigh. To the extent possible, all easements for Knightdale's water and sewer utility system shall be conveyed by Knightdale to Raleigh by an appropriate instrument suitable for recording in the Office of the Register of Deeds for Wake County, North Carolina. As a condition of this Agreement, Knightdale will provide Raleigh with copies of any encroachment agreements it has with the North Carolina Department of Transportation and with any other utility companies (See Exhibit B). To the extent allowed by North Carolina law, the City shall indemnify and hold harmless Knightdale from all liability, costs and legal fees arising out of use of the referenced easements or encroachments. The parties understand and acknowledge that no North Carolina case, statute, or Constitutional provision authorizes a local government to indemnify another party and that this contract provision may be unenforceable.

For new easements acquired by Raleigh as a part of the operational needs of the Knightdale system and system expansions, Raleigh agrees to provide for dual use easements, to include utility needs and greenway/park needs as requested by Knightdale, provided that Knightdale pays, at the time of the easement acquisition, for the additional cost generated by the dual use easements. Said dual use easements shall be provided per Raleigh's standard design for such dual use easements.

Knightdale has some facilities installed on the properties of others for which it does not have express easements or encroachment agreements, and some facilities installed in streets and rights-of-way for which it has no encroachment agreements. In the event a landowner on whose land such a facility exists contests Raleigh's right to maintain such facilities, Raleigh shall notify Knightdale in writing and Knightdale shall be responsible to obtain at its expense the necessary easement, encroachment agreements or fee simple title across said land either by negotiation or by eminent domain. After Knightdale has obtained such easement or fee simple title, it shall transfer ownership thereof to Raleigh. Any reasonable and direct expense borne by Raleigh in resolution of these disputed easements shall be paid by Knightdale, and Knightdale shall also make adequate reservation for the necessary rights-of-way for all existing and/or planned water and sewer facilities prior to closing any street. If Knightdale fails to comply with the provisions of this paragraph, Knightdale shall reimburse Raleigh in full for all expenses incurred in acquiring the necessary rights-of-way by purchase or condemnation.

4.4 Existing Water and Sewer Capacity Allocations

Knightdale has a water supply allocation from Raleigh for 1.43 mgd for maximum daily demand flows; and a wastewater allocation of 1.3 mgd, average month flow, pursuant to amended contract dated May 18, 2005.

Raleigh will construct additional wastewater and water supply capacity as necessary to accommodate new growth and development within the corporate limits and Urban Service Area of Knightdale, consistent with Paragraph 5.1 of this agreement. Said additional wastewater and water supply capacity will be financed by Raleigh using revenues generated by Raleigh's schedule of rates, fees, and charges, or other debt instruments as determined by Raleigh.

4.5 Financial Assets and Closeout

The financial records of the Town of Knightdale water and sewer enterprise fund will be closed as of the Transfer Date of this Agreement. As of this closeout, with the exception of funds necessary to complete existing capital projects that are in process, the full amount of the Knightdale capital reserve and operating fund balances will be due to the City of Raleigh to be used for payments of water/wastewater transition and other approved capital and merger cost. Payment of the funds equity will be accomplished by a payment of 75% to be made at transfer date and the balance to be paid following the special audit. The accounting for all other asset and liability accounts will transfer at closeout to the Raleigh water and sewer enterprise fund, subject to audit verification by the Raleigh Internal Audits Division and an independent auditor. Knightdale shall write-off all inactive accounts considered uncollectible and adjust other accounts to a current status prior to Raleigh's assumption of the financial accounts.

5.0 Expansion and Extension of Water and Sewer Services

Raleigh shall provide, maintain, and extend the water and sewer systems and facilities as may be required under applicable laws and regulations so as to serve present and future demands, and in particular so as not to impede the orderly growth and development of Knightdale, except as provided in Paragraph 5.1 below. Raleigh shall not practice or permit any discrimination against Knightdale in the provision of such services based upon location of the point of service within Knightdale or its Urban Services Area.

5.1 Growth and Development Index

The City of Raleigh will provide water and sewer services to customers in the Town of Knightdale within the following parameters: For the period extending from the Transfer Date to March 31, 2011, the total wastewater flow allocation for Knightdale will be 2.20 MGD average day wastewater flow, and the maximum day water use allocations will be limited to 3.5 MGD, respectively.

1) For the period extending from April 1, 2011 to March 31, 2021, the annual growth rate in average day water use, peak day water use, and average day wastewater flow will be limited to 4 percent per year, compounded upon the prior year's allocation.

2) For the period extending from April 1, 2021 to March 31, 2031, the annual growth in average day water use, peak day water use and average day wastewater flow will be limited to 3 percent, compounded upon the prior year's allocation.

3) For the period extending beyond March 31, 2031, the annual growth in average day water demands, peak day water demands and average day wastewater flow will be the same as for the City of Raleigh service area as determined by the Raleigh City Council.

The calculation of Knightdale's water and wastewater flow allocation will be based on the summation of estimated flows for new connection permits and actual flows metered for the Knightdale service area. An exceedance of the prescribed growth rate in any given year will be allowed, provided it is reconciled within the following 2 years. For example, during the period 2011 to 2021, the annual growth rate limit is 4 percent. Annual growth over a three consecutive year period may be 6 percent (year 1), 2 percent (year 2) and 4 percent (year 3), equivalent to an average 4 percent growth rate. Because the growth exceedance in year 1 was reconciled to the prescribed average within the following 2 years, the overall growth for this period would not violate this agreement.

These growth levels would be subject to modification by the City of Raleigh if problems are encountered with the implementation of treatment plant expansions. If such is necessary, Knightdale's water and sewer growth capacity would be no less than 1 percent of the total treatment capacity of the Raleigh system for water and for wastewater at that time.

The City of Raleigh may offer the town of Knightdale additional water and sewer capacity beyond the agreed-upon indexes, on a case-by-case basis, to accommodate major industrial or commercial projects that elect to locate within Knightdale's Urban Services Area and provide benefits to both Raleigh and Knightdale.

5.2 Requests for Service

Upon the Transfer Date, all future requests for new service connections will be made to Raleigh. Request for new services will be first presented to Knightdale to assure all zoning and land use issues have been addressed then forwarded to Raleigh for approval of water and sewer plans. Both Knightdale and Raleigh, in conjunction with the Utility Advisory Committee, will provide information to customers and potential customers regarding details of service. Raleigh agrees to provide existing and future water and sewer customers located within Knightdale's corporate or Urban Services Area limits, service of a quality comparable to the quality and quantity of service provided to water and sewer customers within the municipal boundaries of Raleigh. Raleigh specifically agrees that the geographical location of the water and sewer customers in Knightdale or in its Urban Services Area shall not have any substantial effect on the quality of service or timing of repairs to be made by Raleigh.

5.3 Developer-Requested Extensions to the System

Subject to the provisions of this Agreement, extensions of the subject water and sewer system that are undertaken by third-party developers shall be made under the policies published and used by Raleigh, and as may be amended from time to time. Said policies shall be uniform throughout Raleigh's water and sewer system, including those areas affected by this Agreement. Raleigh may, at its discretion, make changes to the extension policies as Raleigh determines to be appropriate. Said changes shall apply to all portions of the water and sewer system operated and maintained by Raleigh, including those areas located in Knightdale's corporate and Urban Services Area limits.

For water and sewer extensions outside of Knightdale's municipal corporate limits, all applicable water and sewer extension policies that apply outside of Raleigh's corporate municipal limits will apply.

Any request to Raleigh for water and sewer service extensions in Knightdale's corporate limits, extra-territorial jurisdiction (ETJ), or Urban Services Area (USA) will require prior written approval by Knightdale before the service can be provided by Raleigh. (See Exhibit G)

Utility fees and charges for new Knightdale customers may not be paid by Knightdale or any other public entity, either directly or indirectly, as a part of an economic development program for Knightdale. Violation of this condition will constitute a breach of the Agreement.

Approval for request for service or extension under provisions of this section will not be unreasonably withheld by either Raleigh or Knightdale.

5.4 Knightdale-Requested Extensions to the System

Knightdale-requested extensions to the merged water and sewer system or extensions thereof required by Knightdale beyond those included in the Raleigh Capital Improvement Program, shall be financed by Knightdale and shall be accomplished by contract between Knightdale and Raleigh. Reasonable notice to proceed with such extensions will be provided to Raleigh by Knightdale, such that applicable time limitations can be met. However, under no circumstances shall Raleigh be liable to Knightdale for the payment of damages, penalties, fines or any other monetary recovery as a result of any failure to satisfy such time limitations for Knightdale-requested extensions. For extensions required due to annexation, annexation plans shall be submitted by Knightdale to Raleigh to evaluate the feasibility thereof under then existing conditions, prior to proceeding with implementation of annexation.

Raleigh shall reimburse Knightdale for costs associated with extensions by Knightdale in accordance with established extension and reimbursement procedures applicable to developers and customers of Raleigh.

5.5 Annexations

Any annexation considerations will be resolved based on the existing annexation agreements between Raleigh and Knightdale. Prior to approval of extension of service to property outside the corporate limits of Knightdale, Knightdale must require application for annexation into Knightdale's municipal corporate limits. Knightdale must require application for annexation and act on an annexation petition prior to approval to add new water and sewer customers into Knightdale limits.

Raleigh will provide water and sewer services to areas that cannot be annexed, only by exceptions to be considered on a case-by-case basis, to address specific health-related concerns. All required annexations must proceed within a reasonable amount of time of committing to the provision of water and sewer service.

For water and sewer extensions required as a part of an annexation by Knightdale, the cost of said extensions shall be the responsibility of Knightdale, to be paid by Knightdale prior to initiation of annexation project. Knightdale may use assessments as a means of providing for financing of these annexation water and sewer extensions.

5.6 Assessments

Assessments for extension needs generated by and for the benefit of Knightdale will be developed and implemented by Knightdale. Assessments needed by Raleigh, as a part of the Raleigh Capital Improvement Program, within the corporate limits of Knightdale will be developed by Raleigh, and implemented on Raleigh's behalf by Knightdale.

6.0 Employee Transfer

All existing staff of Knightdale's water and sewer utility system will be offered employment with Raleigh's water and sewer utility system. Knightdale employees accepting positions with Raleigh will suffer no loss of pay, annual leave, sick leave, or years credit in retirement program. Relative to level of compensation, Raleigh has conducted a wage and salary analysis and confirms that employees transferring will suffer no loss of current compensation. The benefit package that will be available to Knightdale employees transferring to Raleigh will be similar but not exactly the same as the Knightdale package. Knightdale employees transferring to Raleigh will retain equivalent tenure and length of service for annual and sick leave, retirement, and other benefits at Raleigh, as they possessed at Knightdale. The rate of accrual of length of service-dependent benefits for Knightdale employees transferring to Raleigh will be commensurate with the rate of accrual for Raleigh employees of similar length of service.

6.1 Employee Probation Period

All transferring employees will serve a six (6) months probation period during which each employee must demonstrate proficiency in the job assigned. Following the probation period, each employee will receive a performance evaluation similar to that applicable to existing water and sewer utility employees of Raleigh. For employees requesting transfer from Knightdale to Raleigh, it will be necessary for the employees to successfully pass a criminal background check and a drug screening.

6.2 Fund Transfers for Accrued Employee Benefits

In accordance with the terms of the financial closeout (section 4.5), Knightdale will transfer funds sufficient to pay for all accrued vacation and sick leave for each transferring employee. Information relative to the total number of hours of accrued vacation and sick leave will be provided to Raleigh prior to the Transfer Date of this Agreement.

Pending governmental accounting standards will require the recording of post employment healthcare and other benefits over the active employment term of recipients. Implementation for Raleigh will be in fiscal year 2006-07. At the time that an actuarial study has determined the prior liability for the transferring employees, Knightdale will have the option of either (1) paying Raleigh for the accumulated value of such benefits, or (2) adjusting the financial proforma results at such point to allow for their existing rate structure to pay for the accumulated expense.

7.0 Records Transfer

Knightdale shall transfer to Raleigh all available reproducible and electronic copies of any and all records, data, information, and models arising from the construction, operation and maintenance of Knightdale's water and sewer utility system and any other related activity, including projects in progress, and including, but not limited to, the following:

1) Construction contracts, drawings, maps, and all other related documents evidencing the condition or location of any portion of the subject water and sewer systems including such documents as may be in the possession of any engineer or other consultant of Knightdale;

2) Billing, collection and payment records on all present customers of the subject water and sewer systems;

3) An accurate tabulation or listing of all actual service locations in the Knightdale system to be transferred to Raleigh from Knightdale, to include:

   a) Address - Number and Street;

   b) Account Name (if active);

   c) Billing Address for Each Account Number;

   d) Account Numbers and all meter reading books and the history of all accounts for the past twelve (12) months;

   e) One Year's Account History;

   f) Meter Location Description;

4) Contracts or agreements for the supply of equipment, materials, supplies, and products;

5) Pending applications for water and sewer service;

6) Contracts or agreements to provide water and or sewer service currently in effect;

7) Receipts, accounts and other records of deposits made by all present and past customers of the subject water and sewer systems;

8) Any and all warranty information on any facilities, property, land, and equipment transferred to Raleigh pursuant to this Agreement;

9) Repair, maintenance, trouble, and emergency response records for all portions of Knightdale's water and sewer systems;

10) Any and all notices of violation, legal actions, and lawsuits pertaining to Knightdale's water and sewer system ;

11) Plans, permits, reports, specifications, surveys, etc., for water and sewer facilities and operations;

12) Number and locations of all unmetered services;

13) Copies of all water and sewer system maps;

14) Copies of all easements;

15) Copies of all encroachment agreements;

16) Identification of all inside Knightdale customers;

17) Identification of all outside Knightdale customers;

18) Record of all assessments for system extensions;

19) Identification of all taps for which payment has been made;

20) Identification of all backflow prevention installations;

21) Identification of all Pretreatment Program installations;

22) Copies of such records as are necessary to inform Raleigh of the location of all facilities of Knightdale for other utility operations;

23) Any other information, data, and records pertaining to Knightdale's water and sewer utility;

24) Accounts receivable records;

25) Accounts payable records; and,

26) Communication Tower Agreements.

Knightdale agrees that within a reasonable time after the Transfer Date, Knightdale shall submit to Raleigh such accounting, commercial, engineering, planning, personnel, and facility records pertaining to Knightdale's water and sewer utility system. Knightdale may make copies of said materials for Knightdale's records and archives. Prior to the Transfer Date, the City Manager of Raleigh and Town Manager of Knightdale, or their designees, shall determine mutually satisfactory administrative details for the transfer of the above-referenced records.

8.0 Customer Transfer

As of the Transfer Date, all customers and users of Knightdale's water and sewer system shall become subject to all rules, regulations and ordinances of Raleigh as the same apply to all users and customers of the water and sewer system of Raleigh, and as same are now or may hereafter be amended. Such rules, regulations and ordinances and schedule of rates, fees, charges and penalties shall constitute a part of the Agreement between Raleigh and any customer or user of the subject water and sewer system and any extensions thereof for the provision of water and sewer service.

A team comprised of Raleigh and Knightdale staff shall develop a seamless transfer of customer accounts at Transfer Date in order to provide continuity of account activity after the merger. All accounting after the Transfer Date shall be made within the Raleigh utility enterprise fund.

8.1 Customer Deposits

Prior to the Transfer Date, Knightdale, under the direction of the Knightdale Town Manager or his designee, shall refund deposits to its customers or credit customer accounts for deposit balances.

8.2 Billing Cycles

The billing cycle for Knightdale water and sewer customers is currently a monthly cycle. The billing cycle for Raleigh water and sewer customers is currently a bi-monthly (every two months) cycle. As of the Transfer Date of this Agreement, Raleigh reserves the right to adjust the billing cycle for Knightdale water and sewer customers to a bi-monthly cycle at a time that Raleigh deems appropriate. Raleigh will make a good-faith effort to implement the change to a bi-monthly billing cycle after a comprehensive customer notification and education program by Knightdale and Raleigh, to begin immediately following the Effective Date of this Agreement.

8.3 Water Meter Readings

As of the Effective Date, Knightdale's water meters measure water volume in units of 1,000 gallons, and Raleigh's water meters measure water volume in units of 100 cubic feet At the Transfer Date, Raleigh shall assume all responsibility for reading all customer meters and for preparation of water and sewer bills, and water and sewer customers in Knightdale will be billed for water and sewer service based on 100 cubic feet units. Knightdale's gallon unit

water meters shall be replaced with cubic feet water meters by Raleigh as part of the System Upgrades and Improvements identified in Exhibit D. If the replacement of Knightdale's water meters cannot be completed prior to the initial collection of water meter readings by Raleigh staff, Raleigh will collect water meter readings from Knightdale customers using 1,000 gallon units, and Raleigh's water billing system will convert the readings to 100 cubic feet units for the purposes of producing water and sewer bills.

The transition of meter readings will be coordinated by a joint implementation team.

9.0 Bonded Indebtedness

Raleigh agrees to pay Knightdale all amounts necessary to enable Knightdale to make all debt service payments when due and payable on all existing outstanding bonded indebtedness of Knightdale for water and sewer facilities covered under this Agreement. The payments required to be made in accordance with this provision of the Agreement shall be made in a timely manner, and Raleigh's obligation hereunder shall be a continuing one until all outstanding bonded indebtedness of Knightdale borrowed for such purposes shall have been paid in full. A statement of Knightdale's outstanding bonded indebtedness and a schedule of the debt service to be made pursuant to this provision of the Agreement shall be submitted to Raleigh prior to the Transfer Date of this Agreement (See Exhibit F). Knightdale agrees to cooperate with Raleigh in determining opportunities for early retirement or refinancing of any of the outstanding debt, when such adjustments are permitted by the bonding agencies, and Raleigh retains the right to exercise an option of debt refinancing or retirement if costs to the water and sewer utility can be lowered as a result. Projected debt service shall be included as a part of the transfer cost calculated as a part of this agreement.

10.0 Prior Agreements

10.1 Knightdale and Raleigh

All prior agreements between Knightdale and Raleigh pertaining to water and sewer services are rescinded as of the Transfer Date.

10.2 Knightdale Commitments to Private Third Parties

1. Knightdale has certain commitments to developers of residential and non-residential projects inside and outside the corporate boundaries of Knightdale. All agreements previously entered into between Knightdale and developers will be honored by the City of Raleigh, provided that such contracts that require expenditure of Raleigh funds shall be considered "merger costs" recoverable by Raleigh pursuant to the terms of Section 3.7 of this Agreement; provided, further, that the City's honoring of the Agreements shall be construed and applied in a manner consistent with the ordinances, regulations, policies and practices of the City regarding utility services, specifically including the City's Capital Improvements Program. Such agreements are specifically enumerated and described in Exhibit H, attached hereto and incorporated herein by reference.

2. Knightdale will install the meters, set the boxes, and collect tap fees in all of such developments to fulfill its existing commitments prior to Transfer Date. Such completed services shall become a part of the property to be conveyed herein from Knightdale to Raleigh.

3. Any contract or agreement with third parties entered into by Knightdale between the Effective Date and the Transfer Date shall require approval by Raleigh.

10.3 Knightdale Commitments to Public Entities

If it is determined that Knightdale has some existing vendor agreements relating to water and sewer services, Knightdale shall provide notice to these entities regarding these agreements and Knightdale's intent to rescind its agreements as of the Transfer Date. However, Raleigh at its option may elect to continue these agreements through the current terms, subject to the consent of the contracting parties. In the event Raleigh chooses to continue the existing Town of Wendell Agreement, any water sold or to be consumed by Wendell shall not count against the allocations provided to be made to Knightdale in this Agreement.

10.4 Knightdale Commitments to Communications Firms for Transmission Towers on Knightdale Water and Sewer Assets

Knightdale has existing contracts with communications firms for transmission towers located on Knightdale water and sewer assets. It is agreed that these contracts, including revenue to be derived from the contracts will be transferred to Raleigh.

10.5 Discriminatory Agreement Disclaimer

No existing special, discriminatory agreements with specific customers will be continued, honored, or assumed by Raleigh.

Knightdale represents and warrants to Raleigh that there are no discriminatory agreements between Knightdale and any customer or user of Knightdale's water and sewer system which will nor may survive this Agreement and be binding upon Raleigh. For purposes of this Agreement, a discriminatory agreement is any agreement, contract or other understanding between Knightdale and any customer or user of Knightdale's water and sewer system that provides that:

1. Water and sewer service be extended and provided in a different manner than such service is extended and provided to the remaining customers or users of Knightdale's water and sewer system as to quality, quantity, or any other aspect of extending and providing such service;

2. Water and sewer service be extended and provided upon the payment of a different schedule of rates, fees, charges, or penalties than is imposed upon the remaining customers or users of Knightdale's water and sewer system;

3. Water and sewer service be extended and provided at a different cost or schedule for reimbursement of costs or any other aspect of paying for the extension and provision of water and sewer service than is imposed upon the remaining customers or users of Knightdale's water and sewer system.

In the event that an unlawful discriminatory agreement exists and survives this Agreement, and is determined to be binding upon Raleigh, Knightdale shall indemnify and hold Raleigh harmless from any and all demands, claims, or actions (including the reasonable costs, expenses and attorney fees incurred by Raleigh), of such discriminatory agreement. Further, Knightdale shall indemnify and hold Raleigh harmless from any and all demands, claims, or actions, without regard to the relief sought or awarded and without regard to whether the claim, demand or action is raised by a party to the discriminatory agreement.

11.0 Contracted Services Between Raleigh and Knightdale

Raleigh will negotiate an agreement(s) with Knightdale for Knightdale's operation of a Raleigh Satellite Customer Service Center, beginning on the Transfer Date, for Knightdale to collect payments for City of Raleigh services and tax revenues, including but not limited to water and sewer bills. Knightdale will negotiate a separate agreement with Raleigh for Raleigh to collect solid waste or other mutually agreeable fees on behalf of Knightdale. Knightdale will also be accessible by telephone for Knightdale residents for billing or service-related inquiries. Obligations of Knightdale and Raleigh for the operation of the Satellite Customer Service Center shall be as specified in the referenced agreement.

Additional services that will require separate agreements between Raleigh and Knightdale include Paving alternatives and inspection services as shown in paragraph 3.3; and potential of leasing space from Knightdale for remote field operations.

12.0 Conflict/ Default Resolution

In the event of conflict or default that might arise for matters associated with this Agreement, the parties involved agree to informally and formally communicate to resolve the conflict. If this communication is not successful in resolving the conflict, the matter will be presented to the City Manager of Raleigh and the Town Manager of Knightdale for resolution. If the Managers are unable to resolve the conflict, the matter will be presented to the respective governing boards for resolution.

13.0 Fire Protection Services

Raleigh Public Utilities shall be responsible for maintaining fire hydrants and related services in a reasonable manner at a level of service equivalent to that maintained by Knightdale Public Utilities at time of transfer of the system. This level of service shall include hydrant spacing, hydrant maintenance, and water volume and pressure available at the hydrant. Raleigh shall coordinate with the Knightdale Public Safety Department for necessary testing to be done by the Knightdale Public Safety Department.

14.0 Ordinances to be Adopted

As a condition of entering into this Agreement, Knightdale shall adopt such ordinances and resolutions as are reasonably necessary to regulate the proper use of the subject water and sewer system and any extensions thereof by the customers and users within the jurisdiction of Knightdale. Said ordinances shall be reviewed and approved by Raleigh prior to adoption by Knightdale, and will further grant to Raleigh all administrative, permitting, regulatory, and enforcement authority necessary for the regulation, operation, maintenance, and improvement of the water and sewer systems serving the corporate and Urban Services Area limits of Knightdale. Knightdale shall maintain updates and enforce such ordinances. Raleigh shall reimburse Knightdale for the reasonable expenses of enforcing such ordinances. Said ordinances shall have the same or similar provisions as are included in Raleigh’s ordinance related to Raleigh’s water and sewer utility system. Adoption of necessary Ordinances and Resolutions may be adopted by reference by the Knightdale Town Board.

By approval and upon execution of this Agreement, Knightdale shall be deemed to have adopted by reference any water conservation ordinance or restriction of Raleigh which may from time to time be adopted by the Raleigh City Council (during drought conditions or arising from other, special circumstances) so that such measures will be fully effective in, and shall be

enforceable by Knightdale, as though adopted by direct action of the Knightdale governing board.

14.1 Environmental Permit Requirements

Knightdale and Raleigh acknowledge that the merger of Knightdale's and Raleigh's utility systems, and anticipated population growth in both municipalities and surrounding utility service areas, will require Raleigh to obtain specific State regulatory permits. These permits may be expected to include requirements for adoption of environmental conditions, requirements and mitigation measures, including land use regulations and restrictions, at the municipal level. In event such conditions, restrictions and mitigation measures are imposed by State regulatory authorities as a condition of permit issuance for the operation, upgrade, or expansion of utility services contemplated hereunder, Knightdale agrees to duly adopt by ordinance or otherwise, and to make effective within its corporate limits and extraterritorial jurisdiction area, as applicable, such conditions, restrictions and mitigation measures.

15.0 Delegation of Permitting Authority

Knightdale shall adopt a resolution or ordinance as may be required to support the delegation of water and wastewater permitting authority to Raleigh from the North Carolina Department of Environment and Natural Resources, Division of Environment Health and Division of Water Quality, within the jurisdiction of Knightdale.

16.0 Amendment to Agreement

This agreement may be amended only by a document in writing, approved by the Town Board of Commissioners of Knightdale and the City Council of Raleigh and executed by the respective Mayors. In the event Raleigh, by written agreement or otherwise, makes provision for utility services or concessions to another municipality or other Raleigh utility customer which are more favorable than the terms, provisions, and concessions herein granted to Knightdale, then and in that event, the parties agree to negotiate in good faith to incorporate into this Agreement identical or equivalent provisions, terms, and concessions for the benefit of Knightdale.

17.0 Customer Notification

Knightdale agrees to use all practical means, including direct mailing, to notify customers of changes associated with this merger. Such notification shall include information on schedule and mechanics of transfer and information concerning Raleigh's policies and procedures.

18.0 Severability

It is hereby the declared intention of Knightdale and Raleigh that the paragraphs, sections, sentences, clauses, and phrases of this agreement are severable. If one or more paragraphs, sections sentences, clauses, or phrases shall be declared void, invalid or otherwise unenforceable for any reason by the valid, final judgment or decree of any court of competent jurisdiction, such judgment or decree shall not affect the remaining provisions of this agreement and the same shall continue to be fully effective and enforceable on the basis that said remaining provisions would have been agreed to by Knightdale and Raleigh without the incorporation of such void, invalid or otherwise unenforceable paragraph, section, sentence, clause or phrase.

19.0 Notices

Whenever written notice is required under this agreement, said notice shall be sufficient when received by the Town Manager of Knightdale and the City Manager of Raleigh. Said notice may be mailed or hand-delivered but shall not be effective unless actually received.

20.0 Covenant of Good Faith and Fair Dealing

Raleigh and Knightdale shall cooperate and act in good faith to perform their obligations under this agreement and shall refrain from any action inconsistent with their contractual rights or obligations that would prejudice or injure the other party's rights to receive the benefits of this Agreement.

Approved this _____day of _____, 200_

Town of Knightdale

BY:_____

Mayor

Attest:

_____

Town Clerk

_____

Approved as to form, Knightdale Town Attorney

City of Raleigh

BY: _____

City Manager

Attest:

_____

City Clerk

_____

Approved as to form, Raleigh City Attorney

EXHIBITS

Exhibit A	Fixed Assets to be Transferred
Exhibit B	List of Real Property, Easements and Encroachments Agreements
Exhibit C	Water and Sewer Utility Property and Fixed Assets to be Retained by Knightdale
Exhibit D	Schedule of Upgrades and Improvements
Exhibit E	Schedule of Estimated Revenues and Expenses
Exhibit F	Bonded Indebtedness
Exhibit G	Service Area Maps
Exhibit H	Knightdale-Developer Agreeements

EXHIBIT A - Fixed Assets to be Transferred

Property	Address
Wil Ros Lift Station-1991	103 1/2 Princess Crescent
Flowers Lift Station	109 Flowers Street
Harper Lift Station	120 Harper Street
Faison Lift Station	413 Faison Drive
Hodge Lift Station	SR 2516 Hodge Road
Lockhart Lift Station	1320 Smithfield Road
Mark's Creek Wastewater Lift Station	8109 US Highway 64 E
Hwy 64 Water Tank	7429 US Highway 64 East
Hodge Road Water Tank	2126 Hodge Road
Booster Pump Station-US 64 Water Booster Pump	5810 Farmwell Road
Old Crews Lift Station	Old Crews

Asset ID	Asset Description	Serial Number
K2 (641)	1993 4X4 CHEV 3/4 TON-S	1GCFK24H9PZ165793
K3 (699)	1993 DODGE RAM-W	1B6KE2655PS193841
847	Dump Truck F450-Super Duty	3FELF47F8VMA22921
138	Trailer Jet 600 Gallon	
842	Cyclops TV inspection Camera	
621	Max IV 800-T w/acc	
831	100 KW Generator and trailer (Lockhart)	
109	385 Case Tractor	
128	JVC Backhoe	
111	Shorten Stevenson Generator	
617	Front Loader/ for Case	
615	9 Ton Trailer-Hudson/ for JVC	10HHTD1D1S1000045
613,640,650	Level Controller & Remote Units	
611	Shoring Box	
622	Snake Drain Cleaner 3/4 HP	
642	3/4" Hammerhead Moe	
	Mclaughlin Line Locator C00150	

Exhibit B List of Real Property, Easements and Encroachments Agreements

Property	Address
Wil Ros Lift Station-1991	103 1/2 Princess Crescent
Flowers Lift Station	109 Flowers Street
Harper Lift Station	120 Harper Street
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Hodge Road Water Tank	2126 Hodge Road
Booster Pump Station-US 64 Water Booster Pump	5810 Farmwell Road
Old Crews Lift Station	Old Crews

Exhibit C Water and Sewer Utility Property and Fixed Assets to be Retained by Knightdale

Property/Asset	Address
Former Well 2 Location	Flowers Street
Former Well 3 Location	Fayetteville Street
Town Shop	360 Robertson Street

Exhibit D Summary of System Upgrade and Improvement Projects

Project ID		Estimated Fiscal Year	Total Project Cost	Knightdale Sewer Plan Segment ID's	Project Description
GEN - 1	Implementation Phase Consulting Services	2006	$80,000		Reimbursement to Raleigh for Utility Merger Implementation support services by Consultants
GEN - 2	Billing Data Conversion	2006	$85,000		Conversion of Knightdale Utility customer account information and billing data by Contractor
GEN - 3	IWOS Devices	2006	$25,000		Field laptop computers to be mounted in service vehicles, with Inventory and Work Order System computerized maintenance management system. Four field devices are anticipated.
GEN - 4	GIS mapping	2006	$100,000		Development of comprehensive GIS mapping for Knightdale water and sewer infrastructure, in format compatible with City of Raleigh standards
GEN - 5	Wake County Reimbursement	2006	$249,471		Knightdale agreement to reimburse Wake County for a water line that Wake County installed along Hodge Road in early 1990's. The agreement calls for the Town of Knightdale to reimburse the County based on actual hook ups to the line. Budgeted amount reflects the remaining reimbursement amount as of the date of preparation of this utility merger agreement
WW - 1	Upgrade Capacity of Hodge Rd PS Neuse River Crossing (PS improvements)	2006	$400,000	ps-a	Increase capacity of existing Hodge Rd pump station under Neuse River to Raleigh Neuse River Interceptor.
WW - 2	Basin Interceptors for Marks Creek	2007	$3,200,000	IV-A (share), IV-B, ps-h	Eliminate existing Marks Cr pump station and install approximately 25,000 ft of 18-inch and 24-inch gravity sewer. Portions of this interceptor can be combined with Wendell development east of Marks Cr pending potential merger of Wendell system with Raleigh.

Exhibit D Summary of System Upgrade and Improvement Projects

Project ID		Estimated Fiscal Year	Total Project Cost	Knightdale Sewer Plan Segment ID's	Project Description
WW - 3	Basin Interceptors for Poplar Creek and West Branch Poplar Creek	2007	$1,830,000	III-J (part), III-L	Install approximately 6,000 ft of 24-inch gravity sewer along Poplar Cr to new future Poole Road regional interceptor (project WW-4 below).
WW - 4	Poole Road Wastewater Conveyance (gravity, pump stations and force main)	2007	$7,560,000	share of PS-3, PS-4, PS-5b, and PS-7 costs; III-E; III-F; III-I; III-J (part); III-K	Install approximately 6,000 ft of minimum 12-inch DIP force main and approximately 20,000 ft of minimum 24-inch gravity sewer as regional interceptor along Poole Road, including 4 new wastewater pump stations and Neuse River crossing to Raleigh Neuse Interceptor
WW - 5	Wendell to Auburn-Knightdale Rd Wastewater Conveyance (cost-share of gravity, pump stations and force main)	2007	$2,840,000	PS-6 (share)	Knightdale share (with Wendell and Zebulon) to install approximately 14,000 ft of minimum 18-inch DIP force main and approximately 20,000 ft of minimum 30-inch gravity sewer as regional conveyance and interceptor from a new Wendell wastewater pump station at Poole Road and Marks Creek (serving future Mercury development) paralleling an existing Wendell wastewater force main along Auburn-Knightdale Road, including 3 new wastewater pump stations and Neuse River crossing to Raleigh Neuse Interceptor
WW - 6	Beaver Dam Interceptor	2006	$2,320,000	I-B, I-C, ps-b	Install approximately 13,000 ft of 21-inch and 30-inch gravity sewer from existing Lockhart pump station (to be abandoned), connecting to Raleigh infrastructure near Neuseoco Lake east of Old Milburnie Road.
WW - 7	I&I Study	2007	$200,000		Targeted sewer system study to identify areas where projects could reduce infiltration and inflow in Knightdale system
WW - 8	WW Collection System Improvements Based on I&I Study	2008	$800,000		Allowance for manhole repairs and replacements throughout Knightdale to address deficiencies identified through inventory, field inspections and analysis conducted under project WW-7.

Exhibit D Summary of System Upgrade and Improvement Projects

Project ID		Estimated Fiscal Year	Total Project Cost	Knightdale Sewer Plan Segment ID's	Project Description
WW - 9	Miscellaneous Lift Station Improvements	2008	$100,000		Allowance for minor improvements to Knightdale pump stations based on I&I study (project WW-7).
WW - 10	Lift Station SCADA Improvements	2006	$160,000		Wastewater pump stations will be upgraded to Raleigh standards by installing a SCADA. An allowance is provided for materials and time to change out based on City of Raleigh estimates of cost for 6 pump stations.
WW - 11	WW Collection System Rolling Stock/Equipment Needs*	2006	$189,000		Knightdale share (with Wendell and Zebulon) to purchase rolling stock and equipment to serve eastern Wake County sewer systems. Project includes purchase of equipment by Raleigh to replace similar equipment to be retained by Knightdale Public Works.
WW - 12	East Wake Sewer Plan (33% cost-share)	2006	$25,000		Knightdale share (with Wendell and Zebulon) to in regional sewer alternatives study completed by consultant in 2005.
WD - 1	Main Extension from Churchill to Knightdale Elementary, Old Faison Rd and Smithfield Rd	2006	$1,690,000		Installation of approximately 10,000 ft of 12-inch and 3,000 ft of 16-inch water line from Churchill development to Knightdale Elementary, along Old Faison Rd and Smithfield Rd
WD - 2	Forestville Rd Water Line Extension	2006	$2,440,000		Installation of approximately 4500 ft of 16-inch water line from Old Milburnie Road to NC 64, and a new water booster pump station.
WD - 3	AMR Conversion	2007	$570,000		Project funds change-out program of automated-meter-reading compatible water meters to replace existing meters, to meet Raleigh standards (total of approximately 3000 meters)
WD - 4	SCADA Improvements for Booster Station and Two Water Tanks	2006	$140,000		Installation of SCADA improvements for booster station and two Knightdale water storage tanks, to be consistent with Raleigh standards.

Exhibit D Summary of System Upgrade and Improvement Projects

Project ID		Estimated Fiscal Year	Total Project Cost	Knightdale Sewer Plan Segment ID's	Project Description
WD - 5	Water Tank Fence Modifications	2006	$10,000		Allowance for chain-link fence repairs and improvements at Town water tank
WD - 6	Water Distribution System Rolling Stock/Equipment Needs*	2006	$90,000		Knightdale share (with Wendell and Zebulon) to purchase rolling stock and equipment to serve eastern Wake County water systems. Project includes purchase of equipment by Raleigh to replace similar equipment to be retained by Knightdale Public Works.

* Cost share for these projects to be adjusted subject to Wendell and Zebulon completing Utility Merger Agreement with Raleigh

Exhibit E Schedule of Estimated Revenues and Expenses

Exhibit F Bonded Indebtedness

Exhibit G Knightdale Service Area Map

BUFFALOE RD
LUCAS RD
OLD CREWS RD
HORTON RD
MARKS CREEK RD
ROLESVILLE RD
KEITHS RD
FORESTVILLE RD
OLD MILBURNIE RD
US 64 HWY
US 64 HWY
KNIGHTDALE EAGLE ROCK RD
HODGE RD
CLIFTON RD
BETHLEHEM RD
POOLE RD
SMITHFIELD RD

Merger Agreement

Merging

The Water and Sewer Utility Systems

of

Rolesville, North Carolina

And

Raleigh, North Carolina

July 31, 2001

FINAL DRAFT

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Merging **1**

The Water and Sewer Utility Systems **1**

of **1**

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Rolesville has active reimbursement agreements in effect with the County of Wake, North Carolina. Pursuant to this agreement, acreage fees are to be collected for each property that connects to, and directly abuts, an agreement project. If the reimbursement requirement is not waived by Wake County, Raleigh agrees to pay Rolesville all amounts necessary from acreage fees to enable Rolesville to make all debt service payments when due and payable under the reimbursement agreements of Rolesville for water and sewer facilities covered under this Agreement, until such reimbursement agreements are repaid in full. Rolesville shall advise Raleigh on an annual basis regarding the status of the Wake County reimbursement agreements. 14
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STATE OF NORTH CAROLINA

COUNTY OF WAKE

AGREEMENT

This Agreement is made and entered into by and between the Town of Rolesville, a North Carolina municipal corporation, duly organized and existing under the laws of the State of North Carolina, hereinafter referred to as "Rolesville", and the City of Raleigh, a North Carolina municipal corporation, duly organized and existing under the laws of the State of North Carolina, hereinafter referred to as "Raleigh".

The purposes of this Agreement are to:

- Assure the continued provision of high quality, reliable, economical, safe and sanitary water and sewer service within the present and future corporate limits and Urban Service Area limits of Rolesville;
- Provide for the orderly and permanent transfer of responsibility for the ownership, construction, operation, maintenance, management, and financing of Rolesville's water and sewer utility system from Rolesville to Raleigh, and;
- Transfer the managerial, operational, and financial responsibility of operating, maintaining, and expanding the water and sewer utility systems serving the present and future corporate limits and Urban Service Area limits of Rolesville from Rolesville to Raleigh.

WHEREAS, Article 20, Interlocal Cooperation of North Carolina General Statutes 160A authorizes and empowers any units of local government to enter into interlocal agreements for the ownership, construction, operation, maintenance, management, and financing of all or portions of water and sewer utility systems within or outside the corporate limits of those units of local government;

WHEREAS, Rolesville owns, operates, and maintains water and sewer utility systems within and outside its corporate limits;

WHEREAS, Rolesville desires to transfer its water and sewer utility systems to Raleigh in accordance with the terms and conditions hereinafter stated;

WHEREAS, Raleigh agrees to assume full responsibility for the provision of water and sewer services in Rolesville, including responsibility for Rolesville's water and sewer utility systems and related equipment and property rights;

WHEREAS, Raleigh further agrees to operate, maintain and expand said water and sewer systems to accommodate planned growth and development within Rolesville's planning and zoning jurisdiction in accordance with the terms and conditions hereinafter stated;

NOW, THEREFORE, for the considerations hereinafter stated, the parties do agree as follows:

a) This Agreement shall be perpetual. Rolesville and Raleigh hereby agree that such perpetual duration is reasonable and necessary in light of the purposes of this Agreement.

b) No joint agency is established by this Agreement.

c) Raleigh shall have the sole responsibility and authority to appoint or otherwise employ the personnel necessary for the implementation of this Agreement.

d) The responsibility for financing the construction, operation and maintenance of the merged water and sewer system and any extensions thereof shall be in accordance with the terms of this Agreement. Raleigh shall be entitled to the receipt of all revenues from the merged water and sewer system and any extensions thereof.

e) Rolesville agrees and grants the authority for appropriate employees of Raleigh to work and act in Rolesville as necessary to carry out the purposes of this agreement as appropriate under the ordinances and regulations of both Raleigh and Rolesville.

f) Rolesville shall transfer to Raleigh and its assignees or successors, and Raleigh and its assignees and successors shall receive from Rolesville, in accordance with the terms and conditions set forth in this Agreement:

   i) All pipes, water lines, hydrants, sewer lines, pump stations, force mains, mains, meters, meter boxes, and service laterals, elevated water tanks, maintenance facilities, and all other appurtenances normally associated with, and owned by Rolesville, and presently in use within Rolesville's water and sewer system (See Exhibit A);

   ii) All of Rolesville's rights, titles and interests in land, easements, and encroachment agreements necessary to own and operate Rolesville's water and sewer systems. All of the property and rights described above shall be hereafter referred to as "the Property" (See Exhibit B);

   iii) All property currently used in the operation of the water and sewer system, but that is to be retained by Rolesville, will be identified prior to the Transfer Date as defined in this Agreement (See Exhibit C);

g) Raleigh shall have the right to exercise its power of eminent domain within the current and future municipal and planning limits of Rolesville for activities necessary to fulfill Raleigh's water and sewer service obligations defined in this Agreement; and

h) Cost of the transfer of ownership of the systems from Rolesville to Raleigh will be borne by Raleigh, and will be recovered through the water and sewer rates, fees, and charges that will be charged to Rolesville customers as set forth in this Agreement.

1.0 Definitions

The following words and phrases are defined as set forth below when used in this Agreement, unless a contrary meaning is clearly required by the context in which the word or phrase is used:

1.1 **Effective Date:** The date on which all of this Agreement is approved and signed by all parties.

1.2 **Transfer Date or Closing Date:** The date on which title or leasehold to the subject water and sewer system passes from Rolesville to Raleigh, which shall be a reasonable time after the Effective Date of this Agreement.

1.3 **Systems:** The real and personal property comprising Rolesville's water and sewer system which is to be transferred to Raleigh.

1.4 **Inside City Rate(s):** The rate(s) charged by Raleigh to the water and sewer customers inside the corporate limits of Raleigh.

1.5 **Outside City Rate(s):** The rate(s) charged by Raleigh to the water and sewer customers outside the corporate limits of Raleigh.

2.0 Transfer Date

The City Manager of Raleigh and the Town Manager of Rolesville, or their designees, shall be responsible for determining all implementation details related to this Agreement not specifically addressed in this Agreement. The Transfer Date for this Agreement is January 1, 2002. The Transfer Date shall not be delayed unreasonably by either party.

2.1 (Reserved)

2.2 (Reserved)

3.0 Responsibility for Merged System

Upon the Transfer Date, Raleigh shall assume immediate and sole duty and responsibility for financing; operating; maintaining; improving; and expanding the water and sewer systems serving Rolesville's existing and future corporate limits and Urban Services Area. Rolesville water and sewer system planning activities will be performed in accordance with the terms of Section 3.1 of this Agreement. Prior to the Transfer Date, Rolesville will be responsible for the operation and maintenance of Rolesville's water and sewer system. During the period after the Effective Date, but prior to the Transfer Date, Rolesville will be responsible for the expansions to the Rolesville water and sewer system, but will solicit participation from City of Raleigh staff regarding design standards and utility operations planning, to ensure that future expansions are in accordance with City of Raleigh policies, standards, and procedures. After the Transfer Date, Rolesville's water and sewer system shall be fully incorporated into the water and sewer system operated and maintained by Raleigh. Said duty and responsibility shall be in accordance with current and future policies, standards, and procedures of Raleigh, and shall be applied in the same extent and in the same manner as applied to other inside city customers of Raleigh. Said duty shall involve the input and recommendations from the Water and Sewer Utility Advisory Committee addressed in Section 3.1 below.

3.1 Water and Sewer Utility Advisory Committee

Prior to the Transfer Date, a permanent Water and Sewer Utility Advisory Committee (UAC) will be established and shall meet periodically at a frequency to be determined by the City Manager of Raleigh, the Town Manager of Garner and the Town Manager of Rolesville to review and develop planning recommendations for the upgrade, expansion, and extension of water and sewer utility services in Rolesville service areas. The Utility Advisory Committee will periodically report its findings and recommendations to the City Manager of Raleigh, Town Manager of Garner and Town Manager of Rolesville. The ultimate responsibility for the operation of the merged water and sewer system shall be the City of Raleigh. The role of the Utility Advisory Committee will be limited to an advisory role. The composition of the Utility Advisory Committee will be as follows:

- Two members appointed by the Raleigh City Manager

- Two members appointed by the Garner Town Manager
- Two members appointed by the Rolesville Town Manager
- Planning Director, Wake County

As other utilities join the merged water and sewer utility, additional members may be added to the Utility Advisory Committee.

3.2 Name of Merged Water and Sewer Utility

The name of the merged water and sewer utility will be the City of Raleigh Public Utilities Department.

3.3 Right to Operate

Rolesville hereby irrevocably grants Raleigh the right to design, construct, operate, maintain and perform all related activities required to operate, maintain, expand, upgrade and improve Rolesville's existing water and sewer utility system in accordance with Raleigh's water and sewer utility system standards and policies for operation and performance, level of service, reliability, and redundancy. Said Right to Operate includes the encroachment authority for Raleigh to operate in all public rights-of-way over which Rolesville has the sole authority or joint authority with the North Carolina Department of Transportation. Said water and sewer utility system standards and policies shall be applied in Rolesville to the same extent and in the same manner as applied to other customers of Raleigh's water and sewer utility system.

In all instances, Raleigh or its authorized contractor shall be required to restore and repair any street or other property of Rolesville upon the completion of any construction, operation, maintenance, replacement, improvement or related activity causing damage thereto. Said restoration or repair shall be to the standards acceptable to Rolesville.

3.4 System Upgrades and Improvements

Raleigh shall undertake and complete all activities relating to the design; construction; startup; and operation of the system upgrade and improvement projects agreed upon as a part of this Agreement and listed in Exhibit D. Said upgrade and improvement projects will be undertaken and completed by Raleigh to upgrade and improve Rolesville's water and sewer system in accordance with Raleigh's water and sewer utility system standards for operation and performance, level of service, reliability, and redundancy. Raleigh may, at its discretion, undertake alternative upgrade and improvement projects that accomplish the same purposes as the projects agreed upon.

Any upgrades by Raleigh beyond those outlined in Exhibit D will be accomplished in accordance with Raleigh's normal operations and capital program prioritization process. Raleigh will notify in writing, and confer with representatives of Rolesville's governing Board and the UAC, before final adoption of any upgrade and improvement projects beyond those outlined in Exhibit D, any water and sewer utility system expansion program, or water and sewer system master plan or capital improvements plan affecting the water and sewer systems within the corporate or Urban Service Area limits of Rolesville.

The costs for the upgrade and improvement projects will be recovered from customers located in Rolesville's municipal corporate and Urban Services Area limits through the schedule of rates, fees and charges as described elsewhere in this Agreement. Cost-

sharing for projects of mutual benefit to Rolesville and other municipalities will be reviewed on a case-by-case basis.

3.5 Notices of Violation

In the event that fines or penalties are levied by the State of North Carolina for violation of Rolesville water or wastewater system permits following the Transfer Date, payment of fines for notices of violations will be paid by Raleigh. Any fines or penalties for actions prior to the Transfer Date will be paid completely by the Town of Rolesville.

3.6 Rates, Fees, Charges, and Penalties

Raleigh shall have the sole responsibility and authority to establish and set rates, fees, charges, and penalties necessary for the operation, maintenance, upgrade, improvement, and expansion of the water and sewer utility system. Subject to the provisions hereof, it is intended that the expansion, upgrade, improvement, operation and maintenance of the water and sewer system shall be on a self-sustaining basis. All revenues of Raleigh water and sewer utility shall be used exclusively by the water and sewer utility fund for direct and indirect costs of the water and sewer utility operations.. In maintaining and operating the water and sewer system, Raleigh will:

1) Set and charge reasonable rates, based on cost of service principles, to all classes of users of the water and sewer system;

2) Operate and maintain the water and sewer system at the lowest possible rates, consistent with Raleigh's obligation and commitment to provide proper, efficient, and environmentally sound water and sewer services now and in the future;

3) Use the revenues of the water and sewer system for:

    a) The maintenance and operation of the water and sewer system,

    b) The payment of debt service or other debt instruments issued therefore, and the funding of resources in connection with the issuance of such debt for the water and sewer system,

    c) The expansion, extension, upgrade, and improvement of the water and sewer system and such other purposes as Raleigh may deem proper for the operation of the water and sewer system,

    d) Watershed protection activities, or

    e) Other lawful public purposes.

3.7 Schedules of Rates, Fees, Charges, and Penalties

Raleigh shall apply to customers located in Rolesville's corporate limits and Urban Services Area a schedule of rates, fees and charges sufficient to recover all of the costs, as determined by Raleigh, required to accomplish the water and sewer utility merger between Raleigh and Rolesville. Said costs will include, but not be limited to, capital upgrades and improvements, administration and other transfer costs directly related to the water and sewer utility merger.

Capital cost estimates for system upgrade and improvement projects are listed in Exhibit D. It is understood that the actual costs for the upgrade and improvement projects may vary from the estimated costs presented in Exhibit D because of changes in scope, site

conditions, schedule or other factors beyond the control of Raleigh. Potential cost increases resulting from factors beyond the control of Raleigh will be recovered through the schedules of rates, fees and charges applied to customers in the Rolesville service area.

The cost recovery program for the water and sewer utility merger will be phased over a 10-year period. The schedule of estimated revenues and expenses for the Rolesville service area is presented in Exhibit E. The sequence of rates, fees and charges to be applied to customers in the Rolesville area during this period is scheduled as follows:

1) For the period extending from the Transfer Date to December 31, 2011, the consumptive retail rate for Rolesville customers will remain the same as in effect on the Transfer Date.

2) For the period extending from January 1, 2007 to December 31, 2011, a surcharge may be applied to the consumptive retail rate of Rolesville customers if:

   a) The actual capital costs, and associated annual debt service, exceed the estimated capital costs for the upgrade and improvement projects identified in Exhibit D, or

   b) The actual revenue from the Rolesville service area is insufficient to recover all of the merger-related costs within the 10-year period.

   If a surcharge is required, then the surcharge will apply for a future period to be determined based upon the recovery period projected as of January 1, 2007.

3) After January 1, 2012, the consumptive retail rate for Rolesville customers will be same as for Raleigh customers, subject to any continuing surcharge that may be added to the rates in subparagraph 2 above.

4) If revenues collected from the Rolesville service area during the 10-year period exceed the merger-related costs as defined by Raleigh, then Raleigh may offer to apply the excess revenues toward the purchase of additional water and/or sewer capacity allocations beyond the agreed upon indexes specified in Section 5.1. The quantity of additional water and/or sewer capacity available under this provision will be determined by comparing the excess revenues collected with Raleigh’s back-capital fees and charges in effect on the Transfer Date. Raleigh's back-capital fees and charges are referenced in Exhibit E.

Rolesville's non-consumption fees and charges related to utility service, such as acreage fees, capacity fees, frontage fees, Neuse River nitrogen fees and utility connection ("tap") charges will continue to be assessed and collected by the Rolesville customer service center, and remitted to Raleigh, until all said merger costs have been fully recovered.

Once all said merger costs have been fully recovered, Raleigh shall apply rates and non-consumption fees and charges to customers located inside the municipal limits of Rolesville that are equivalent to those that are being charged to customers inside the municipal limits of Raleigh, and shall apply rates and non-consumption fees and charges to customers located outside the municipal limits of Rolesville that are equivalent to those that are being charged to customers outside the municipal limits of Raleigh. During the 10-year period from January 1, 2002 through December 31, 2011, Raleigh shall provide Rolesville with an annual statement summarizing the status of Rolesville utility revenues and merger costs as compared to original estimates.

Raleigh will provide at least thirty (30) days written notice to Rolesville customers prior to adopting any revisions to the schedule of rates, fees, and charges.

4.0 Rolesville Existing Facilities and Property

Rolesville's water and sewer utility system provides water and sewer service to approximately 950 persons through approximately 375 accounts. Rolesville's water distribution system consists of approximately 11 miles of water mains and one 75,000-gallon elevated storage tank. Rolesville's water is supplied either by contract with Wake Forest or from Rolesville's network of water supply wells.

Rolesville's wastewater management system consists of approximately 11 miles of gravity and pressure mains and one wastewater-pumping station. Rolesville has a contract with Raleigh to treat 0.450 MGD at Raleigh's Neuse River WWTP.

4.1 Representation and Warranties by Rolesville

Rolesville makes the following representations and warranties to Raleigh:

1) Rolesville is the sole owner of all water and sewer lines, pipes, meters, valves, meter boxes, laterals, and any other property transferred to Raleigh under the terms and conditions of this Agreement, and

2) Said facilities, property, land, equipment, information, and data is free and clear of all encumbrances (except as it may be included in the full, faith and credit of Rolesville as a part of existing bonded indebtedness or loans). In the event that Rolesville's bonds have provisions that do not allow the sale of the systems while bonds are outstanding, Rolesville and Raleigh agree to enter into a long term leasing arrangement for the portions of the system that are affected until such time as the bonds are retired. Upon retirement of the bonds, the full ownership transfer will take place.

4.2 Property Transfer

Upon the Transfer Date of this Agreement, a Bill of Sale shall be executed by Rolesville to transfer ownership of all facilities, property, land, equipment, financial assets, information, and data subject to this Agreement to Raleigh. Such documents shall be sufficient to convey to Raleigh all of Rolesville's right, title, and interest in Rolesville's water and sewer system, including easements and rights-of-way, whether or not recorded. Said rights-of-way shall include the right to operate and maintain the subject water and sewer system within any public streets within Rolesville. Any documents needed to memorialize this passage of title shall not be required to contain any warranties of condition or title, except as expressly set forth herein. A quit-claim deed shall be executed by Rolesville to convey all interests in real property and improvements thereto which are subject to this Agreement.

Rolesville shall cooperate with Raleigh in establishing title to any portion of Rolesville's water and sewer system where ownership may be contested.

4.3 Easements and Encroachments

Rolesville has fully-executed and properly recorded easements and encroachment agreements for portions of Rolesville's water and sewer utility system. As a condition of this Agreement, a complete list of all recorded easements and encroachment agreements will be provided to Raleigh. To the extent possible, all easements for Rolesville's water and sewer utility system shall be conveyed by Rolesville to Raleigh by an appropriate instrument suitable for recording in the Office of the Register of Deeds for Wake County, North Carolina. As a condition of this Agreement, Rolesville will provide Raleigh with copies of any encroachment agreements it has with the North Carolina Department of Transportation and with any other utility companies (See Exhibit B).

Rolesville has some facilities installed on the properties of others for which it does not have express easements or encroachment agreements, and some facilities installed in streets and rights-of-way for which it has no encroachment agreements. In the event a landowner on whose land such a facility exists contests Raleigh's right to maintain such facilities, Raleigh shall notify Rolesville in writing and Rolesville shall be responsible to obtain at its expense the necessary easement, encroachment agreements or fee simple title across said land either by negotiation or by eminent domain. After Rolesville has obtained such easement or fee simple title, it shall transfer ownership thereof to Raleigh. Any reasonable and direct expense borne by Raleigh in resolution of these disputed easements shall be paid by Rolesville, and Rolesville shall also make adequate reservation for the necessary rights-of-way for all planned water and sewer facilities prior to closing any street. If Rolesville fails to comply with the provisions of this paragraph, Rolesville shall reimburse Raleigh in full for all expenses incurred in acquiring the necessary rights-of-way by purchase or condemnation.

4.4 Existing Water and Sewer Capacity Allocations

As of June 12, 2001, Rolesville has an interim (non-permanent) wastewater treatment allocation from Raleigh for 0.450 million gallons per day (mgd) for average daily demand (ADD) flows. As of the Transfer Date, Rolesville will have an allocation of 0.375 mgd for ADD wastewater flows.

As of May 1, 2001, Rolesville has a water supply allocation from the Town of Wake Forest for 0.15 mgd for maximum daily demand flows. Under this Agreement between Raleigh and Rolesville, a water supply allocation from Raleigh of 0.15 mgd for maximum daily demand flows will be provided to Rolesville, as credit for release of its Wake Forest allocation. As of the Transfer Date, Rolesville will have a total water supply allocation from Raleigh of 0.36 mgd for average day water use and 0.45 mgd for peak day water use.

Raleigh will construct additional wastewater and water supply capacity as necessary to accommodate new growth and development within the corporate limits and Urban Service Area of Rolesville. Said additional wastewater and water supply capacity will be financed by Raleigh using revenues generated by Raleigh's schedule of rates, fees, and charges, or other debt instruments as determined by Raleigh.

4.5 Financial Assets and Closeout

The financial records of the Town of Rolesville water and sewer enterprise fund will be closed as of the Transfer Date of this Agreement. As of this closeout, the full amount of the Rolesville utility fund equity will be transferred to the City of Raleigh to be used for payments of water/wastewater debt service costs or capital improvements for the Rolesville system. The accounting for all other asset and liability accounts will transfer at closeout to the Raleigh water and sewer enterprise fund, subject to audit verification by the Raleigh Internal Audits Division and an independent auditor. Rolesville shall write-off all inactive accounts considered uncollectable and adjust other accounts to a current status prior to Raleigh's assumption of the financial accounts.

4.6 Existing Rolesville Water Supply Wells

The existing Town of Rolesville water supply wells shall be capped by Raleigh following the Transfer Date, following Raleigh's determination that sufficient water supply can be provided to Rolesville by other means to compensate for the well production. The well capping shall

occur after direct interconnections between Raleigh and Rolesville are completed and direct water delivery from Raleigh has begun.

5.0 Expansion and Extension of Water and Sewer Services

Raleigh shall provide, maintain, and extend the water and sewer systems and facilities as may be required under applicable laws and regulations so as to serve present and future demands, and in particular so as not to impede the orderly growth and development of Rolesville, except as provided in Paragraph 5.1 below. Raleigh shall not practice or permit any discrimination against Rolesville in the provision of such services based upon location of the point of service within Rolesville or its Urban Services Area.

5.1 Growth and Development Index

The City of Raleigh will provide water and sewer services to customers in the Town of Rolesville within the following parameters:

1) For the period extending from the Transfer Date to December 31, 2006, the total wastewater flow allocation for Rolesville will be limited to 0.375 MGD average day wastewater flow, and the average day water use and peak day water use allocations will be limited to 0.36 MGD and 0.45 MGD, respectively.

2) For the period extending from January 1, 2007 to December 31, 2015, the annual growth rate in average day water use, peak day water use, and average day wastewater flow will be limited to 4 percent per year, compounded upon the prior year's allocation.

3) For the period extending from January 1, 2016 to December 31, 2025, the annual growth in average day water use, peak day water use and average day wastewater flow will be limited to 3 percent, compounded upon the prior year's allocation.

4) For the period extending beyond January 1, 2026, the annual growth in average day water demands, peak day water demands and average day wastewater flow will be the same as for the City of Raleigh service area as determined by the Raleigh City Council.

The calculation of Rolesville's water and wastewater flow allocation will be based on the summation of estimated flows for new connection permits and actual flows metered for the Rolesville service area. An exceedance of the prescribed growth rate in any given year will be allowed, provided it is reconciled within the following 2 years. For example, during the period 2006 to 2015, the the annual growth rate limit is 4 percent. Annual growth over a three consecutive year period may be 6 percent (year 1), 2 percent (year 2) and 4 percent (year 3), equivalent to an average 4 percent growth rate. Because the growth exceedance in year 1 was reconciled to the prescribed average within the following 2 years, the overall growth for this period would not violate this agreement.

These growth levels would be subject to modification by the City of Raleigh if problems are encountered with the implementation of treatment plant expansions. If such is necessary, Rolesville's water and sewer growth capacity would be no less than 1 percent of the total treatment capacity of the Raleigh system for water and for wastewater at that time.

The City of Raleigh may offer the town of Rolesville additional water and sewer capacity beyond the agreed-upon indexes, on a case-by-case basis, to accommodate major industrial or commercial projects that elect to locate within Rolesville's Urban Services Area and provide benefits to both Raleigh and Rolesville.

5.2 Requests for Service

Upon the Transfer Date, all future requests for new service connections will be made to Raleigh. Request for new services that require extensions will be first presented to Rolesville to assure all zoning and land use issues have been addressed then forwarded to Raleigh for approval of water and sewer plans. Both Rolesville and Raleigh, in conjunction with the UAC, will provide information to customers and potential customers regarding details of service. Raleigh agrees to provide existing and future water and sewer customers located within Rolesville's corporate or Urban Services Area limits, service of a quality comparable to the quality and quantity of service provided to water and sewer customers within the municipal boundaries of Raleigh. Raleigh specifically agrees that the geographical location of the water and sewer customers in Rolesville or in its Urban Services Area shall not have any substantial effect on the quality of service or timing of repairs to be made by Raleigh.

5.3 Developer-Requested Extensions to the System

Subject to the provisions of this Agreement, extensions of the subject water and sewer system that are undertaken by third-party developers shall be made under the policies published and used by Raleigh, and as may be amended from time to time. Said policies shall be uniform throughout Raleigh's water and sewer system, including those areas affected by this Agreement. Raleigh may, at its discretion, make changes to the extension policies as Raleigh determines to be appropriate. Said changes shall apply to all portions of the water and sewer system operated and maintained by Raleigh, including those areas located in Rolesville's corporate and Urban Services Area limits.

For water and sewer extensions outside of Rolesville's municipal corporate limits, all applicable water and sewer extension policies that apply outside of Raleigh's corporate municipal limits will apply.

Any third-party request to Raleigh for water and sewer service extensions in Rolesville's corporate limits, extra-territorial jurisdiction (ETJ), or Urban Services Area (USA) will require prior written approval by Rolesville's governing board before the service can be provided by Raleigh.

Utility fees and charges for new Rolesville customers may not be paid by Rolesville or any other public entity, either directly or indirectly, as a part of an economic development program for Rolesville. Violation of this condition will constitute a breach of the Agreement.

Approval for request for service or extension under provisions of this section will not be unreasonably withheld by either Raleigh or Rolesville.

5.4 Rolesville-Requested Extensions to the System

Rolesville-requested extensions to the merged water and sewer system or extensions thereof required by Rolesville beyond those included in the Raleigh Capital Improvement Program, shall be financed by Rolesville and shall be accomplished by contract between Rolesville and Raleigh. Reasonable notice to proceed with such extensions will be provided to Raleigh by Rolesville, such that applicable time limitations can be met. However, under no circumstances shall Raleigh be liable to Rolesville for the payment of damages, penalties, fines or any other monetary recovery as a result of any failure to satisfy such time limitations for Rolesville-requested extensions. For extensions required due to annexation, annexation plans shall be submitted by Rolesville to Raleigh to evaluate the feasibility thereof under then existing conditions.

Raleigh shall reimburse Rolesville for costs associated with extensions by Rolesville in accordance with established extension and reimbursement procedures applicable to developers and customers of Raleigh.

5.5 Annexations

Any annexation considerations will be resolved based on the existing annexation agreements between Raleigh and Rolesville. Prior to approval of extension of service to property outside the corporate limits of Rolesville, Rolesville must require application for annexation into Rolesville's municipal corporate limits. Rolesville must require application for annexation and act on an annexation petition prior to approval to add new water and sewer customers into Rolesville limits.

Raleigh will provide water and sewer services to areas that cannot be annexed, only by exceptions to be considered on a case-by-case basis, to address specific health-related concerns. All required annexations must proceed within a reasonable amount of time of committing to the provision of water and sewer service.

6.0 Employee Transfer

Rolesville's water and sewer utility system has no full-time employees, but the utility funds one-half of the salary and benefits for a permanent customer service representative stationed at the Rolesville Town Hall. The customer service representative will remain a Town of Rolesville employee. Raleigh will utilize this position for operation of a satellite customer service center at the Rolesville Town Hall in accordance with the services described in Section 11 of this Agreement.

7.0 Records Transfer

Rolesville shall transfer to Raleigh all available reproducible and electronic copies of any and all records, data, information, and models arising from the construction, operation and maintenance of Rolesville's water and sewer utility system and any other related activity, including projects in progress, and including, but not limited to, the following:

1) Construction contracts, drawings, maps, and all other related documents evidencing the condition or location of any portion of the subject water and sewer systems including such documents as may be in the possession of any engineer or other consultant of Rolesville;

2) Billing, collection and payment records on all present customers of the subject water and sewer systems;

3) An accurate tabulation or listing of all actual service locations in the Rolesville system to be transferred to Raleigh from Rolesville, to include:

    a) Address - Number and Street;

    b) Account Name (if active);

    c) Billing Address for Each Account Number;

    d) Account Numbers and all meter reading books and the history of all accounts for the past twelve (12) months;

    e) One Year's Account History;

f) Meter Location Description;

4) Contracts or agreements for the supply of equipment, materials, supplies, and products;

5) Pending applications for water and sewer service;

6) Contracts or agreements to provide water and or sewer service currently in effect;

7) Receipts, accounts and other records of deposits made by all present and past customers of the subject water and sewer systems;

8) Any and all warranty information on any facilities, property, land, and equipment transferred to Raleigh pursuant to this Agreement;

9) Repair, maintenance, trouble, and emergency response records for all portions of Rolesville's water and sewer systems;

10) Any and all notices of violation, legal actions, and lawsuits pertaining to Rolesville's water and sewer system ;

11) Plans, permits, reports, specifications, surveys, etc., for water and sewer facilities and operations;

12) Number and locations of all unmetered services;

13) Copies of all water and sewer system maps;

14) Copies of all easements;

15) Copies of all encroachment agreements;

16) Identification of all inside Rolesville customers;

17) Identification of all outside Rolesville customers;

18) Record of all assessments for system extensions;

19) Identification of all taps for which payment has been made;

20) Identification of all backflow prevention installations;

21) Identification of all Pretreatment Program installations;

22) Copies of such records as are necessary to inform Raleigh of the location of all facilities of Rolesville for other utility operations;

23) Any other information, data, and records pertaining to Rolesville's water and sewer utility;

24) Accounts receivable records; and,

25) Accounts payable records.

Rolesville agrees that within a reasonable time after the Transfer Date, Rolesville shall submit to Raleigh such accounting, commercial, engineering, planning, personnel, and facility records pertaining to Rolesville's water and sewer utility system. Rolesville may make copies of said materials for Rolesville's records and archives. Prior to the Transfer Date, the City Manager of Raleigh and Town Manager of Rolesville, or their designees, shall

determine mutually satisfactory administrative details for the transfer of the above-referenced records.

8.0 Customer Transfer

As of the Transfer Date, all customers and users of Rolesville's water and sewer system shall become subject to all rules, regulations and ordinances of Raleigh as the same apply to all users and customers of the water and sewer system of Raleigh, and as same are now or may hereafter be amended. Such rules, regulations and ordinances and schedule of rates, fees, charges and penalties shall constitute a part of the Agreement between Raleigh and any customer or user of the subject water and sewer system and any extensions thereof for the provision of water and sewer service.

A team comprised of Raleigh and Rolesville staff shall develop a seamless transfer of customer accounts at Transfer Date in order to provide continuity of account activity after the merger. All accounting after the Transfer Date shall be made within the Raleigh utility enterprise fund.

8.1 Customer Deposits

Following the Transfer Date, Rolesville, under the direction of the Rolesville Town Manager or their designee, shall refund deposits by checks to be mailed to its customers..

8.2 Billing Cycles

The billing cycle for Rolesville water and sewer customers is currently a monthly cycle. The billing cycle for Raleigh water and sewer customers is currently a bi-monthly (every two months) cycle. As of the Transfer Date of this Agreement, Raleigh reserves the right to adjust the billing cycle for Rolesville water and sewer customers to a bi-monthly cycle at a time that Raleigh deems appropriate. Raleigh will make a good-faith effort to implement the change to a bi-monthly billing cycle after a 5-month customer notification and education program by Rolesville and Raleigh, to begin immediately following the Effective Date of this Agreement.

8.3 Water Meter Readings

As of the Effective Date, Rolesville's water meters measure water volume in units of 1,000 gallons, and Raleigh's water meters measure water volume in units of 100 cubic feet At the Transfer Date, Raleigh shall assume all responsibility for reading all customer meters and for preparation of water and sewer bills, and water and sewer customers in Rolesville will be billed for water and sewer service based on 100 cubic feet units. Rolesville's gallon unit water meters shall be replaced with cubic feet water meters by Raleigh as part of the System Upgrades and Improvements identified in Exhibit D. If the replacement of Rolesville's water meters cannot be completed prior to the initial collection of water meter readings by Raleigh staff, Raleigh will collect water meter readings from Rolesville customers using 1,000 gallon units, and Raleigh's water billing system will convert the readings to 100 cubic feet units for the purposes of producing water and sewer bills.

The transition of meter readings will be coordinated by a joint implementation team.

9.0 Bonded Indebtedness

Raleigh agrees to pay Rolesville all amounts necessary to enable Rolesville to make all debt service payments when due and payable on all existing outstanding bonded indebtedness of Rolesville for water and sewer facilities covered under this Agreement. The payments

required to be made in accordance with this provision of the Agreement shall be made in a timely manner, and Raleigh's obligation hereunder shall be a continuing one until all outstanding bonded indebtedness of Rolesville borrowed for such purposes shall have been paid in full. A statement of Rolesville's outstanding bonded indebtedness and a schedule of the debt service to be made pursuant to this provision of the Agreement shall be submitted to Raleigh prior to the Transfer Date of this Agreement (See Exhibit F). Rolesville agrees to cooperate with Raleigh in determining opportunities for early retirement or refinancing of any of the outstanding debt, when such adjustments are permitted by the bonding agencies, and Raleigh retains the right to exercise an option of debt refinancing or retirement if costs to the water and sewer utility can be lowered as a result.

9.1 Wake County Acreage Fee Reimbursements

Rolesville has active reimbursement agreements in effect with the County of Wake, North Carolina. Pursuant to this agreement, acreage fees are to be collected for each property that connects to, and directly abuts, an agreement project. If the reimbursement requirement is not waived by Wake County, Raleigh agrees to pay Rolesville all amounts necessary from acreage fees to enable Rolesville to make all debt service payments when due and payable under the reimbursement agreements of Rolesville for water and sewer facilities covered under this Agreement, until such reimbursement agreements are repaid in full. Rolesville shall advise Raleigh on an annual basis regarding the status of the Wake County reimbursement agreements.

10.0 Prior Agreements

All prior agreements between Rolesville and Raleigh pertaining to water and sewer services are rescinded as of the Transfer Date.

10.1 Existing Commitments

Rolesville has certain commitments to developers of residential and non-residential projects inside and outside the corporate boundaries of Rolesville.

Rolesville will install the meters, set the boxes, and collect tap fees in all of such developments to fulfill its existing commitments prior to Transfer Date. Such completed services shall become a part of the property to be conveyed herein from Rolesville to Raleigh. If any commitments are left outstanding as of the Transfer Date, Rolesville agrees to accept full financial responsibility to resolve the commitment.

10.2 Existing Agreements

Raleigh shall assume and honor all existing developer (as of the Transfer Date) contracts previously entered into by Rolesville concerning Rolesville's water and sewer system; provided that such contracts that require expenditure of Raleigh funds shall be reimbursed by Rolesville in full within thirty (30) days after receipt of an invoice from Raleigh. Any such contract or agreement with third parties entered into by Rolesville between the Effective Date and the Transfer Date shall require approval by Raleigh.

Rolesville has existing agreements relating to water and sewer services (as of the Effective Date) with the Town of Wake Forest and Five County Utilities, Incorporated. Rolesville shall provide notice to both entities regarding this agreement and Rolesville's intent to rescind its agreements with Wake Forest and Five County Utilities, Incorporated, as of the Transfer

Date. However, Raleigh at its option may elect to continue these agreements through the current terms, subject to the consent of the contracting parties.

10.3 Discriminatory Agreement Disclaimer

No existing special, discriminatory agreements with specific customers will be continued, honored, or assumed by Raleigh.

Rolesville represents and warrants to Raleigh that there are no discriminatory agreements between Rolesville and any customer or user of Rolesville's water and sewer system which will nor may survive this Agreement and be binding upon Raleigh. For purposes of this Agreement, a discriminatory agreement is any agreement, contract or other understanding between Rolesville and any customer or user of Rolesville's water and sewer system that provides that:

1. Water and sewer service be extended and provided in a different manner than such service is extended and provided to the remaining customers or users of Rolesville's water and sewer system as to quality, quantity, or any other aspect of extending and providing such service;
2. Water and sewer service be extended and provided upon the payment of a different schedule of rates, fees, charges, or penalties than is imposed upon the remaining customers or users of Rolesville's water and sewer system;
3. Water and sewer service be extended and provided at a different cost or schedule for reimbursement of costs or any other aspect of paying for the extension and provision of water and sewer service than is imposed upon the remaining customers or users of Rolesville's water and sewer system.

In the event that an unlawful discriminatory agreement exists and survives this Agreement, and is determined to be binding upon Raleigh, Rolesville shall indemnify and hold Raleigh harmless from any and all demands, claims, or actions (including the reasonable costs, expenses and attorney fees incurred by Raleigh), of such discriminatory agreement. Further, Rolesville shall indemnify and hold Raleigh harmless from any and all demands, claims, or actions, without regard to the relief sought or awarded and without regard to whether the claim, demand or action is raised by a party to the discriminatory agreement.

11.0 Contracted Services Between Raleigh and Rolesville

Raleigh will make separate agreement with Rolesville for Rolesville's operation of a Raleigh Satellite Customer Service Center, beginning on the Transfer Date. Rolesville will collect payments for City of Raleigh services and tax revenues, including but not limited to water and sewer bills. Rolesville will also be accessible by telephone for Rolesville residents for billing or service-related inquiries. Obligations of Rolesville and Raleigh for the operation of the Satellite Customer Service Center shall be as specified in the referenced agreement.

12.0 Conflict/ Default Resolution

In the event of conflict or default that might arise for matters associated with this Agreement, the parties involved agree to informally and formally communicate to resolve the conflict. If this communication is not successful in resolving the conflict, the matter will be presented to the City Manager of Raleigh and the Town Manager of Rolesville for resolution. If the Managers are unable to resolve the conflict, the matter will be presented to the respective governing boards for resolution.

13.0 Fire Protection Services

Raleigh shall be responsible for maintaining fire hydrants and services in a reasonable manner at a level equivalent to that maintained by Rolesville at time of transfer of the system. This level of service shall include hydrant spacing, hydrant maintenance, and water volume and pressure available at the hydrant. Raleigh shall coordinate with the Rolesville Fire Department for necessary testing to be done by the Rolesville Fire Department.

14.0 Ordinances to be Adopted

As a condition of entering into this Agreement, Rolesville shall adopt such ordinances as are reasonably necessary to regulate the proper use of the subject water and sewer system and any extensions thereof by the customers and users within the jurisdiction of Rolesville. Said ordinances shall be reviewed and approved by Raleigh prior to adoption by Rolesville, and will further grant to Raleigh all administrative, permitting, regulatory, and enforcement authority necessary for the regulation, operation, maintenance, and improvement of the water and sewer systems serving the corporate and Urban Services Area limits of Rolesville. Rolesville shall maintain updates and enforce such ordinances. Raleigh shall reimburse Rolesville for the reasonable expenses of enforcing such ordinances. Said ordinances shall have the same or similar provisions as are included in Raleigh's use ordinance related to Raleigh's water and sewer utility system.

15.0 Amendment to Agreement

This agreement may be amended only by a document in writing, approved by the Town Board of Commissioners of Rolesville and the City Council of Raleigh and executed by the respective Mayors.

16.0 Customer Notification

Rolesville agrees to use all practical means, including direct mailing, to notify customers of changes associated with this merger. Such notification shall include information on schedule and mechanics of transfer and information concerning Raleigh's policies and procedures.

17.0 Severability

It is hereby the declared intention of Rolesville and Raleigh that the paragraphs, sections, sentences, clauses, and phrases of this agreement are severable. If one or more paragraphs, sections sentences, clauses, or phrases shall be declared void, invalid or otherwise unenforceable for any reason by the valid, final judgment or decree of any court of competent jurisdiction, such judgment or decree shall not affect the remaining provisions of this agreement and the same shall continue to be fully effective and enforceable on the basis that said remaining provisions would have been agreed to by Rolesville and Raleigh without the incorporation of such void, invalid or otherwise unenforceable paragraph, section, sentence, clause or phrase.

18.0 Notices

Whenever written notice is required under this agreement, said notice shall be sufficient when received by the Town Manager of Rolesville and the City Manager of Raleigh. Said notice may be mailed or hand-delivered but shall not be effective unless actually received.

Approved this _____day of _____2001

Town of Rolesville

BY:_____

Town Manager

Attest:

_____

Town Clerk

City of Raleigh

BY:_____

City Manager

Attest:

_____

City Clerk

EXHIBITS

Exhibit A	Fixed Assets to be Transferred
Exhibit B	List of Real Property, Easements and Encroachments Agreements
Exhibit C	Water and Sewer Utility Property and Fixed Assets to be Retained by Rolesville
Exhibit D	Schedule of Upgrades and Improvements
Exhibit E	Schedule of Estimated Revenues and Expenses
Exhibit F	Bonded Indebtedness

EXHIBIT A - Fixed Assets to be Transferred

Asset	Address
1. Wastewater Pump Station	109 Bowling Drive, Rolesville
2. Rolesville Maintenance Building, Complete with contents	208 West Young Street, Rolesville
3. Elevated Water Storage Tank	Behind property at 106 South Main Street, Rolesville, PIN # 1769.17013494
4. Hydrogen Peroxide Dosing Location[a]	208 West Young Street, Rolesville
5. Hydrogen Peroxide Dosing Location[a]	291 North Main Street, Rolesville

[a] Note: Hydrogen peroxide dosing equipment, including tank, metering pumps, controls and piping, are leased by the Town, and therefore ownership of the equipment does not transfer to the City.

Exhibit B List of Real Property, Easements and Encroachments Agreements

Property	Address
1. Wastewater Pump Station Site	109 Bowling Drive, Rolesville
2. Rolesville Maintenance Facility Site	208 West Young Street, Rolesville

Note: The Town of Rolesville has not identified easements or encroachment agreements relating to the utility. Agreement section 4.3 addresses responsibilities of the Town with regard to easements and encroachments.

Exhibit C Water and Sewer Utility Property and Fixed Assets to be Retained by Rolesville

Property/Asset	Address
1. Well No. 3 and Wellsite	Behind property at 213 North Main Street, Rolesville
2. Wells No. 4 and 5 and Wellsite	206 Bowling Drive, Rolesville

Exhibit D Schedule of Upgrades and Improvements

EXHIBIT D
Summary of System Upgrade and Improvement Projects

Project Identifier	Project Description[1]	Estimated Construction Cost	Engineering Allowance (10%)	Total Estimated Project Cost	Estimated Year of Construction
Water System:					
WS-001	New 500,000 gallon elevated storage tank, complete in place (60% proposed Rolesville share of costs)	$ 667,800	$ 66,780	$ 734,580	2002
WS-002	16-inch line, US 401 from Jonesville Road to Forestville Road	$ 1,013,760	$ 101,376	$ 1,115,136	2002
WS-003	16-inch line, feeder to elevated storage tank	$ 105,600	$ 10,560	$ 116,160	2002
WS-004	Booster Pump Station at Forestville Road,	$ 263,399	$ 26,340	$ 289,739	2002
WS-005	8-inch line, North Main from Young to end of System	$ 324,000	$ 32,400	$ 356,400	2002
WS-006	6-inch line, Watkins Farm Road from Blueberry to Waterstone	$ 35,640	$ 3,564	$ 39,204	2002
WS-007	South Main, abandon 6-inch Transite, move services to new 12-inch main, cap cross connections	$ 12,000	$ 1,200	$ 13,200	2003
WS-008	South Main, replace 6-inch Transite	$ 7,140	$ 714	$ 7,854	2003
WS-009	Bowling Street, replace 6-inch Transite	$ 34,440	$ 3,444	$ 37,884	2003
WS-010	West Young Street, replace 6-inch Transite and new services	$ 48,300	$ 4,830	$ 53,130	2003
WS-011	East Young Street, replace 6-inch Transite and new services	$ 36,540	$ 3,654	$ 40,194	2003
WS-012	Rolesville Operations Ctr - abandon 4-inch Transite	$ 3,600	$ 360	$ 3,960	2004
WS-013	Rolesville Operations Ctr - replace 4-inch line to Peroxide Station	$ 5,760	$ 576	$ 6,336	2004
WS-014	Meter Replacement Program, to City of Raleigh standards	$ 140,000	$ 14,000	$ 154,000	2002
Wastewater Collection, Conveyance and Pumping System:					
WW-001	Hydrogen Peroxide Dosing Station for south wastewater collection area	$ 22,800	$ 2,280	$ 25,080	2003
Total Estimated Cost of Upgrade and Improvement Projects:				***$ 2,999,857***	

Exhibit E Schedule of Estimated Revenues and Expenses

Exhibit F Bonded Indebtedness

Original Amount	Enterprise Debt	Interest Rate	Balance 6-30-2001	Anticipated Payoff
$600,000	General Obligation Bond	5.5%	$552,500	2033
$374,000	Installment Loan, Wake Electric Cooperative	0%	$332,444	2009

File - Rolesville Merger

City Council
Minutes
June 15, 2004

ROLESVILLE WATER AND SEWER MERGER AGREEMENT – AMENDMENT #1 - APPROVED

The City currently has an existing agreement with the Town of Rolesville for merging their water and sewer system with the City's. Amendment #1 is for additional base water and sewer capacity to be purchased by the Town of Rolesville at a cost of $3,325,500, paid prior to January 1, 2007.

Recommendation: Approve Amendment #1.

Ms. Cowell pointed out she understands this would be giving additional base water and sewer capacity for Rolesville and questioned the basis for this amendment. City Manager Allen explained the merger agreement utilized with Garner and Rolesville and explained how the base capacity was developed and how there was different calculations used. This would allow Rolesville to bring their base capacity similar to how Garner's base capacity was calculated. Mayor Meeker pointed out this shows the City of Raleigh can and is flexible with the merger agreements. Ms. Cowell moved approval of Amendment No. 1 of the Rolesville water and sewer merger agreement. Her motion was seconded by Ms. Taliaferro and a roll call vote resulted in all members voting in the affirmative. The Mayor ruled the motion adopted.

Watkins, Marva

From: Crisp, Dale
Sent: Tuesday, June 08, 2004 1:27 PM
To: Allen, Russell
Cc: Alford, Cathy; Hunt, Brenda; Watkins, Marva; Horton, Ron; Moyer, Jack; Jackson, Donna; Matthew Livingston; McCormick, Tom; James, Perry
Subject: AGENDA ITEM: Town of Rolesville Water and Sewer System Merger Agreement Amendment No. 1

The Town of Rolesville has submitted a request to the City of Raleigh to increase their base water capacity from 360,000 GPD to 936,000 GPD (an increase of 576,000 GPD) and their base sewer capacity of 375,000 GPD to 825,000 GPD (an increase of 450,000 GPD), as provided in section 4.4 of the existing Water and Sewer System Merger Agreement dated July 31, 2001 between Raleigh and Rolesville. This amount of additional base water and sewer capacity will place Rolesville on a per acre capacity basis equal with the amount included in the Town of Garner's Water and Sewer System Merger Agreement for both Town's "ultimate" service area equal to 77 GPD of water per acre and 67 GPD per acre. Attached is draft amendment no.1 to the Rolesville W/S Merger Agreement addressing the proposed change which would become effective on July 1, 2004.

Rolesville has agreed to pay Raleigh an additional $3,325,000 by January 1, 2007 in exchange for the additional base water and sewer capacity. Rolesville may pay this amount to the City in a lump sum or periodic installments to the City. If Rolesville chooses to pay on the installment payment basis and the Town should not complete the entire payment of $3,325,000 by January 1, 2007, then the base water and sewer capacity increase will be pro-rated, based on the amount they have paid to the City.

By copy of this memo, I'm transmitting a copy of the draft agreement amendment no. 1 to the City Attorney for his review.

Recommendation:
Public Utilities recommends City Council approval of the subject Rolesville Water and Sewer System Merger Agreement Amendment, as proposed. Dale

H. Dale Crisp

H. Dale Crisp, P.E.
Raleigh Public Utilities Director
One Exchange Plaza, Suite 620
219 Fayetteville Street Mall
(919)-857-4540 fax (919)-857-4545

Rolesville
nendment No. 1.doc

STATE OF NORTH CAROLINA

COUNTY OF WAKE

AMENDMENT NO. 1

ROLESVILLE WATER AND SEWER SYSTEM MERGER AGREEMENT

This AMENDMENT, made and entered into this _____ day of June, 2004, by and between the CITY OF RALEIGH, a municipal corporation existing under the laws of the State of North Carolina (hereinafter called the RALEIGH), and the TOWN OF ROLESVILLE, a municipal corporation existing under the laws of the State of North Carolina (hereinafter called the TOWN).

WITNESSETH

WHEREAS, RALEIGH and TOWN have an existing AGREEMENT specifying the rights, terms and conditions under which RALEIGH will merge the TOWN's water and sewer system with RALEIGH's water and sewer system, and

WHEREAS, said AGREEMENT, was executed on the 7th day of August, 2001, and approved by the respective Council of both RALEIGH and TOWN, and

NOW, THEREFORE, the TOWN and RALEIGH mutually agree to amend the AGREEMENT to increase the base capacity of water provided by RALEIGH to the TOWN by 0.576 million gallons per day (MGD) from 0.360 to 0.936 MGD and to increase the base capacity of wastewater by 0.450 MGD from 0.375 to 0.825 MGD.

Specifically, the AGREEMENT shall be amended in the sections noted below and the following sentences added to these sections:

(Section 4.4) Delete last sentence in the first paragraph and replace as follows – "As of July 1, 2004, the TOWN will have an allocation of 0.825 MGD for average daily demand (ADD) wastewater flows".

(Section 4.4) Delete last sentence in the second paragraph and replace as follows –"As of July 1, 2004, the TOWN will have a total water supply allocation of 0.936 MGD for ADD water use and 1.170 MGD for peak day water use".

(Section 4.4) Add to end of current section as follows – "The base water capacity cost for the additional 0.576 MGD is $1,728,000. The base wastewater capacity cost for the additional 0.450 MGD is $1,597,000. The total cost of additional water and wastewater base capacity is $3,325,000. The TOWN will make either a lump sum payment to RALEIGH of this amount or installment payments to RALEIGH which total this amount by January 1, 2007. Should the TOWN's installment payments not equal the total of $3,325,000 by January 1, 2007, then the additional base water and wastewater

Town of Rolesville

First incorporated 1837
P.O. Box 250 • 200 East Young St.• Rolesville, NC 27571 Phone (919) 556-3506 Fax (919) 556-6852

June 10, 2004

Mr. Dale Crisp, Raleigh Public Utilities Director
City of Raleigh Public Utilities Department
PO Box 590
27602

Dear Dale:

As aware, the Town of Rolesville has approached the City of Raleigh in an attempt to get additional water and sewer capacity. We are grateful to the City for considering this and appreciate the cooperative spirit that Raleigh has had towards Rolesville. After completing studies regarding future capacity needs, the Town Board unanimously agreed to move forward and work with the City to see what could be done. We are requesting that base water and sewer allocation be increased to a total of 936,000 gallons per day for water and 325,000 gallons per day for sewer. The Town Board understands that an additional $3.325,000 will be charged for said allocation. The deadline for completing said purchase will be 01/01/07. We propose that the source of these funds come from future water and sewer revenue primarily derived through increased water and sewer capacity fees on future approved development paid at the time of plat recordation. If an arrangement can be made, we will change our fee schedule accordingly.

A water and sewer subcommittee has completed studies of future water and sewer needs based on growth projections of approved development within the Town of Rolesville. Even from the most conservative vantage point, the data clearly shows the need for additional water and sewer allocation. I have attached summary graphs for your information. We recognize that it is difficult to predict just how much the Town will grow. Our data, which again is based primarily on approved development, shows that our current allocation of 375,000 gallons per day will be surpassed in a few short years. Therefore, we respectfully request that this matter be taken up for consideration by the Raleigh City Council at your earliest possible convenience. Thank you very much for your consideration of this matter. Please feel free to contact me at the number above should you have any questions.

Sincerely,

Matthew S. Livingston

Matthew S. Livingston
Town Manager

Cc: Mayor, Nancy Kelly
Town Commissioners

Crisp, Dale

From: Crisp, Dale

Sent: Tuesday, June 08, 2004 9:49 AM

To: Allen, Russell

Cc: Jackson, Donna; Wiggins, Jewell; Watkins, Marva; Alford, Cathy

Subject: RE: AGENDA ITEM: Request for Transfer of Funds for the Crabtree Creek Sewer Parallel Project Account

The subject request for transfer of funds is for $8,371 of additional funding for the Crabtree Creek Sewer Parallel Project Account (fund 345). The transfer is necessary in order to have sufficient funds in this account to pay the private attorney fees (Poyner and Spruil) hired by the City Attorney's Office, for legal work that was associated with this sewer project. The funds in this account have been expended prematurely due to under estimation of the amount of attorney work necessary in order to settle the damages the City incurred from the property owner, as a result of the petroleum soil contamination on the City's sewer easement caused by the property owner.

RECOMMENDATION:
Public Utilities recommends City Council approval of the subject transfer of funds request, as proposed.
Dale

H. Dale Crisp
H. Dale Crisp, P.E.
Raleigh Public Utilities Director
One Exchange Plaza, Suite 620
219 Fayetteville Street Mall
(919)-857-4540 fax (919)-857-4545

REQUEST FOR TRANSFER OF FUNDS

To: City Manager **Date Submitted:** 6/7/04
Subject: Transfer of Funds - Request for **Date of Council Action** 6/15/04

I hereby request the transfer of funds, as set forth below, from one account to another, all within the adopted budget appropriations, as permitted and authorized by the General Statutes of North Carolina.

The purpose of this transfer is to provide funds to cover attorney fees.

Transfer from:

Account Number	Object Classification	Department	Division	Amount
325-8071-79290-975	Crabtree Ck Sewer	Public Utilities	Sewer	$8,371.00
	Parallel			
			TOTAL	$ 8,371.00

Transfer to:

Account Number	Object Classification	Department	Division	Amount
345-8071-79290-975	Crabtree Ck Sewer	Public Utilities	Sewer Bond	$8,371.00
	Parallel			
			TOTAL	$ 8,371.00

Department Head

This request has been checked and is correct in every respect including an adequate source of funds to complete this transfer. ☑ Yes ☐ No **In-house approval:** ☑ Yes ☐ No

Remarks: Agenda Item!

Finance Director

ACTION OF CITY MANAGER

☐ Approved ☐ Disapproved
Remarks:

City Manager

Crisp, Dale

From: Crisp, Dale
Sent: Tuesday, June 08, 2004 9:32 AM
To: Allen, Russell
Cc: Moyer, Jack; Jackson, Donna; Wiggins, Jewell; Watkins, Marva; Alford, Cathy
Subject: AGENDA ITEM: Request for Transfer of Funds for the Telephone / Communications Account

The subject request for transfer of funds is for $82,800 of additional funding for the Telephone / Communications Account in Special Appropriations. The transfer is necessary in order to have sufficient funds in these accounts for the remainder of the fiscal year. The funds have been expended prematurely due to under estimation of the expenditures necessary this year. The addition of staff in Public Utilities and the addition voice and data lines at our facilities lead to the under estimation of the funds needed for this year.

RECOMMENDATION:
Public Utilities recommends City Council approval of the subject transfer of funds request, as proposed.
Dale

H. Dale Crisp

H. Dale Crisp, P.E.
Raleigh Public Utilities Director
One Exchange Plaza, Suite 620
219 Fayetteville Street Mall
(919)-857-4540 fax (919)-857-4545

REQUEST FOR TRANSFER OF FUNDS

To: City Manager **Date Submitted:** 6-4-04
Subject: Transfer of Funds - Request for **Date of Council Action** 6-15-04

I hereby request the transfer of funds, as set forth below, from one account to another, all within the adopted budget appropriations, as permitted and authorized by the General Statutes of North Carolina.

The purpose of this transfer is to provide funds to cover the cost for the remainder of this fiscal year.

Transfer from:

Account Number	Object Classification	Department	Division	Amount
310-5220-71012-602	Corps Falls Project	Public Utilities	Water Plant	$20,300.00
310-5240-70111-611	Water Constr Sup	Public Utilities	Construction	$30,000.00
310-5240-70112-611	Sewer Constr Sup	Public Utilities	Construction	$20,000.00
310-5290-72324-622	Neuse Cross O&M	Public Utilities	Special Appr.	$12,500.00
			TOTAL	$82,800.00

Transfer to:

Account Number	Object Classification	Department	Division	Amount
310-5210-71305-601	Telephone/Comm.	Public Utilities	Administration	$ 82,800.00
			TOTAL	$ 82,800.00

Department Head

This request has been checked and is correct in every respect including an adequate source of funds to complete this transfer. ☑ Yes ☐ No **In-house approval:** ☑ Yes ☐ No

Remarks: Agenda Item 1

Finance Director

ACTION OF CITY MANAGER

☐ Approved ☐ Disapproved
Remarks:

City Manager

TOWN OF ROLESVILLE
NORTH CAROLINA
PHONE: (919) 556-3506
FAX: (919 556-6852

FACSIMILE TRANSMITTAL SHEET

TO: Dale Crisp

FROM: Matt Livingston

COMPANY:

DATE: June 10, 2004

FAX NUMBER: 837-4345 ~~840-3600~~

TOTAL NO. OF PAGES INCLUDING COVER:

PHONE NUMBER:

SENDER'S REFERENCE NUMBER:

RE:

YOUR REFERENCE NUMBER:

☒ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

Rec your instructions

Matt

P.O. BOX 250, ROLESVILLE, NC 27571

Town of Rolesville

First incorporated 1837
P.O. Box 250 • 200 East Young St.• Rolesville, NC 27571 Phone (919) 556-3506 Fax (919) 556-6852

June 10, 2004

Mr. Dale Crisp, Raleigh Public Utilities Director
City of Raleigh Public Utilities Department
PO Box 590
27602

Dear Dale:

As aware, the Town of Rolesville has approached the City of Raleigh in an attempt to get additional water and sewer capacity. We are grateful to the City for considering this and appreciate the cooperative spirit that Raleigh has had towards Rolesville. After completing studies regarding future capacity needs, the Town Board unanimously agreed to move forward and work with the City to see what could be done. We are requesting that base water and sewer allocation be increased to a total of 936,000 gallons per day for water and 325,000 gallons per day for sewer. The Town Board understands that an additional $3.325,000 will be charged for said allocation. The deadline for completing said purchase will be 01/01/07. We propose that the source of these funds come from future water and sewer revenue primarily derived through increased water and sewer capacity fees on future approved development paid at the time of plat recordation. If an arrangement can be made, we will change our fee schedule accordingly.

A water and sewer subcommittee has completed studies of future water and sewer needs based on growth projections of approved development within the Town of Rolesville. Even from the most conservative vantage point, the data clearly shows the need for additional water and sewer allocation. I have attached summary graphs for your information. We recognize that it is difficult to predict just how much the Town will grow. Our data, which again is based primarily on approved development, shows that our current allocation of 375,000 gallons per day will be surpassed in a few short years. Therefore, we respectfully request that this matter be taken up for consideration by the Raleigh City Council at your earliest possible convenience. Thank you very much for your consideration of this matter. Please feel free to contact me at the number above should you have any questions.

Sincerely,

Matthew S. Livingston

Matthew S. Livingston
Town Manager

Cc: Mayor, Nancy Kelly
Town Commissioners

Merger Agreement

Merging

The Water and Sewer Utility Systems

of

Wake Forest, North Carolina

And

Raleigh, North Carolina

March 14, 2005

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WTD-7 30
Based on Hazen and Sawyer report of May 13, 2004 and updated cost estimate. 1,166 linear feet of 12" water main from end of Kullana Lane to White Street. This project will not be necessary if the Wake Forest Fire Department determines that the available fire flows of 840 gallons per minute is sufficient. 30
WTD-8 30
Based on Hazen and Sawyer report of May 13, 2004, there is a proposed new connection of Wake Forest's water system to Raleigh's at Old NC 98. A new metering connection will be necessary at this location. The original cost estimate provided by Hazen and Sawyer has been updated 30
WTD-9 30

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STATE OF NORTH CAROLINA

COUNTY OF WAKE

AGREEMENT

This Agreement is made and entered into by and between the Town of Wake Forest, a North Carolina municipal corporation, duly organized and existing under the laws of the State of North Carolina, hereinafter referred to as “Wake Forest”, and the City of Raleigh, a North Carolina municipal corporation, duly organized and existing under the laws of the State of North Carolina, hereinafter referred to as “Raleigh”.

The purposes of this Agreement are to:

- Assure the continued provision of high quality, reliable, economical, safe and sanitary water and sewer service within the present and future corporate limits and Urban Service Area limits of Wake Forest;
- Provide for the orderly and permanent transfer of responsibility for the ownership, construction, operation, maintenance, management, and financing of Wake Forest’s water and sewer utility system from Wake Forest to Raleigh, and;
- Transfer the managerial, operational, and financial responsibility of operating, maintaining, and expanding the water and sewer utility systems serving the present and future corporate limits and Urban Service Area limits of Wake Forest from Wake Forest to Raleigh.

WHEREAS, Article 20, Interlocal Cooperation of North Carolina General Statutes 160A authorizes and empowers any units of local government to enter into interlocal agreements for the ownership, construction, operation, maintenance, management, and financing of all or portions of water and sewer utility systems within or outside the corporate limits of those units of local government;

WHEREAS, Wake Forest owns, operates, and maintains water and sewer utility systems within and outside its corporate limits;

WHEREAS, Wake Forest desires to transfer its water and sewer utility systems to Raleigh in accordance with the terms and conditions hereinafter stated;

WHEREAS, Raleigh agrees to assume full responsibility for the provision of water and sewer services in Wake Forest, including responsibility for Wake Forest’s water and sewer utility systems and related equipment and property rights;

WHEREAS, Raleigh further agrees to operate, maintain and expand said water and sewer systems to accommodate planned growth and development within Wake Forest’s planning and zoning jurisdiction in accordance with the terms and conditions hereinafter stated;

NOW, THEREFORE, for the considerations hereinafter stated, the parties do agree as follows:

a) This Agreement shall be perpetual. Wake Forest and Raleigh hereby agree that such perpetual duration is reasonable and necessary in light of the purposes of this Agreement.

b) No joint agency is established by this Agreement.

c) Raleigh shall have the sole responsibility and authority to appoint or otherwise employ the personnel necessary for the implementation of this Agreement.

d) The responsibility for financing the construction, operation and maintenance of the merged water and sewer system and any extensions thereof shall be in accordance with the terms of this Agreement. Raleigh shall be entitled to the receipt of all revenues from the merged water and sewer system and any extensions thereof.

e) Wake Forest agrees and grants the authority for appropriate employees of Raleigh to work and act in Wake Forest as necessary to carry out the purposes of this Agreement as appropriate under the ordinances and regulations of both Raleigh and Wake Forest.

f) Wake Forest shall transfer to Raleigh and its assignees or successors, and Raleigh and its assignees and successors shall receive from Wake Forest, in accordance with the terms and conditions set forth in this Agreement:

   i) All pipes, water lines, hydrants, sewer lines, pump stations, force mains, mains, meters, meter boxes, and service laterals, elevated water tanks, and all other appurtenances normally associated with, and owned by Wake Forest, and presently in use within Wake Forest's water and sewer system (See Exhibit A);

   ii) All of Wake Forest's rights, titles and interests in land, encroachment agreements necessary to own and operate Wake Forest's water and sewer systems. All of the property and rights described above shall be hereafter referred to as "the Property" (See Exhibit B);

   iii) All property currently used in the operation of the water and sewer system, but that is to be retained by Wake Forest, will be identified prior to the Transfer Date as defined in this Agreement (See Exhibit C);

g) Raleigh shall have the right to exercise its power of eminent domain within the current and future municipal and planning limits of Wake Forest for activities necessary to fulfill Raleigh's water and sewer service obligations, to include maintenance, operations, improvements, and expansion of the system, defined in this Agreement; and

h) Cost of the transfer of ownership of the systems from Wake Forest to Raleigh will be borne by Raleigh, and will be recovered through the water and sewer rates, fees, and charges that will be charged to Wake Forest customers as set forth in this Agreement.

1.0 Definitions

The following words and phrases are defined as set forth below when used in this Agreement, unless a contrary meaning is clearly required by the context in which the word or phrase is used:

1.1 Effective Date: The date on which all of this Agreement is approved and signed by all parties.

1.2 Transfer Date or Closing Date: The date on which title or leasehold to the subject water and sewer system passes from Wake Forest to Raleigh, which shall be a reasonable time after the Effective Date of this Agreement.

1.3 Systems: The real and personal property comprising Wake Forest's water and sewer system which is to be transferred to Raleigh.

1.4 Inside City Consumptive Rate(s): The rate(s) charged by Raleigh for volume of water and wastewater services to the water and sewer customers inside the corporate limits of Raleigh or inside the Town Limits of a town that has merged utilities with Raleigh.

1.5 Outside City Consumptive Rate(s): The rate(s) charged by Raleigh for volume of water and wastewater services to the water and sewer customers outside the corporate limits of Raleigh and outside the corporate limits of a town that has merged utilities with Raleigh.

2.0 Transfer Date

The City Manager of Raleigh and the Town Manager of Wake Forest, or their designees, shall be responsible for determining all implementation details related to this Agreement not specifically addressed in this Agreement. The Transfer Date for this Agreement is projected to be July 1, 2005. The Transfer Date shall not be delayed unreasonably by either party.

2.1 Due Diligence Assessment

Upon execution of the Agreement, the City of Raleigh and the Town of Wake Forest will conduct a final due diligence assessment for the merger. The activities of the due diligence assessment will be completed by June 1, 2005.

The purpose of the due diligence assessment will be to verify that the merger can be accomplished in accordance with the assumptions used to develop the terms and conditions of the Agreement, including the revenue and expense projections used to develop the business/financial plan for the merger.

The due diligence assessment will include, but is not limited to, a review of the capital improvements plan, operations plan, employee transfer plan and customer information/billing migration plan required to implement the merger. The findings of the due diligence assessment will be submitted to the City Manager of Raleigh and the Town Manager of Wake Forest in the form of a summary report. As a part of the due diligence assessment an independent special audit shall be conducted. Cost for such audit will be shared by the parties.

2.2 Due Diligence Disposition

If the City Manager of Raleigh and the Town Manager of Wake Forest determine that the merger can proceed in accordance with the terms and conditions of the Agreement, then the City Manager of Raleigh and the Town Manager of Wake Forest will submit a letter to their respective governing boards documenting the completion of the due diligence assessment, and confirming that the Transfer Date for the merger will be July 1, 2005.

If the City Manager of Raleigh and the Town Manager of Wake Forest determine that the merger can not proceed in accordance with the terms and conditions of the Agreement, then the City Manager of Raleigh and the Town Manager of Wake Forest will notify their respective governing boards and conduct additional studies and analyses as required to address specific issues of concern. The Transfer Date will be deferred until the additional studies and analyses have been completed and the issues of concern have been addressed

to the mutual satisfaction of the City Manager of Raleigh and the Town Manager of Wake Forest.

If upon completion of the additional studies and analyses, the issues of concern can not be resolved to the mutual satisfaction of the City Manager of Raleigh and the Town Manager of Wake Forest, then either party can terminate this Agreement by providing written notice to the other party.

3.0 Responsibility for Merged System

Upon the Transfer Date, Raleigh shall assume immediate and sole duty and responsibility for financing; operating; maintaining; improving; and expanding the water and sewer systems serving Wake Forest's existing and future corporate limits and Urban Services Area. Wake Forest water and sewer system planning activities will be performed in accordance with the terms of Section 3.1 of this Agreement. Prior to the Transfer Date, Wake Forest will be responsible for the operation and maintenance of Wake Forest's water and sewer system. During the period after the Effective Date, but prior to the Transfer Date, Wake Forest will be responsible for the expansions to the Wake Forest water and sewer system, but will solicit participation from City of Raleigh staff regarding design standards and utility operations planning, to ensure that future expansions are in accordance with City of Raleigh policies, standards, and procedures. After the Transfer Date, Wake Forest's water and sewer system shall be fully incorporated into the water and sewer system operated and maintained by Raleigh. Said duty and responsibility shall be in accordance with current and future policies, standards, and procedures of Raleigh, and shall be applied in the same extent and in the same manner as applied to other inside city customers of Raleigh. Said duty shall involve the input and recommendations from the Water and Sewer Utility Advisory Committee addressed in Section 3.1 below.

3.1 Water and Sewer Utility Advisory Committee

Prior to the Transfer Date, a permanent Water and Sewer Utility Advisory Committee (UAC) will be established and shall meet periodically at a frequency of at least one meeting every six months to review and develop planning recommendations for the upgrade, expansion, and extension of water and sewer utility services in service areas associated with utility systems merged into the Raleigh systems. The Utility Advisory Committee will provide copies of meeting minutes to the City/ Town Managers of all parties to the UAC immediately following each UAC meeting. The ultimate responsibility for the operation of the merged water and sewer system shall be the City of Raleigh. The role of the UAC will be limited to an advisory role. The composition of the UAC will be as follows:

- Two staff members appointed by the Raleigh City Manager
- Two staff members appointed by the Garner Town Manager
- Two staff members appointed by the Rolesville Town Manager
- Two staff members appointed by the Wake Forest Town Manager
- Planning Director, Wake County

As other utilities join the merged water and sewer utility, additional members may be added to the Utility Advisory Committee.

3.2 Name of Merged Water and Sewer Utility

The name of the merged water and sewer utility will be the City of Raleigh Public Utilities Department. Raleigh may, at its discretion, change the name of the utility to correspond to Raleigh's broader regional role as future growth or mergers with other water and sewer service providers occur.

3.3 Right to Operate

Wake Forest hereby irrevocably grants Raleigh the right to design, construct, operate, maintain and perform all related activities required to operate, maintain, expand, upgrade and improve Wake Forest's existing water and sewer utility system in accordance with Raleigh's water and sewer utility system standards and policies for operation and performance, level of service, reliability, and redundancy. Said Right to Operate includes the encroachment authority for Raleigh to operate in all public rights-of-way over which Wake Forest has the sole authority or joint authority with the North Carolina Department of Transportation. Said water and sewer utility system standards and policies shall be applied in Wake Forest to the same extent and in the same manner as applied to other customers of Raleigh's water and sewer utility system.

In all instances, Raleigh or its authorized contractor shall be required to restore and repair any street or other property of Wake Forest upon the completion of any construction, operation, maintenance, replacement, improvement or related activity causing damage thereto. Said restoration or repair shall be to the standards acceptable to Wake Forest and shall be subject to inspection by Wake Forest. As an alternative, Wake Forest will provide street patching at Wake Forest standards and charge Raleigh on a quarterly basis for such service.

Raleigh agrees to operate and maintain the lift station located at and serving the Wake Forest Operation's Center on Friendship Chapel Road. Access to said lift station will be granted by Wake Forest to Raleigh across Operation's Center facilities.

Details of these and other alternative agreements are further addressed in paragraph 11.0.

3.4 System Upgrades and Improvements

Raleigh shall undertake and complete all activities relating to the design; construction; startup; and operation of the system upgrade and improvement projects agreed upon as a part of this Agreement and listed in Exhibit D. Said upgrade and improvement projects will be undertaken and completed by Raleigh to upgrade and improve Wake Forest's water and sewer system in accordance with Raleigh's water and sewer utility system standards for operation and performance, level of service, reliability, and redundancy. Raleigh may, at its discretion, undertake alternative upgrade and improvement projects that accomplish the same purposes as the projects agreed upon. In the event the alternative project is an enhancement to and more costly than the project as defined in Exhibit D, based on an up-to-date cost estimate or quote, the increased cost shall be borne by Raleigh.

Any upgrades by Raleigh beyond those outlined in Exhibit D1 will be accomplished in accordance with Raleigh's normal operations and capital program prioritization process. Raleigh will notify in writing, and confer with representatives of Wake Forest's governing Board and the UAC, before final adoption of any upgrade and improvement projects beyond those outlined in Exhibit D1, any water and sewer utility system expansion program, or water and sewer system master plan or capital improvements plan affecting the water and sewer systems within the corporate or Urban Service Area limits of Wake Forest.

The costs for the upgrade and improvement projects will be recovered from customers located in Wake Forest's municipal corporate and Urban Services Area limits through the schedule of rates, fees and charges as described elsewhere in this Agreement. Cost-sharing for projects of mutual benefit to Wake Forest and other municipalities will be reviewed on a case-by-case basis.

3.5 Notices of Violation

In the event that fines or penalties are levied by the State of North Carolina for violation of Wake Forest water or wastewater system permits following the Transfer Date, payment of fines for notices of violations will be paid by Raleigh. Any fines or penalties for actions prior to the Transfer Date will be paid by the Town of Wake Forest.

3.6 Rates, Fees, Charges, and Penalties

Raleigh shall have the sole responsibility and authority to establish and set rates, fees, charges, and penalties necessary for the operation, maintenance, upgrade, improvement, and expansion of the water and sewer utility system. Subject to the provisions hereof, it is intended that the expansion, upgrade, improvement, operation and maintenance of the water and sewer system shall be on a self-sustaining basis. All revenues of Raleigh water and sewer utility shall be used exclusively by the water and sewer utility fund for direct and indirect costs of the water and sewer utility operations. In maintaining and operating the water and sewer system, Raleigh will:

1) Set and charge reasonable rates, based on cost of service principles, to all classes of users of the water and sewer system;

2) Operate and maintain the water and sewer system at the lowest possible rates, consistent with Raleigh's obligation and commitment to provide proper, efficient, and environmentally sound water and sewer services now and in the future;

3) Use the revenues of the water and sewer system for:

    a) The maintenance and operation of the water and sewer system,

    b) The payment of debt service or other debt instruments issued therefore, and the funding of resources in connection with the issuance of such debt for the water and sewer system,

    c) The expansion, extension, upgrade, and improvement of the water and sewer system and such other purposes as Raleigh may deem proper for the operation of the water and sewer system,

    d) Watershed protection activities, or

    e) Other lawful public purposes.

3.7 Schedules of Rates, Fees, Charges, and Penalties

Raleigh shall apply to customers located in Wake Forest's corporate limits and Urban Services Area a schedule of rates, fees and charges sufficient to recover all of the costs, as determined by Raleigh, required to accomplish the water and sewer utility merger between Raleigh and Wake Forest. Said costs will include, but not be limited to, capital upgrades and improvements, capacity purchases, administration and other transfer costs directly related to the water and sewer utility merger.

Capital cost estimates for system upgrade and improvement projects are listed in Exhibit D1. It is understood that the actual costs for the upgrade and improvement projects may vary from the estimated costs presented in Exhibit D1 because of changes in scope, site conditions, schedule or other factors beyond the control of Raleigh. Potential cost increases resulting from factors beyond the control of Raleigh will be recovered through the schedules of rates, fees and charges applied to customers in the Wake Forest service area.

The cost recovery program for the water and sewer utility merger is projected to be phased over a 7 year period. The schedule of estimated revenues and expenses for the Wake Forest service area is presented in Exhibits E1, E2, and E3. The sequence of rates, fees and charges to be applied to customers in the Wake Forest area during this period is scheduled as follows:

1) For the period extending from the Transfer Date to July 1, 2012, the consumptive retail rate for Wake Forest customers will remain the same as in effect on the Transfer Date, unless net revenues collected from the Wake Forest service area exceed merger-related costs as defined by Raleigh (see subparagraph 5 below).

2) For the period extending from January 1, 2009 to June 30, 2012, a surcharge may be applied to the consumptive retail rate of Wake Forest customers if:

   a) The actual capital costs, and associated annual debt service, exceed the estimated capital costs for the upgrade and improvement projects identified in Exhibit D, or

   b) The actual revenue from the Wake Forest service area is insufficient to recover all of the merger-related costs within the 7 year period.

   If a surcharge is required, then the surcharge will apply for a future period to be determined based upon the recovery period projected as of January 1, 2009.

3) After June 30, 2012, the consumptive retail rate for Wake Forest customers will be same as for Raleigh customers, subject to any continuing surcharge that may be added to the rates in subparagraph 2 above.

4) The Proforma Financial Projections developed as a part of the merger evaluation indicate that merger costs will be recovered in approximately 7 years. Copies of the Proforma Financial Projections, based on three different growth projections, are included as Exhibits E1, E2, and E3 to this agreement.

5) If net revenues collected from the Wake Forest service area during the approximate 7 year period exceed the merger-related costs as defined by Raleigh, and as verified by audit, then Raleigh shall offer one of two options to Wake Forest, the choice being solely that of Wake Forest. The first option is to apply the excess revenues toward the purchase of additional water and/or sewer capacity allocations beyond the agreed upon indexes specified in Section 5.1. The second option is to adjust the consumptive retail rate for Wake Forest customers to the same as Raleigh customers prior to the date in paragraph 3.7.3, above. In the event the additional capacity allocation is chosen, the quantity of additional water and/or sewer capacity under this provision will be determined by dividing the excess revenues by the City of Raleigh water and/or wastewater capacity fee(s) in effect on the Transfer Date. Raleigh's water and wastewater capacity fees are referenced in Exhibit E1, E2, and E3.

Wake Forest's non-consumption fees and charges related to utility service, such as acreage fees, capacity fees, frontage fees, Neuse River nitrogen fees and utility connection ("tap")

charges will continue to be assessed and collected by the Wake Forest customer service center, and remitted to Raleigh, until all said merger costs have been fully recovered.

Once all said merger costs have been fully recovered, Raleigh shall apply rates and non-consumption fees and charges to customers located inside the municipal limits of Wake Forest that are the same as those that are being charged to customers inside the municipal limits of Raleigh, and shall apply rates and non-consumption fees and charges to customers located outside the municipal limits of Wake Forest that are equivalent to those that are being charged to customers outside the municipal limits of Raleigh. During the period that merger costs are being recovered, Raleigh shall provide Wake Forest with an annual statement summarizing the status of Wake Forest utility revenues and merger costs as compared to original estimates. Within three months of the projected time for all merger costs to be fully recovered, Raleigh shall provide Wake Forest with a monthly statement summarizing the status of the revenues and merger costs.

Raleigh will provide at least thirty (30) days written notice, to be included in customers' water and sewer utility bill, to Wake Forest customers prior to adopting any revisions to the schedule of rates, fees, and charges.

4.0 Wake Forest Existing Facilities and Property

Wake Forest's water and sewer utility system provides water and sewer service to approximately 20,000 persons through approximately 8341 water accounts and 7321 sewer accounts (as of beginning of FY 2005). Wake Forest's water distribution system consists of approximately 140 miles of water mains, two existing and one new elevated storage tanks. Wake Forest's water is supplied either from the G. G. Hill Water Treatment Plant (2.0 mgd capacity), owned by Wake Forest, or by contract (2.71 mgd) with Raleigh.

Wake Forest's wastewater management system consists of approximately 115 miles of gravity and pressure mains and 11 wastewater-pumping stations. Wastewater is treated at the Smith Creek WWTP(2.4 mgd capacity), owned by Wake Forest. There is also a contract with Raleigh for treatment of 0.80 MGD wastewater from the Wake Forest system.

4.1 Representation and Warranties by Wake Forest

Wake Forest makes the following representations and warranties to Raleigh:

1) Wake Forest is the sole owner of all water and sewer lines, pipes, meters, valves, meter boxes, laterals, and any other property transferred to Raleigh under the terms and conditions of this Agreement, and

2) Said facilities, property, land, equipment, information, and data is free and clear of all encumbrances (except as it may be included in the full, faith and credit of Wake Forest as a part of existing bonded indebtedness or loans). In the event that Wake Forest's bonds have provisions that do not allow the sale of the systems while bonds are outstanding, Wake Forest and Raleigh agree to enter into a long term leasing arrangement for the portions of the system that are affected until such time as the bonds are retired. Upon retirement of the bonds, the full ownership transfer will take place.

4.2 Property Transfer

Upon the Transfer Date of this Agreement, a Bill of Sale shall be executed by Wake Forest to transfer ownership of all facilities, property, land, equipment, financial assets, information, and data subject to this Agreement to Raleigh. Such documents shall be sufficient to convey to Raleigh all of Wake Forest's right, title, and interest in Wake Forest's water and sewer system, including access to easements and rights-of-way, whether or not recorded.

Said rights-of-way shall include the right to operate and maintain the subject water and sewer system within any public streets within Wake Forest. Any documents needed to memorialize this grant of access or passage of title shall not be required to contain any warranties of condition or title, except as expressly set forth herein. A quit-claim deed shall be executed by Wake Forest to convey all interests in real property and improvements thereto which are subject to this Agreement. Raleigh will require a period of six months to physically transfer the equipment and inventory being transferred from Wake Forest to Raleigh.

Wake Forest shall cooperate with Raleigh in establishing title to any portion of Wake Forest's water and sewer system where ownership may be contested.

Approximately 67 acres of land adjacent to the WWTP will be transferred to Raleigh, but is only to be used for land application of bio-solids unless another use is approved by Wake Forest. This property is programmed to ultimately be a Wake Forest Park, following the approximate 30 year life as a land application site. At a time, no later than 30 years from the transfer date, Raleigh will transfer ownership of this tract back to Wake Forest. Raleigh agrees to use the property as a forested land application site, applying biosolids at a rate and using methodology consistent with a forested site, unless another methodology is mutually agreed upon by both the Wake Forest and Raleigh. Wake Forest and Raleigh agree to conduct a phase one environmental assessment of the site, using a geotechnical engineer acceptable to both parties, before the property is transferred to Raleigh and before it is transferred back to Wake Forest. Both parties agree that if any site remediation is recommended by the environmental assessment it will be accomplished prior to the transfer, and will be financed by the transferring party.

The G. G. Hill Water Treatment Plant and Wake Forest Lake will be transferred to Raleigh, however, these assets will be returned to Wake Forest if Raleigh determines current and future usefulness for water and sewer purposes no longer exists. Wake Forest and Raleigh agree to conduct a phase one environmental assessment of the water plant site (not including Wake Forest Lake), using a geotechnical engineer acceptable to both parties, before the property is transferred to Raleigh and before it is transferred back to Wake Forest. Both parties agree that if any site remediation is recommended by the environmental assessment it will be accomplished prior to the transfer, and will be financed by the transferring party.

Raleigh agrees that Wake Forest may continue to use the reservoir for recreational purposes for area citizens. Raleigh agrees that Wake Forest may construct park/recreational facilities on property around Wake Forest Lake provided the facilities are consistent with the Park Master Plan and consistent with class two water supply watershed use. Boating will be allowed to occur with individuals using their own boats, however, only battery powered motors will be allowed. Additional details of this use of the facility for recreation are to be addressed in a separate agreement as outlined in paragraph 11.0.

Wake Forest shall provide land and access related to the three elevated water tanks being transferred as a part of this agreement. Property for the Friendship Chapel Tank will be deeded to Raleigh and access across the Operation's Center will be provided. Property at the White Street Elevated Tank will be subdivided, property for the tank will be deeded to Raleigh, and access across the park will be provided. Property at the Taylor Street Tank will be deeded to Raleigh and access across the park will be provided. If at any time in the future the tank at Taylor Street is no longer to be used by Raleigh, Raleigh shall dismantle the tank and return the land to Wake Forest.

A detailed list of assets to be transferred is included as Exhibit A. A list of water and sewer utility property and fixed assets to be retained by Wake Forest is included as Exhibit C.

4.3 Easements and Encroachments

Wake Forest has fully-executed and properly recorded easements and encroachment agreements for portions of Wake Forest's water and sewer utility system. As a condition of this Agreement, a complete detailed list of all recorded easements and encroachment agreements will be provided to Raleigh. Wake Forest hereby grants Raleigh perpetual, exclusive, blanket access to all water and sewer easements owned by Wake Forest for the purpose of access to, operation, and maintenance of the water and sewer system; and hereby assigns to Raleigh all of the rights, entitlements, and interests enjoyed by Wake Forest. The rights granted by this license are subject to the rights of Wake Forest as the beneficial owner of the easements. Raleigh agrees that it shall use the access granted by Wake Forest to maintain and operate the water and sewer system, provided, however, Raleigh shall not exceed the nature and scope of the easement in the exercise of its rights.

To the extent allowed by North Carolina law, the City shall indemnify and hold harmless Wake Forest from all liability, costs, and legal fees arising out of use of the referenced easements or encroachments. The parties understand and acknowledge that no North Carolina case, statute, or Constitutional provision authorizes a local government to indemnify another party and that this contract provision may be unenforceable.

Wake Forest will provide Raleigh with copies of any encroachment agreements it has with the North Carolina Department of Transportation and with any other utility companies (See Exhibit B).

Wake Forest has some facilities installed on the properties of others for which it does not have express easements or encroachment agreements, and some facilities installed in streets and rights-of-way for which it has no encroachment agreements. In the event a landowner on whose land such a facility exists contests Raleigh's right to access or maintain such facilities, Raleigh shall notify Wake Forest in writing. Wake Forest shall be responsible to obtain at its expense the necessary easement, encroachment agreements or fee simple title across said land either by negotiation or by eminent domain, or in the alternative, may contest any such landowner's claim. Raleigh shall not take any action in such disputes without the prior written consent of Wake Forest and only after submitting to Wake Forest an estimate of costs it reasonably expects to have reimbursed by Wake Forest. Any reasonable and direct expense borne by Raleigh in resolution of these disputed easements shall be paid by Wake Forest, and Wake Forest shall also make adequate reservation for the necessary rights-of-way for all planned water and sewer facilities prior to closing any street. If Wake Forest fails to comply with the provisions of this paragraph, Wake Forest shall reimburse Raleigh in full for all expenses incurred in acquiring the necessary rights-of-way by purchase or condemnation.

Wake Forest electrical systems share many easements with the water and sewer system, and will need to continue to do so in perpetuity. As a part of this agreement, Wake Forest agrees for Raleigh to have perpetual, blanket access to any shared use easements for which Raleigh has a need for water and sewer purposes.

Raleigh will operate the existing Wake Forest G. G. Hill Water Treatment Plant for an unknown period of time. During that period, ownership of Wake Forest Lake and the Hill Water Treatment Plant and related properties will be transferred to Raleigh, pursuant to paragraph 4.2, above. Following the period of time that Raleigh will be operating the Hill Water Treatment Plant and reservoir, or using the property for other water and/or sewer

utility purposes, the property will be vacated and returned to Wake Forest for control and disposition. In the event that Raleigh has an on-going need for some portion of the water treatment property as a part of the operation of the water and/or wastewater systems, Wake Forest agrees to provide for that use and for full access to the properties as necessary..

4.4 Existing and Future Water and Sewer Capacity Allocations

Wake Forest has a water supply allocation from Raleigh for 3.91 MGD for average daily demand flows, including 2.71 MGD allocation based on the existing contract with Raleigh and a 1.2 MGD allocation based on safe yield of Wake Forest Lake. Wake Forest has an allocation of 3.4 MGD maximum month wastewater capacity, including 2.4 MGD from the Smith WWTP, a contract for 0.8 MGD wastewater treatment by Raleigh, and 0.2 MGD additional capacity that Wake Forest will purchase at the Transfer Date.

Raleigh will construct additional wastewater and water supply capacity as necessary to accommodate new growth and development within the corporate limits and Urban Service Area of Wake Forest, consistent with Paragraph 5.1 of this agreement. Said additional wastewater and water supply capacity will be financed by Raleigh using revenues generated by Raleigh's schedule of rates, fees, and charges, or other debt instruments as determined by Raleigh.

4.5 Financial Assets and Closeout

The financial records of the Town of Wake Forest water and sewer enterprise fund will be closed as of the Transfer Date of this Agreement. As of this closeout, with the exception of funds necessary to complete existing capital projects that are in process, the full amount of the Wake Forest capital reserve and operating fund balances will be due to the City of Raleigh to be used for payments of water/wastewater transition and other approved capital and merger cost. Payment of the funds equity will be accomplished by a payment of 75% to be made at Transfer Date and the balance to be paid following the special audit. The accounting for all other asset and liability accounts will transfer at closeout to the Raleigh water and sewer enterprise fund, subject to audit verification by the Raleigh Internal Audits Division and an independent auditor. Wake Forest shall write-off all inactive accounts considered uncollectible and adjust other accounts to a current status prior to Raleigh's assumption of the financial accounts. Prior to the Transfer Date, Wake Forest, under the direction of the Wake Forest Town Manager or his designee, shall refund deposits to its customers.

4.6 Disposition of Nitrogen Allocation

Wake Forest currently holds a total nitrogen allocation of 67,579 pounds per year at end of pipe (33,790 pounds per year estuary). Following the transfer of the system to Raleigh, if Raleigh sells any of this nitrogen allocation, which current established value is $22.00 per pound, or if the asset is applied to other than the Wake Forest Urban Service Area, the proceeds from such a sale or use outside the Wake Forest Urban Service Area are to be paid to Wake Forest at the established rate of $22.00 per pound.

5.0 Expansion and Extension of Water and Sewer Services

Raleigh shall provide, maintain, and extend the water and sewer systems and facilities as may be required under applicable laws and regulations so as to serve present and future demands, and in particular so as not to impede the orderly growth and development of Wake Forest, except as provided in Paragraph 5.1 below. Raleigh shall not practice or permit any discrimination against Wake Forest in the provision of such services based upon location of the point of service within Wake Forest or its Urban Services Area.

5.1 Growth and Development Index

The City of Raleigh will provide water and sewer services to customers in the Town of Wake Forest within the following parameters:

1) For the period extending from the Transfer Date to June 30, 2010, the total wastewater flow allocation for Wake Forest will be 3.4 MGD average day wastewater flow, and average day water use allocations will be limited to 3.91 MGD.

2) For the period extending from July 1, 2010 to June 30, 2020, the annual growth rate in average day water use allocation and average day wastewater flow allocation will be limited to 4 percent per year, compounded upon the prior year's allocation.

3) For the period extending from July 1, 2020 to June 30, 2030, the annual growth rate in average day water use allocation and average day wastewater flow allocation will be limited to 3 percent, compounded upon the prior year's allocation.

4) For the period extending beyond July 1, 2030, the annual growth rate in average day water use allocation and average day wastewater flow allocation will be the same as the growth rate in the City of Raleigh service area as determined by the Raleigh City Council.

The calculation of Wake Forest's water and wastewater flow allocation will be based on the summation of estimated flows for new connection permits and actual flows metered for the Wake Forest service area. An exceedance of the prescribed growth rate in any given year will be allowed, provided it is reconciled within the following 2 years. For example, during a period in which the annual growth rate limit is 4 percent, annual growth over a three consecutive year period may be 6 percent (year 1), 2 percent (year 2) and 4 percent (year 3), equivalent to an average 4 percent growth rate. Because the growth exceedance in year 1 was reconciled to the prescribed average within the following 2 years, the overall growth for this period would not violate this agreement.

These growth levels would be subject to modification by the City of Raleigh if problems are encountered with the implementation of treatment plant expansions. If such is necessary, Wake Forest's water and sewer growth capacity would be no less than 1 percent of the available treatment capacity, defined as the difference between the permitted capacity and the total of the current monthly average actual flow plus the permitted, non-connected flow of the Raleigh system for water and for wastewater at that time.

The City of Raleigh may offer the Town of Wake Forest additional water and sewer capacity beyond the agreed-upon indexes, on a case-by-case basis, to accommodate major industrial or commercial projects that elect to locate within Wake Forest's Urban Services Area and provide benefits to both Raleigh and Wake Forest.

5.2 Requests for Service

Upon the Transfer Date, all future requests for new service connections will be made to Raleigh. Request for new services that require extensions will be first presented to Wake Forest to assure all zoning and land use issues have been addressed then forwarded to Raleigh for approval of water and sewer plans. Both Wake Forest and Raleigh, in conjunction with the UAC, will provide information to customers and potential customers regarding details of service. Raleigh agrees to provide existing and future water and sewer customers located within Wake Forest's corporate or Urban Services Area limits, service of a quality comparable to that provided to water and sewer customers within the municipal boundaries of Raleigh. Raleigh specifically agrees that the geographical location of the

water and sewer customers in Wake Forest or in its Urban Services Area shall not have any substantial effect on the quality of service or timing of repairs to be made by Raleigh.

5.3 Developer-Requested Extensions to the System

Subject to the provisions of this Agreement, extensions of the subject water and sewer system that are undertaken by third-party developers shall be made under the policies published and used by Raleigh, and as may be amended from time to time. Said policies shall be uniform throughout Raleigh's water and sewer system, including those areas affected by this Agreement. Raleigh may, at its discretion, make changes to the extension policies as Raleigh determines to be appropriate. Said changes shall apply to all portions of the water and sewer system operated and maintained by Raleigh, including those areas located in Wake Forest's corporate and Urban Services Area limits.

For water and sewer extensions outside of Wake Forest's municipal corporate limits, all applicable water and sewer extension policies that apply outside of Raleigh's corporate municipal limits will apply.

Any third-party request to Raleigh for water and sewer service extensions in Wake Forest's corporate limits, extra-territorial jurisdiction (ETJ), or Urban Services Area (USA) will require prior written approval by Wake Forest's governing board before the service can be provided by Raleigh.

Utility fees and charges for new Wake Forest customers may not be paid by Wake Forest or any other public entity, either directly or indirectly, as a part of an economic development program for Wake Forest. Violation of this condition will constitute a breach of the Agreement.

Utility fees and charges for new Wake Forest customers that are a part of a Town of Wake Forest Community Development Program may be paid by Wake Forest or any other public entity provided the payments are consistent with the City of Raleigh policy related to Community Development projects.

Approval for request for service or extension under provisions of this section will not be unreasonably withheld by either Raleigh or Wake Forest.

5.4 Wake Forest-Requested Extensions to the System

Wake Forest-requested extensions to the merged water and sewer system or extensions thereof required by Wake Forest beyond those included in the Raleigh Capital Improvement Program, shall be financed by Wake Forest and shall be accomplished by contract between Wake Forest and Raleigh. Reasonable notices to proceed with such extensions will be provided to Raleigh by Wake Forest, such that applicable time limitations can be met. However, under no circumstances shall Raleigh be liable to Wake Forest for the payment of damages, penalties, fines or any other monetary recovery as a result of any failure to satisfy such time limitations for Wake Forest-requested extensions. For extensions required due to annexation, annexation plans shall be submitted by Wake Forest to Raleigh to evaluate the feasibility thereof under then existing conditions.

Raleigh shall reimburse Wake Forest for costs associated with extensions by Wake Forest in accordance with established extension and reimbursement procedures applicable to developers and customers of Raleigh.

As an alternate to the process outlined above, Wake Forest may elect to design and construct system extensions, provided such extensions design and construction is done to Raleigh standards and under Raleigh plan review and inspection.

5.5 Annexations

Any annexation considerations will be resolved based on the existing annexation agreements between Raleigh and Wake Forest. Prior to approval of extension of service to property outside the corporate limits of Wake Forest, Wake Forest must require application for annexation into Wake Forest's municipal corporate limits.

Raleigh will provide water and sewer services to areas that cannot be annexed, only by exceptions to be considered on a case-by-case basis, to address specific health-related concerns. All required annexations must proceed within a reasonable amount of time of committing to the provision of water and sewer service.

6.0 Employee Transfer

All existing staff of Wake Forest's water and sewer utility system will be offered employment with Raleigh's water and sewer utility system. Several categories of employees of the Town have responsibilities associated with both water and sewer and electrical system, for instance, meter readers and customer service staff. In these instances, the Town will determine which employees are eligible for transfer to Raleigh. Wake Forest employees that are eligible and elect to transfer to Raleigh will be offered a position as equivalent as possible to their present positions with Wake Forest. Wake Forest employees accepting positions with Raleigh will suffer no loss of pay, annual leave, sick leave, or years in retirement program. Relative to level of compensation, Raleigh has conducted a wage and salary analysis and confirms that employees transferring will suffer no loss of compensation. The benefit package that will be available to Wake Forest employees transferring to Raleigh will be similar but not exactly the same as the Wake Forest package.

Wake Forest employees transferring to Raleigh will retain equivalent tenure and length of service for annual and sick leave, retirement, and other benefits with Raleigh, as they possessed at Wake Forest. With the exception of the award for service pay (referred to by Wake Forest as longevity pay), which is addressed in Section 6.1, the rate of accrual of length of service-dependent benefits for Wake Forest employees transferring to Raleigh will be commensurate with the rate of accrual for Raleigh employees of similar length of service.

6.1 Award for Service

Wake Forest employees transferring to Raleigh will qualify for award for service pay in accordance with the policies and procedures outlined in the *"City of Raleigh Employee Handbook".*

6.2 Employee Probation Period

All transferring employees will serve a six (6) months probation period during which each employee must demonstrate proficiency in the job assigned. Following the probation period, each employee will receive a performance evaluation similar to that applicable to existing water and sewer utility employees of Raleigh. For employees requesting transfer from Wake Forest to Raleigh, it will be necessary for the employees to successfully pass a criminal background check and a drug and hearing screening. Employees filling a position that requires a driving license will be required to have obtained the appropriate level of driving license for that position within the six month probation period.

6.3 Fund Transfers for Accrued Employee Benefits

In accordance with the terms of the financial closeout (section 4.5), Wake Forest will transfer funds sufficient to pay for all accrued vacation and sick leave for each transferring

employee. Information relative to the total number of hours of accrued vacation and sick leave will be provided to Raleigh prior to the Transfer Date of this Agreement.

Pending governmental accounting standards will require the recording of post employment healthcare and other benefits over the active employment term of recipients. Implementation for Raleigh will be in fiscal year 2006-07. At the time that an actuarial study has determined the prior liability for the transferring employees, Wake Forest will have the option of either (1) paying Raleigh for the accumulated value of such benefits, or (2) adjusting the financial proforma results at such point to allow for their existing rate structure to pay for the accumulated expense.

7.0 Records Transfer

Wake Forest shall transfer to Raleigh all available reproducible and electronic copies of any and all records, data, information, and models arising from the construction, operation and maintenance of Wake Forest's water and sewer utility system and any other related activity, including projects in progress, and including, but not limited to, the following:

1) Construction contracts, drawings, maps, and all other related documents evidencing the condition or location of any portion of the subject water and sewer systems including such documents as may be in the possession of any engineer or other consultant of Wake Forest;

2) Billing, collection and payment records on all present customers of the subject water and sewer systems;

3) An accurate tabulation or listing of all actual service locations in the Wake Forest system to be transferred to Raleigh from Wake Forest, to include:

    a) Address - Number and Street;

    b) Account Name (if active);

    c) Billing Address for Each Account Number;

    d) Account Numbers and all meter reading books and the history of all accounts for the past twelve (12) months;

    e) One Year's Account History;

    f) Meter Location Description;

4) Contracts or agreements for the supply of equipment, materials, supplies, and products;

5) Pending applications for water and sewer service;

6) Contracts or agreements to provide water and or sewer service currently in effect;

7) Receipts, accounts and other records of deposits made by all present and past customers of the subject water and sewer systems;

8) Any and all warranty information on any facilities, property, land, and equipment transferred to Raleigh pursuant to this Agreement;

9) Repair, maintenance, trouble, and emergency response records for all portions of Wake Forest's water and sewer systems;

10) Any and all notices of violation, legal actions, and lawsuits pertaining to Wake Forest's water and sewer system ;

11) Plans, permits, reports, specifications, surveys, etc., for water and sewer facilities and operations;

12) Number and locations of all unmetered services;

13) Copies of all water and sewer system maps;

14) A list of all easements;

15) A list of all encroachment agreements;

16) Identification of all inside Wake Forest customers;

17) Identification of all outside Wake Forest customers;

18) Record of all assessments for system extensions;

19) Identification of all taps for which payment has been made;

20) Identification of all backflow prevention installations;

21) Identification of all Pretreatment Program installations;

22) Copies of such records as are necessary to inform Raleigh of the location of all facilities of Wake Forest for other utility operations;

23) Any other information, data, and records pertaining to Wake Forest's water and sewer utility;

24) Accounts receivable records; and,

25) Accounts payable records.

Wake Forest agrees that within a reasonable time after the Transfer Date, Wake Forest shall submit to Raleigh such accounting, commercial, engineering, planning, personnel, and facility records pertaining to Wake Forest's water and sewer utility system. Wake Forest may make copies of said materials for Wake Forest's records and archives. Prior to the Transfer Date, the City Manager of Raleigh and Town Manager of Wake Forest, or their designees, shall determine mutually satisfactory administrative details for the transfer of the above-referenced records.

8.0 Customer Transfer

As of the Transfer Date, all customers and users of Wake Forest's water and sewer system shall become subject to all rules, regulations and ordinances of Raleigh as the same apply to all users and customers of the water and sewer system of Raleigh, and as same are now or may hereafter be amended. Such rules, regulations and ordinances and schedule of rates, fees, charges and penalties shall constitute a part of the Agreement between Raleigh and any customer or user of the subject water and sewer system and any extensions thereof for the provision of water and sewer service.

A team comprised of Raleigh and Wake Forest staff shall develop a seamless transfer of customer accounts at the Transfer Date in order to provide continuity of account activity after the merger. All accounting after the Transfer Date shall be made within the Raleigh utility enterprise fund.

8.1 Billing Cycles

The billing cycle for Wake Forest water and sewer customers is currently a monthly cycle. The billing cycle for Raleigh water and sewer customers is currently a bi-monthly (every two months) cycle. Raleigh agrees to allow billing to remain on a monthly basis for Wake Forest customers, however, the added cost for the monthly billing will be paid by Wake Forest, as a convenience to their citizens. At some point in the future, if Raleigh converts to monthly billings for all customers, the payment by Wake Forest will no longer be necessary. Raleigh may contract with Wake Forest to read meters and provide other customer service activities, to include turn-on and turn-off services. Such an agreement would be a supplemental agreement as outlined in paragraph 11.0.

8.2 Water Meter Readings

As of the Effective Date, Wake Forest's water meters measure water volume in units of 1,000 gallons, and Raleigh's water meters measure water volume in units of 100 cubic feet At the Transfer Date, Raleigh shall assume all responsibility for reading all customer meters and for preparation of water and sewer bills, and water and sewer customers in Wake Forest will be billed for water and sewer service based on 100 cubic feet units. Wake Forest's gallon unit water meters shall be replaced with cubic feet water meters and upgraded to radio read capability by Raleigh as part of the system upgrades and improvements identified in Exhibit D1. If the replacement of Wake Forest's water meters cannot be completed prior to the initial collection of water meter readings by Raleigh staff, Raleigh will collect water meter readings from Wake Forest customers using 1,000 gallon units, and Raleigh's water billing system will convert the readings to 100 cubic feet units for the purposes of producing water and sewer bills.

The transition of meter readings will be coordinated by a joint implementation team.

9.0 Indebtedness

Raleigh agrees to pay Wake Forest all amounts necessary to enable Wake Forest to make all debt service payments when due and payable on all existing outstanding indebtedness of Wake Forest for water and sewer facilities covered under this Agreement. The payments required to be made in accordance with this provision of the Agreement shall be made in a timely manner, and Raleigh's obligation hereunder shall be a continuing one until all outstanding indebtedness of Wake Forest borrowed for such purposes shall have been paid in full. A statement of Wake Forest's outstanding indebtedness and a schedule of the debt service to be made pursuant to this provision of the Agreement shall be submitted to Raleigh prior to the Transfer Date of this Agreement (See Exhibit F1 and F2). Wake Forest agrees to cooperate with Raleigh in determining opportunities for early retirement or refinancing of any of the outstanding debt, when such adjustments are permitted by the bonding agencies, and Raleigh retains the right to exercise an option of debt refinancing or retirement if costs to the water and sewer utility can be lowered as a result.

10.0 Prior Agreements

All prior agreements between Wake Forest and Raleigh pertaining to water and sewer services are rescinded as of the Transfer Date.

10.1 Existing Commitments

Wake Forest has a commitment with Richland Hills development located in Franklin County.

Wake Forest will install the meters, set the boxes, and collect tap fees in the Richland Hills development to fulfill its existing commitments prior to the Transfer Date. Such completed

services shall become a part of the property to be conveyed herein from Wake Forest to Raleigh. If any commitments are left outstanding as of the Transfer Date, Wake Forest agrees to accept full financial responsibility to resolve the commitment.

10.2 Existing Agreements

Raleigh shall honor contracts with Heritage development for water and sewer service and Jones Dairy Farm development for water service (as of the Transfer Date) previously entered into by Wake Forest; provided that such contracts that require expenditure of Raleigh funds shall be reimbursed by Wake Forest in full within thirty (30) days after receipt of an invoice from Raleigh. Any such contract or agreement with third parties entered into by Wake Forest between the Effective Date and the Transfer Date shall require approval by Raleigh.

10.3 Discriminatory Agreement Disclaimer

No existing special, discriminatory agreements with specific customers will be continued, honored, or assumed by Raleigh.

Wake Forest represents and warrants to Raleigh that there are no discriminatory agreements between Wake Forest and any customer or user of Wake Forest's water and sewer system which will nor may survive this Agreement and be binding upon Raleigh. For purposes of this Agreement, a discriminatory agreement is any agreement, contract or other understanding between Wake Forest and any customer or user of Wake Forest's water and sewer system that provides that:

1. Water and sewer service be extended and provided in a different manner than such service is extended and provided to the remaining customers or users of Wake Forest's water and sewer system as to quality, quantity, or any other aspect of extending and providing such service;
2. Water and sewer service be extended and provided upon the payment of a different schedule of rates, fees, charges, or penalties than is imposed upon the remaining customers or users of Wake Forest's water and sewer system;
3. Water and sewer service be extended and provided at a different cost or schedule for reimbursement of costs or any other aspect of paying for the extension and provision of water and sewer service than is imposed upon the remaining customers or users of Wake Forest's water and sewer system.

In the event that an unlawful discriminatory agreement exists and survives this Agreement, and is determined to be binding upon Raleigh, Wake Forest shall indemnify and hold Raleigh harmless from any and all demands, claims, or actions (including the reasonable costs, expenses and attorney fees incurred by Raleigh), of such discriminatory agreement. Further, Wake Forest shall indemnify and hold Raleigh harmless from any and all demands, claims, or actions, without regard to the relief sought or awarded and without regard to whether the claim, demand or action is raised by a party to the discriminatory agreement.

11.0 Contracted Services Between Raleigh and Wake Forest

Raleigh will negotiate separate agreements with Wake Forest for Wake Forest's operation of a Raleigh Satellite Customer Service Center, beginning on the Transfer Date. Wake Forest will collect payments for City of Raleigh services and tax revenues, including but not limited to water and sewer bills. Obligations of Wake Forest and Raleigh for the operation of the Satellite Customer Service Center shall be as specified in the referenced agreement.

Additional services that will require separate agreements between Raleigh and Wake Forest may include paving alternatives as shown in paragraph 3.3; inspection services as shown in paragraph 3.3 and 4.2, use of the reservoir for recreational purposes, as shown in paragraph 4.3., operation and maintenance of the Operation's Center lift station, meter reading and customer service functions, and, an agreement for vehicle maintenance to be performed by Wake Forest for Raleigh.

12.0 Conflict/ Default Resolution

In the event of conflict or default that might arise for matters associated with this Agreement, the parties involved agree to informally and formally communicate to resolve the conflict. If this communication is not successful in resolving the conflict, the matter will be presented to the City Manager of Raleigh and the Town Manager of Wake Forest for resolution. If the Managers are unable to resolve the conflict, the matter will be presented to the respective governing boards for resolution.

13.0 Fire Protection Services

Raleigh shall be responsible for maintaining fire hydrants and services in a reasonable manner at a level equivalent to that maintained by Wake Forest at time of transfer of the system. This level of service shall include hydrant spacing, hydrant maintenance, and water volume and pressure available at the hydrant. Raleigh shall coordinate with the Wake Forest Fire Department, for necessary testing to be done by the Wake Forest Fire Department.

14.0 Ordinances to be Adopted

As a condition of entering into this Agreement, Wake Forest shall adopt such ordinances as are reasonably necessary to regulate the proper use of the subject water and sewer system and any extensions thereof by the customers and users within the jurisdiction of Wake Forest. Said ordinances shall be reviewed and approved by Raleigh prior to adoption by Wake Forest, and will further grant to Raleigh all administrative, permitting, regulatory, and enforcement authority necessary for the regulation, operation, maintenance, and improvement of the water and sewer systems serving the corporate and Urban Services Area limits of Wake Forest. Wake Forest shall maintain updates and enforce such ordinances. Raleigh shall reimburse Wake Forest for the reasonable expenses of enforcing such ordinances. Said ordinances shall have the same or similar provisions as are included in Raleigh's use ordinance related to Raleigh's water and sewer utility system. Said ordinances shall include, but not be limited to Sanitary Sewer Use Ordinance, Backflow Prevention Ordinance, Water and Sewer Extension policies, and Water Conservation Ordinance.

15.0 Amendment to Agreement

This agreement may be amended only by a document in writing, approved by the Town Board of Commissioners of Wake Forest and the City Council of Raleigh and executed by the respective Mayors.

16.0 Customer Notification

Wake Forest agrees to use all practical means, including direct mailing, to notify customers of changes associated with this merger. Such notification shall include information on schedule and mechanics of transfer and information concerning Raleigh's policies and procedures.

17.0 Severability

It is hereby the declared intention of Wake Forest and Raleigh that the paragraphs, sections, sentences, clauses, and phrases of this agreement are severable. If one or more paragraphs, sections sentences, clauses, or phrases shall be declared void, invalid or otherwise unenforceable for any reason by the valid, final judgment or decree of any court of competent jurisdiction, such judgment or decree shall not affect the remaining provisions of this agreement and the same shall continue to be fully effective and enforceable on the basis that said remaining provisions would have been agreed to by Wake Forest and Raleigh without the incorporation of such void, invalid or otherwise unenforceable paragraph, section, sentence, clause or phrase.

18.0 Notices

Whenever written notice is required under this Agreement, said notice shall be sufficient when received by the Town Manager of Wake Forest and the City Manager of Raleigh. Said notice may be mailed or hand-delivered but shall not be effective unless actually received.

Approved this _____day of _____2004

Town of Wake Forest

BY:_____

Town Manager

Approved as to Form:

BY:_____

Town Attorney

Attest:

_____

Town Clerk

Approved this _____day of _____2004

City of Raleigh

BY:_____

City Manager

Approved as to Form:

BY:_____

City Attorney

Attest:

_____

City Clerk

EXHIBITS

Exhibit A	Assets to be Transferred
Exhibit B	List of Easements and Encroachments Agreements
Exhibit C	Water and Sewer Utility Assets to be Retained by Wake Forest
Exhibit D1	Summary of System Upgrades, Improvements and Capacity Purchases
Exhibit D2	Detailed Descriptions of System Upgrades and Improvements
Exhibit E1	Schedule of Estimated Revenues and Expenses (Pro Forma Financial Projections) with 500 Units Per Year Growth Through FY 2009
Exhibit E2	Schedule of Estimated Revenues and Expenses (Pro Forma Financial Projections) with 800 Units Per Year Growth Through FY 2009
Exhibit E3	Schedule of Estimated Revenues and Expenses (Pro Forma Financial Projections) with 1,000 Units Per Year Growth Through FY 2009
Exhibit F1	Indebtedness
Exhibit F2	Debt Payment Schedule

EXHIBIT A - Assets to be Transferred

Asset Description[1]	Address [To be proved by Wake Forest]
1. G.G. Hill Water Treatment Plant and Wake Forest Lake[2]	
2. Smith Creek Wastewater Treatment Plant and adjacent 67 acre biosolids land application site[3]	
3. New elevated water storage tank on Friendship Chapel	
4. Neuse River water booster pump station	
5. Existing elevated water storage tanks on White Street and Taylor Street	
6. Ten Sanitary Sewer Pump Stations, including:	
a) Staffordshire Pump Station	
b) Water Treatment Plant Pump Station	
c) Prestwicke Pump Station	
d) St. Ives Pump Station	
e) Forest Mill Pump Station	
f) Jenkins Road Pump Station	
g) Ligon Mill Pump Station	
h) Oakwood Pump Station	
i) South Main Pump Station	
j) Spring Valley Pump Station	
7. Neuse River raw water intake and site[4]	
8. Richland Creek Sewer Metering Station	
9. Rolesville Water Metering Station	

Notes:

[1] Assets include all associated fixed structures and equipment in addition to the property on which these fixed structures and equipment exist.

[2] G. G. Hill water treatment plant and/or Wake Forest Lake will be returned to Wake Forest at no charge, as addressed in paragraph 4.2 and 4.3, if Raleigh determines that a need no longer exists for current and future use for any water and/or sewer utility purposes.

[3] The biosolids land application site will be returned to Wake Forest to be used as a park no later than 30 years following the transfer date.

[4] Assumes that Wake Forest has acquired the asset prior to the transfer date

Exhibit B List of Easements and Encroachments Agreements

Description
[To be provided by the Town of Wake Forest]

Exhibit C Water and Sewer Utility Assets to be Retained by Wake Forest

Asset Description[1,2]	Address [To be completed by Wake Forest]
Wake Forest Operations Center[3]	234 Friendship Chapel Road
Wake Forest Operations Center Wastewater Pump Station	234 Friendship Chapel Road

Notes:

[1] Refer to Exhibit A for fixed assets that have transferred to Raleigh as part of this Agreement, but will transfer back to Wake Forest under certain provisions.

[2] Assets include all associated fixed structures and equipment in addition to the property on which these fixed structures and equipment exist.

[3] The Wake Forest Operations Center was not purchased with water and sewer utility funds, and is shared with other departments

Exhibit D1 Summary of System Upgrades, Improvements, and Capacity Purchases

Project Identifier[1]	Project Description	Estimated Capital Cost	Engineering Allowance (15%)	Total Estimated Cost	Estimated Fiscal Year of Expense
GEN-1	Utility Merger Implementation Phase Consulting Services	$95,500	NA	$95,500	2005
GEN-2	Billing Data Conversion	$30,000	NA	$30,000	2005
WTD-1	Neuse River Booster Sta. VFDs	$60,000	$9,000	$69,000	2006
WTD-2	Auto Meter Reading	$1,500,000	NA	$1,500,000	2006
WTD-3	Neuse River Booster Sta. Fence	$10,000	NA	$10,000	2006
WTD-4	Paint 300 kgal water tank	$400,000	NA	$400,000	2006
WTD-5	SCADA for 2 Booster Stations and 3 Water Tanks	$200,000	$30,000	$230,000	2006
WTD-6	IWOS devices in vehicles	$50,000	NA	$50,000	2006
WTD-7	Water main - End of Kullana to White (12")[2]	$80,000	$12,000	$92,000	2006
WTD-8	Metering Conn. at Old NC 98	$40,000	$6,000	$46,000	2006
WTD-9	Water main - Old NC 98 and Wake Union Church (12")	$500,000	$75,000	$575,000	2006
WTD-10	Upfit of Rolesville Booster Station for Wake Forest pumps	$480,000	$72,000	$552,000	2006
WTD-11	Water main – Forestville (16" from Pump Station to Coach Lantern Ext.)	$500,000	$75,000	$575,000	2006
WTD-12	Water main – Wingate, Pine, Rockspring, and Stadium (12")	$380,000	$57,000	$437,000	2006
WTD-13	Check Valve at White and Cedar	$12,000	$1,800	$13,800	2006
WTD-14	1995 Ford 700 Diesel Dump Truck	$70,000	NA	$70,000	2005
WTD-15	Air Compressor	$15,000	NA	$15,000	2005
WTD-16	Truck	$35,000	NA	$35,000	2005
WTD-17	2nd Easement Tractor w/Deck	$75,000	NA	$75,000	2005
WTD-18	Compact Hydraulic Excavator	$70,000	NA	$70,000	2005

Exhibit D1 Summary of System Upgrades, Improvements, and Capacity Purchases (continued)

Project Identifier[1]	Project Description	Estimated Capital Cost	Engineering Allowance (15%)	Total Estimated Cost	Estimated Fiscal Year of Expense
WTD-19	Power Rodder	$80,000	NA	$80,000	2005
WTD-20	1-Manual Rodder	$44,000	NA	$44,000	2005
WWC-1	I&I Study	$250,000	NA	$250,000	2006
WWC-2	Collection System Improvements based on I&I study	$1,000,000	$150,000	$1,150,000	2006
WWC-3	Standby Generators at 7 Lift Stations and 1 Water Tank	$287,500	NA	$287,500	2006
WWC-4	Fencing at all Wake Forest lift stations and misc. safety improvements	$150,000	NA	$150,000	2006
WWC-5	Lift Stations SCADA upgrade (at 9 lift stations)	$360,000	$54,000	$414,000	2006
WWC-6	Four Gas Detectors and One Station	$15,000	NA	$15,000	2005
WWC-7	2nd Vacuum Jet Truck	$240,000	NA	$240,000	2005
WTP-1	Miscellaneous Capital Costs associated with WTP operation	$200,000	$30,000	$230,000	2006
WTP-2	Miscellaneous Capital Costs associated with Closing WTP[3]	$300,000	$45,000	$345,000	2008
WTP-3	Fencing around WTP property	$35,000	NA	$35,000	2006
WWP-1	Groundwater Monitoring Wells	$35,000	NA	$35,000	2006
WWP-2	Waterproof Building CMU	$40,000	NA	$40,000	2006
WWP-3	Equipment Shelter/Workshop	$200,000	$30,000	$230,000	2006
WWP-4	RAS Pumps VFDs	$50,000	$7,500	$57,500	2009
WWP-5	Backhoe	$55,000	NA	$55,000	2009
WWP-6	Vacuum Truck	$53,000	NA	$53,000	2009
WWP-7	Exterior Paint System	$50,000	NA	$50,000	2007
WWP-8	WWTP SCADA upgrade	$40,000	$6,000	$46,000	2006
WWP-9	WWTP Process Improvements	$3,100,000	$465,000	$3,565,000	2006

Exhibit D1 Summary of System Upgrades, Improvements, and Capacity Purchases (continued)

Project Identifier[1]	Project Description	Estimated Capital Cost	Engineering Allowance (15%)	Total Estimated Cost	Estimated Fiscal Year of Expense
WWP-10	F250 4X4 Truck	$26,000	NA	$26,000	2007
WWP-11	F350 Truck with Hoist	$32,000	NA	$32,000	2006
WWP-12	Truck – ¾ Ton	$17,000	NA	$17,000	2005
WWP-13	Truck – ½ ton, 4x4	$17,000	NA	$17,000	2005
WWP-14	Truck – ½ ton 4x4	$17,000	NA	$17,000	2005
WWP-15	Utility Vehicle	$10,000	NA	$10,000	2005
WWP-16	Bobcat with backhoe, forklift, and plow attachments	$25,000	NA	$25,000	2005

Subtotal of Estimated Upgrades and Improvements Costs	$12,559,300
Contingency (20%)	$2,511,860
Total of Estimated Upgrades and Improvements Costs (with Contingency)	$15,071,160
0.2 MGD maximum month addl. Wastewater capacity purchase as Transfer[4]	$720,000

Notes:

[1] Descriptions of abbreviated project identifier prefixes are as follows:

GEN General
WTD Water Distribution
WWC Wastewater Collection
WTP Water Treatment Plant
WWP Wastewater Treatment Plant

[2] Required only if Wake Forest Fire Department determines more than 850 gallons per minute is needed.

[3] If the City of Raleigh determines that the GG Hill Water Treatment Plant (WTP) will remain in operation beyond the time in which water and sewer rates are lowered for Wake Forest citizens, the cost of closing the WTP should be deleted, and the costs shown for Project WTP-1 will need to be evaluated, and may change.

[4] Cost of capacity purchases are included within Exhibit E1, E2, and E3 as a Sewer Expenditure (Raleigh Sewer Purchase line item) to be paid over four years (no interest), and are not included in the Total of Estimated Upgrades and Improvements Costs shown.

Exhibit D2 Detailed Descriptions of System Upgrades and Improvements

Project Identifier[1]	Detailed Description of System Upgrades and Improvements
GEN-1	CH2M HILL consulting services during merger implementation
GEN-2	Cost of transferring billing data from Wake Forest to Raleigh
WTD-1	Transferred from Wake Forest CIP
WTD-2	Conversion of all Wake Forest water meters to automatic meter reading (AMR)
WTD-3	Fence to be installed for security at the Neuse River Booster Station
WTD-4	Painting of elevated storage tank on Taylor Street. City of Raleigh may choose to demolish this tank as an alternative.
WTD-5	SCADA improvements to connect Wake Forest with City of Raleigh system, at the Neuse River Booster Station, the Rolesville Booster Station, and elevated storage tanks on Taylor Street, White Street, and Friendship Chapel Road.
WTD-6	Devices installed in Wake Forest vehicles to incorporate the City of Raleigh new work order system (IWOS)
WTD-7	Based on Hazen and Sawyer report of May 13, 2004 and updated cost estimate. 1,166 linear feet of 12" water main from end of Kullana Lane to White Street. This project will not be necessary if the Wake Forest Fire Department determines that the available fire flows of 840 gallons per minute is sufficient.
WTD-8	Based on Hazen and Sawyer report of May 13, 2004, there is a proposed new connection of Wake Forest's water system to Raleigh's at Old NC 98. A new metering connection will be necessary at this location. The original cost estimate provided by Hazen and Sawyer has been updated
WTD-9	Based on Hazen and Sawyer report of May 13, 2004 and updated cost estimate. 7,076 linear feet of 12" water main on Old NC 98, from Falls of Neuse to Quatrefoil, and Wake Union Church, from Durham to Aldoncaster.
WTD-10	Based on Hazen and Sawyer report of May 13, 2004 and updated cost estimate. Includes structure, equipment, and appurtenances at the Rolesville Booster Station for pumping into the Wake Forest water system.
WTD-11	Based on Hazen and Sawyer report of May 13, 2004 and updated cost estimate. 5,323 linear feet of 16" water main on Forestville Road, from the Rolesville Booster Station to Coach Lantern.
WTD-12	Based on Hazen and Sawyer report of May 13, 2004 and updated cost estimate. 5,482 linear feet of 12" water main on Wingate, Pine, Rockspring, and Stadium, from North to McDowell.
WTD-13	Based on Hazen and Sawyer report of May 13, 2004 and updated cost estimate. Check Valve at White and Cedar, proposed to open during a major fire.
WTD-14	Necessary to meet City of Raleigh standards
WTD-15	Necessary to meet City of Raleigh standards

Exhibit D2 Detailed Descriptions of System Upgrades and Improvements (continued)

Project Identifier[1]	Detailed Description of System Upgrades and Improvements
WTD-16	Necessary to meet City of Raleigh standards
WTD-17	Necessary to meet City of Raleigh standards
WTD-18	Necessary to meet City of Raleigh standards
WTD-19	Necessary to meet City of Raleigh standards
WTD-20	Necessary to meet City of Raleigh standards
WWC-1	Infiltration and Inflow (I&I) study of Wake Forest wastewater collection system
WWC-2	Collection System Improvements based on recommendations of I&I study
WWC-3	Standby generators at seven Wake Forest lift stations and one water tank
WWC-4	Fencing is necessary at all Wake Forest lift stations for security. In addition, safety improvements will be made to the lift stations as appropriate.
WWC-5	Lift Stations SCADA upgrade to connect with the City of Raleigh system at 9 of the 10 lift stations being transferred to Raleigh (all except the Water Treatment Plant lift station)
WWC-6	Necessary to meet City of Raleigh standards
WWC-7	Necessary to meet City of Raleigh standards
WTP-1	The City of Raleigh will need to operate the G.G. Hill Water Treatment Plant, but may choose to close the plant in the future. There may be miscellaneous capital costs associated with WTP operation, including SCADA upgrades, safety improvements, chemical storage improvements, etc.
WTP-2	Miscellaneous Capital Costs associated with Closing WTP, including, but not limited to demolition, waste disposal, etc.
WTP-3	Fencing for security around the G.G. Hill Water Treatment Plant property
WWP-1	Transferred from Wake Forest CIP
WWP-2	Transferred from Wake Forest CIP
WWP-3	Transferred from Wake Forest CIP
WWP-4	Transferred from Wake Forest CIP
WWP-5	Necessary to meet City of Raleigh standards
WWP-6	Necessary to meet City of Raleigh standards
WWP-7	Transferred from Wake Forest CIP
WWP-8	Smith Creek Wastewater Treatment Plant SCADA upgrade to connect with the City of Raleigh system

Exhibit D2 Detailed Descriptions of System Upgrades and Improvements (continued)

Project Identifier[1]	Detailed Description of System Upgrades and Improvements
WWP-9	The Smith Creek Wastewater Treatment Plant (WWTP) currently has one UV channel with two Trojan UV units in series. One additional UV channel will be necessary for redundancy. There is currently no sludge thickening facility located at the Smith Creek WWTP. A sludge thickening facility will be installed to control elevated levels of phosphorus in the recycle stream and reduce operations costs. There is currently no odor control for the digesters at the Smith Creek WWTP. Odor control for the two digesters will be installed to minimize odors.
WWP-10	Necessary to meet City of Raleigh standards
WWP-11	Necessary to meet City of Raleigh standards
WWP-12	Necessary to meet City of Raleigh standards
WWP-13	Necessary to meet City of Raleigh standards
WWP-14	Necessary to meet City of Raleigh standards
WWP-15	Necessary to meet City of Raleigh standards
WWP-16	Necessary to meet City of Raleigh standards

Notes:

[1] Descriptions of abbreviated project identifier prefixes are as follows:

GEN General
WTD Water Distribution
WWC Wastewater Collection
WTP Water Treatment Plant
WWP Wastewater Treatment Plant

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Exhibit E1 Schedule of Estimated Revenues and Expenses (Pro Forma Financial Projections) with 500 Units Per Year Growth Through FY 2012

See attached table (2 pages)

Exhibit E2 Schedule of Estimated Revenues and Expenses (Pro Forma Financial Projections) with 800 Units Per Year Growth Through FY 2012

See attached table (2 pages)

Exhibit E3 Schedule of Estimated Revenues and Expenses (Pro Forma Financial Projections) with 1,000 Units Per Year Growth Through FY 2012

See attached table (2 pages)

Exhibit F1 Indebtedness

Original Amount	Enterprise Debt	Interest Rate	Balance 4-1-2005	Anticipated Date of Payoff
$289,210	97 Refunding Water	4.5%, 4.75%	$184,625.00	9/1/2009
$247,890	97 Refunding Sewer	4.5%, 4.75%	$158,250.00	9/1/2009
$1,089,000	97 State Sewer Bonds	5.3%	$707,850.00	5/1/2017
$211,105	97 State Sewer Bonds	5.85%	$133,329.48	5/1/2016
$6,450,000	Sewer Plant Upgrade SRF	3.035%	$4,192,500.00	5/1/2017
$3,100,000	01 Water Plant Improvements Installment Purchase Contract	4.79%	$2,686,666.84	4/30/2017

Note: Debt may be paid off prior to the “Anticipated Date of Payoff”, as shown in Exhibits E1, E2, and E3.

Exhibit F2 Debt Payment Schedule

See attached table (1 page)

Merger Agreement

Merging
The Water and Sewer Utility Systems
of
Wendell, North Carolina
And
Raleigh, North Carolina

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STATE OF NORTH CAROLINA

COUNTY OF WAKE

AGREEMENT

This Agreement is made and entered into by and between the Town of Wendell, a North Carolina municipal corporation, duly organized and existing under the laws of the State of North Carolina, hereinafter referred to as "Wendell", and the City of Raleigh, a North Carolina municipal corporation, duly organized and existing under the laws of the State of North Carolina, hereinafter referred to as "Raleigh".

The purposes of this Agreement are to:

- Assure the continued provision of high quality, reliable, economical, safe and sanitary water and sewer service within the present and future corporate limits and Urban Service Area limits of Wendell;
- Provide for the orderly and permanent transfer of responsibility for the ownership, construction, operation, maintenance, management, and financing of Wendell's water and sewer utility system from Wendell to Raleigh, and;
- Transfer the managerial, operational, and financial responsibility of operating, maintaining, and expanding the water and sewer utility systems serving the present and future corporate limits and Urban Service Area limits of Wendell from Wendell to Raleigh.

WHEREAS, Article 20, Interlocal Cooperation of North Carolina General Statutes 160A authorizes and empowers any units of local government to enter into interlocal agreements for the ownership, construction, operation, maintenance, management, and financing of all or portions of water and sewer utility systems within or outside the corporate limits of those units of local government;

WHEREAS, Wendell owns, operates, and maintains water and sewer utility systems within and outside its corporate limits;

WHEREAS, Wendell desires to transfer its water and sewer utility systems to Raleigh in accordance with the terms and conditions hereinafter stated;

WHEREAS, Raleigh agrees to assume full responsibility for the provision of water and sewer services in Wendell, including responsibility for Wendell's water and sewer utility systems and related equipment and property rights;

WHEREAS, Raleigh further agrees to operate, maintain and expand said water and sewer systems to accommodate planned growth and development within Wendell's planning and zoning jurisdiction in accordance with the terms and conditions hereinafter stated;

NOW, THEREFORE, for the considerations hereinafter stated, the parties do agree as follows:

a) This agreement shall have a term of 99 years. The expiration of the term shall only affect the agreements hereunder with respect to events and performances that occur after the expiration date of such term, and shall not affect the existence of validity of any transfer, conveyance, undertaking, liability, or other action or right that occurred or arose prior to

the end of the term of this Agreement. Notwithstanding the expiration of the term of this Agreement, Raleigh hereby acknowledges that Wendell is entering into this Agreement in reliance upon the agreement set forth in the final paragraph of Section 3.7 to the effect that once all merger costs have been recovered, Raleigh shall apply rates and non-consumption fees and charges to customers located in Wendell that are equivalent to those that are being charged to customers in Raleigh and represents that it shall continue such practice after the expiration of the term hereof.

b) No joint agency is established by this Agreement.

c) Raleigh shall have the sole responsibility and authority to appoint or otherwise employ the personnel necessary for the implementation of this Agreement.

d) The responsibility for financing the construction, operation and maintenance of the merged water and sewer system and any extensions thereof shall be in accordance with the terms of this Agreement. Raleigh shall be entitled to the receipt of all revenues from the merged water and sewer system and any extensions thereof.

e) Wendell agrees and grants the authority for appropriate employees of Raleigh to work and act in Wendell as necessary to carry out the purposes of this agreement as appropriate under the ordinances and regulations of both Raleigh and Wendell.

f) Wendell shall transfer to Raleigh and its assignees or successors, and Raleigh and its assignees and successors shall receive from Wendell, in accordance with the terms and conditions set forth in this Agreement:

   i) All pipes, water lines, hydrants, sewer lines, pump stations, force mains, mains, meters, meter boxes, and service laterals, elevated water tanks, maintenance facilities, and all other appurtenances normally associated with, and owned by Wendell, and presently in use within Wendell's water and sewer system (See Exhibit A);

   ii) All of Wendell's rights, titles and interests in land, easements, and encroachment agreements necessary to own and operate Wendell's water and sewer systems. All of the property and rights described above shall be hereafter referred to as "the Property" (See Exhibit B);

   iii) All property currently used in the operation of the water and sewer system, but that is to be retained by Wendell, will be identified prior to the Transfer Date as defined in this Agreement (See Exhibit C);

g) Raleigh shall have the right to exercise its power of eminent domain within the current and future municipal and planning limits of Wendell for activities necessary to fulfill Raleigh's water and sewer service obligations defined in this Agreement; and

h) Cost of the transfer of ownership of the systems from Wendell to Raleigh will be borne by Raleigh, and will be recovered through the water and sewer rates, fees, and charges that will be charged to Wendell customers as set forth in this Agreement.

1.0 Definitions

The following words and phrases are defined as set forth below when used in this Agreement, unless a contrary meaning is clearly required by the context in which the word or phrase is used:

1.1 **Effective Date:** The date on which all of this Agreement is approved and signed by all parties.

1.2 **Transfer Date or Closing Date:** The date on which title or leasehold to the subject water and sewer system passes from Wendell to Raleigh, which shall be a reasonable time after the Effective Date of this Agreement.

1.3 **Systems:** The real and personal property comprising Wendell's water and sewer system which is to be transferred to Raleigh.

1.4 **Inside City Rate(s):** The rate(s) charged by Raleigh to the water and sewer customers inside the corporate limits of Raleigh.

1.5 **Outside City Rate(s):** The rate(s) charged by Raleigh to the water and sewer customers outside the corporate limits of Raleigh.

2.0 Transfer Date

The City Manager of Raleigh and the Town Manager of Wendell, or their designees, shall be responsible for determining all implementation details related to this Agreement not specifically addressed in this Agreement. The Transfer Date for this Agreement is October 2, 2006. The Transfer Date shall not be delayed unreasonably by either party.

2.1 Due Diligence Assessment

Upon execution of the Agreement, the City of Raleigh and the Town of Wendell will conduct a final due diligence assessment for the merger. The activities of the due diligence assessment will be completed by September 1, 2006.

The purpose of the due diligence assessment will be to verify that the merger can be accomplished in accordance with the assumptions used to develop the terms and conditions of the Agreement, including the revenue and expense projections used to develop the business/financial plan for the merger.

The due diligence assessment will include, but is not limited to, a review of the capital improvements plan, operations plan, employee transfer plan and customer information/billing migration plan required to implement the merger. The findings of the due diligence assessment will be submitted to the City Manager of Raleigh and the Town Manager of Wendell in the form of a summary report.

2.2 Due Diligence Disposition

If the City Manager of Raleigh and the Town Manager of Wendell determine that the merger can proceed in accordance with the terms and conditions of the Agreement, then the City Manager of Raleigh and the Town Manager of Wendell will submit a letter to their respective governing boards documenting the completion of the due diligence assessment, and confirming that the Transfer Date for the merger will be October 2, 2006.

If the City Manager of Raleigh and the Town Manager of Wendell determine that the merger can not proceed in accordance with the terms and conditions of the Agreement, then the City Manager of Raleigh and the Town Manager of Wendell will notify their respective governing boards and conduct additional studies and analyses as required to address specific issues of concern. The Transfer Date will be deferred until the additional studies and analyses have been completed and the issues of concern have been addressed to the mutual satisfaction of the City Manager of Raleigh and the Town Manager of Wendell.

If upon completion of the additional studies and analyses, the issues of concern can not be resolved to the mutual satisfaction of the City Manager of Raleigh and the Town Manager of Wendell, then either party can terminate this Agreement by providing written notice to the other party.

3.0 Responsibility for Merged System

Upon the Transfer Date, Raleigh shall assume immediate and sole duty and responsibility for financing; operating; maintaining; improving; and expanding the water and sewer systems serving Wendell's existing and future corporate limits and Urban Services Area. Wendell water and sewer system planning activities will be performed in accordance with the terms of Section 3.1 of this Agreement. Prior to the Transfer Date, Wendell will be responsible for the operation and maintenance of Wendell's water and sewer system. During the period after the Effective Date, but prior to the Transfer Date, Wendell will be responsible for the expansions to the Wendell water and sewer system, but will solicit participation from City of Raleigh staff regarding design standards and utility operations planning, to ensure that future expansions are in accordance with City of Raleigh policies, standards, and procedures. After the Transfer Date, Wendell's water and sewer system shall be fully incorporated into the water and sewer system operated and maintained by Raleigh. Said duty and responsibility shall be in accordance with current and future policies, standards, and procedures of Raleigh, and shall be applied in the same extent and in the same manner as applied to other inside city customers of Raleigh. Said duty shall involve the input and recommendations from the Water and Sewer Utility Advisory Committee addressed in Section 3.1 below.

3.1 Water and Sewer Utility Advisory Committee

Prior to the Transfer Date, a permanent Water and Sewer Utility Advisory Committee (UAC) will be established and shall meet periodically at a frequency to be determined by the Committee to review and develop planning recommendations for the upgrade, expansion, and extension of water and sewer utility services in Wendell service areas. The Utility Advisory Committee will periodically report its findings and recommendations to the City/ Town Managers of all parties to the UAC. The ultimate responsibility for the operation of the merged water and sewer system shall be the City of Raleigh. The role of the UAC will be limited to an advisory role. The composition of the UAC will be as follows:

- Two staff members appointed by the Raleigh City Manager
- Two staff members appointed by the Garner Town Manager
- Two staff members appointed by the Rolesville Town Manager
- Two staff members appointed by the Wake Forest Town Manager
- Two staff members appointed by the Knightdale Town Manager
- Two staff members appointed by the Zebulon Town Manager
- Two staff members appointed by the Wendell Town Manager
- Planning Director, Wake County

As other utilities join the merged water and sewer utility, additional members may be added to the UAC.

3.2 Name of Merged Water and Sewer Utility

The name of the merged water and sewer utility will be the City of Raleigh Public Utilities Department. Raleigh may, at its discretion, change the name of the utility to correspond to Raleigh's broader regional role as future growth or mergers with other water and sewer service providers occur.

3.3 Right to Operate

Wendell hereby irrevocably grants Raleigh the right to design, construct, operate, maintain and perform all related activities required to operate, maintain, expand, upgrade and improve Wendell's existing water and sewer utility system in accordance with Raleigh's water and sewer utility system standards and policies for operation and performance, level of service, reliability, and redundancy. Said Right to Operate includes the encroachment authority for Raleigh to operate in all public rights-of-way over which Wendell has the sole authority or joint authority with the North Carolina Department of Transportation. Said water and sewer utility system standards and policies shall be applied in Wendell to the same extent and in the same manner as applied to other customers of Raleigh's water and sewer utility system.

In all instances, Raleigh or its authorized contractor shall be required to restore and repair any street or other property of Wendell upon the completion of any construction, operation, maintenance, replacement, improvement or related activity causing damage thereto. Said restoration or repair shall be to the standards acceptable to Wendell and shall be subject to inspection by Wendell. As an alternative, Wendell may provide street patching at Wendell standards and charge Raleigh on a quarterly basis for such service.

3.4 System Upgrades and Improvements

Raleigh shall undertake and complete all activities relating to the design; construction; startup; and operation of the system upgrade and improvement projects agreed upon as a part of this Agreement and listed in Exhibit D, including the purchases of an additional 3.65 million gallons per day of water capacity (based on the maximum day usage) and an additional 1.75 million gallons per day of wastewater capacity (based on average day usage).

The water capacity allocation is to be included in Exhibit D at $3.60 per gallon for 2.5 million gallons per day and $4.44 per gallon for 1.15 million gallons per day, for a total water capacity cost of $14.106 million. The wastewater capacity allocation is to be included in Exhibit D at $3.55 per gallon for 1.0 million gallons per day and $3.80 per gallon for 0.75 million gallons per day, for a total wastewater capacity cost of $6.4 million.

Said upgrade and improvement projects will be undertaken and completed by Raleigh to upgrade and improve Wendell's water and sewer system in accordance with Raleigh's water and sewer utility system standards for operation and performance, level of service, reliability, and redundancy. Raleigh may, at its discretion, undertake alternative upgrade and improvement projects that accomplish the same purposes as the projects agreed upon. In the event the alternative project is an enhancement and more costly than the project as defined in Exhibit D based upon an up to date cost estimate and quote (and which is agreed to be a design upgrade beyond the original project scope which does not provide commensurate benefits to the present Wendell service area), then the increased cost shall be borne by Raleigh.

Any upgrades by Raleigh beyond those outlined in Exhibit D will be accomplished in accordance with Raleigh's normal operations and capital program prioritization process. Raleigh will notify in writing, and confer with representatives of Wendell's governing Board and the UAC, before final adoption of any upgrade and improvement projects beyond those outlined in Exhibit D, any

water and sewer utility system expansion program, or water and sewer system master plan or capital improvements plan affecting the water and sewer systems within the corporate or Urban Service Area limits of Wendell.

The costs for the upgrade and improvement projects will be recovered from customers located in Wendell's municipal corporate and Urban Services Area limits through the schedule of rates, fees and charges as described elsewhere in this Agreement. Cost-sharing for projects of mutual benefit to Wendell and other municipalities will be reviewed on a case-by-case basis.

3.5 Notices of Violation

In the event that fines or penalties are levied by the State of North Carolina for violation of Wendell water or wastewater system permits following the Transfer Date, payment of fines for notices of violations will be paid by Raleigh. Any fines or penalties for actions prior to the Transfer Date will be paid completely by Wendell.

3.6 Rates, Fees, Charges, and Penalties

Raleigh shall have the sole responsibility and authority to establish and set rates, fees, charges, and penalties necessary for the operation, maintenance, upgrade, improvement, and expansion of the water and sewer utility system. Subject to the provisions hereof, it is intended that the expansion, upgrade, improvement, operation and maintenance of the water and sewer system shall be on a self-sustaining basis. All revenues of Raleigh water and sewer utility shall be used exclusively by the water and sewer utility fund for direct and indirect costs of the water and sewer utility operations. In maintaining and operating the water and sewer system, Raleigh will:

1) Set and charge reasonable rates, based on cost of service principles, to all classes of users of the water and sewer system;

2) Operate and maintain the water and sewer system at the lowest possible rates, consistent with Raleigh's obligation and commitment to provide proper, efficient, and environmentally sound water and sewer services now and in the future;

3) Use the revenues of the water and sewer system for:

    a) The maintenance and operation of the water and sewer system,

    b) The payment of debt service or other debt instruments issued therefore, and the funding of resources in connection with the issuance of such debt for the water and sewer system,

    c) The expansion, extension, upgrade, and improvement of the water and sewer system and such other purposes as Raleigh may deem proper for the operation of the water and sewer system,

    d) Watershed protection activities, or

    e) Other lawful public purposes.

3.7 Schedules of Rates, Fees, Charges, and Penalties

Raleigh shall apply to customers located in Wendell's corporate limits and Urban Services Area a schedule of rates, fees and charges sufficient to recover all of the costs, as determined by Raleigh, required to accomplish the water and sewer utility merger between Raleigh and Wendell. Said costs will include, but not be limited to, capital upgrades and improvements, administration and other transfer costs directly related to the water and sewer utility merger.

Capital cost estimates for system upgrade and improvement projects are listed in Exhibit D. It is understood that the actual costs for the upgrade and improvement projects may vary from the estimated costs presented in Exhibit D because of changes in scope, site conditions, schedule or other factors beyond the control of Raleigh. Potential cost increases resulting from factors beyond the control of Raleigh will be recovered through the schedules of rates, fees and charges applied to customers in the Wendell service area.

The cost recovery program for the water and sewer utility merger will be phased over a 12-year period. The schedule of estimated revenues and expenses for the Wendell service area is presented in Exhibit E. The sequence of rates, fees, and charges to be applied to customers in the Wendell area during this period is scheduled as follows:

1) For the period extending from the Transfer Date to October 1, 2018 the consumptive retail rate for Wendell customers will remain the same as in effect on the Transfer Date.

2) For the period extending from October 1, 2011 to October 1, 2018, a surcharge may be applied to the consumptive retail rate of Wendell customers if:

   a) The actual capital costs, and associated annual debt service, exceed the estimated capital costs for the upgrade and improvement projects identified in Exhibit D, or

   b) The actual revenue from the Wendell service area is insufficient to recover all of the merger-related costs within the 12-year period.

   If a surcharge is required, then the surcharge will apply for a future period to be determined based upon the recovery period projected as of October 1, 2011.

3) After October 1, 2018, the consumptive retail rate for Wendell customers will be same as for Raleigh customers, subject to any continuing surcharge that may be added to the rates in subparagraph 2 above.

4) If net revenues collected from the Wendell service area during the approximate 12 year period exceed the merger-related costs as defined by Raleigh, and as verified by audit, then Raleigh shall offer one of two options to Wendell, the choice being solely that of Wendell. The first option is to apply the excess revenues toward the purchase of additional water and/or sewer capacity allocations beyond the agreed upon indexes specified in Section 5.1. The second option is to adjust the consumptive retail rate for Wendell customers to the same as Raleigh customers prior to the date in paragraph 3.7.3, above. In the event the additional capacity allocations is chosen, the quantity of additional water and/or sewer capacity under this provision will be determined by dividing the excess revenues by the City of Raleigh water and/or wastewater capacity fee(s) in effect at the time that the calculation is taking place.

Wendell's non-consumption fees and charges related to utility service, such as acreage fees, capacity fees, frontage fees, Neuse River nitrogen fees and utility connection ("tap") charges will continue to be assessed and collected by the Wendell customer service center, and remitted to Raleigh, until all said merger costs have been fully recovered. These fees and charges shall not be less than the fee or charge collected from Raleigh customers.

Once all said merger costs have been fully recovered, Raleigh shall apply rates and non-consumption fees and charges to customers located inside the municipal limits of Wendell that are equivalent to those that are being charged to customers inside the municipal limits of Raleigh, and shall apply rates and non-consumption fees and charges to customers located outside the municipal limits of Wendell that are equivalent to those that are being charged to

customers outside the municipal limits of Raleigh. During the approximate 12-year period from October 2, 2006 through October 1, 2018, Raleigh shall provide Wendell with an annual statement summarizing the status of Wendell utility revenues and merger costs as compared to original estimates.

Raleigh will provide at least thirty (30) days written notice to Wendell customers prior to adopting any revisions to the schedule of rates, fees, and charges.

4.0 Wendell Existing Facilities and Property

Wendell's water and sewer utility system provides water and sewer service to approximately 5253 persons through approximately 2633 accounts. Wendell's water distribution system consists of approximately 49 miles of water mains and 2 elevated storage tanks, with capacities of 0.5 MG and 0.75 MG. The water distribution system includes a ground storage tank of 0.5 MG capacity, which is currently out of service (Old Zebulon Road Ground Storage Tank). Wendell's water is supplied by contract with Raleigh.

Wendell's wastewater management system consists of approximately 44 miles of gravity and pressure mains, 11 wastewater-pumping stations, and 1 pre-treatment facility. Wastewater is treated by contract with Raleigh.

4.1 Representation and Warranties by Wendell

Wendell makes the following representations and warranties to Raleigh:

1) Wendell is the sole owner of all water and sewer lines, pipes, meters, valves, meter boxes, laterals, and any other property transferred to Raleigh under the terms and conditions of this Agreement, and

2) Said facilities, property, land, equipment, information, and data is free and clear of all encumbrances (except as it may be included in the full, faith and credit of Wendell as a part of existing bonded indebtedness or loans). In the event that Wendell's bonds have provisions that do not allow the sale of the systems while bonds are outstanding, Wendell and Raleigh agree to enter into a long term leasing arrangement for the portions of the system that are affected until such time as the bonds are retired. Upon retirement of the bonds, the full ownership transfer will take place.

4.2 Property Transfer

Upon the Transfer Date of this Agreement, a Bill of Sale shall be executed by Wendell to transfer ownership of all facilities, property, land, equipment, financial assets, information, and data subject to this Agreement to Raleigh. Such documents shall be sufficient to convey to Raleigh all of Wendell's right, title, and interest in Wendell's water and sewer system, including easements and rights-of-way, whether or not recorded. Said rights-of-way shall include the right to operate and maintain the subject water and sewer system within any public streets within Wendell. Any documents needed to memorialize this passage of title shall not be required to contain any warranties of condition or title, except as expressly set forth herein. A non-warranty deed shall be executed by Wendell to convey all interests in real property and improvements thereto which are subject to this Agreement.

Wendell shall cooperate with Raleigh in establishing title to any portion of Wendell's water and sewer system where ownership may be contested.

A detailed list of real property and easements and encroachment agreements is included as Exhibit B. A list of water and sewer utility property and fixed assets to be retained by Wendell is

included as Exhibit C. If at any time in the future property transferred to Raleigh is no longer used for water and sewer purposes, Raleigh shall return the land to Wendell.

4.3 Easements and Encroachments

Wendell has fully-executed and properly recorded easements and encroachment agreements for portions of Wendell's water and sewer utility system. As a condition of this Agreement, a complete list of all recorded easements and encroachment agreements will be provided to Raleigh. To the extent possible, all easements for Wendell's water and sewer utility system shall be conveyed by Wendell to Raleigh by an appropriate instrument suitable for recording in the Office of the Register of Deeds for Wake County, North Carolina. As a condition of this Agreement, Wendell will provide Raleigh with copies of any encroachment agreements it has with the North Carolina Department of Transportation and with any other utility companies (See Exhibit B). To the extent allowed by North Carolina law, the City shall indemnify and hold harmless Wendell from all liability, costs and legal fees arising out of use of the referenced easements or encroachments. The parties understand and acknowledge that no North Carolina case, statute, or Constitutional provision authorizes a local government to indemnify another party and that this contract provision may be unenforceable. Wendell agrees to resolve any known easement or encroachment issues prior to the effective date of this merger.

For new easements acquired by Raleigh as a part of the operational needs of the Wendell system and system expansions, Raleigh agrees to provide for dual use easements, to include utility needs and greenway/park needs as requested by Wendell, provided that Wendell pays, at the time of the easement acquisition, for the additional cost generated by the dual use easements. Said dual use easements shall be provided per Raleigh's standard design for such dual use easements.

Wendell has some facilities installed on the properties of others for which it does not have express easements or encroachment agreements, and some facilities installed in streets and rights-of-way for which it has no encroachment agreements. In the event a landowner on whose land such a facility exists contests Raleigh's right to maintain such facilities, Raleigh shall notify Wendell in writing and Wendell shall be responsible to obtain at its expense the necessary easement, encroachment agreements or fee simple title across said land either by negotiation or by eminent domain. After Wendell has obtained such easement or fee simple title, it shall transfer ownership thereof to Raleigh. Any reasonable and direct expense borne by Raleigh in resolution of these disputed easements shall be paid by Wendell, and Wendell shall also make adequate reservation for the necessary rights-of-way for all planned water and sewer facilities prior to closing any street. If Wendell fails to comply with the provisions of this paragraph, Wendell shall reimburse Raleigh in full for all expenses incurred in acquiring the necessary rights-of-way by purchase or condemnation.

4.4 Existing Water and Sewer Capacity Allocations

Wendell has a water supply allocation from Raleigh for 1.0 million gallons per day for maximum daily demand flows and a wastewater allocation from Raleigh for 0.75 million gallons per day.

Raleigh will construct additional wastewater and water supply capacity as necessary to accommodate new growth and development within the corporate limits and Urban Service Area of Wendell, consistent with Paragraph 5.1 of this agreement. See Exhibit F for identification of corporate and urban service area limits. Said additional wastewater and water supply capacity will be financed by Raleigh using revenues generated by Raleigh's schedule of rates, fees, and charges, or other debt instruments as determined by Raleigh. During the period prior to the system being fully accepted by Raleigh, and the Wendell customers' rates being adjusted to the

same as the rates for Raleigh customers, the financing by Raleigh for the additional constructed water and wastewater facilities will be offset by the differential in rates being paid by Wendell customers and the rate that they would pay if inside the City of Raleigh.

4.5 Financial Assets and Closeout

The financial records of the Town of Wendell water and sewer enterprise fund will be closed as of the Transfer Date of this Agreement. As of this closeout, with the exception of funds necessary to complete existing capital projects and other utility fund liabilities that are in process, the full amount of the Wendell capital reserve and operating fund balances will be transferred to the City of Raleigh to be used for payments of water/wastewater transition and other approved capital and merger costs. Payment of the funds equity will be accomplished by a payment of 75% of the Operating Fund balance to be made at transfer date and the balance to be paid following the special audit. The accounting for all other asset and liability accounts will transfer at closeout to the Raleigh water and sewer enterprise fund, subject to audit verification by the Raleigh Internal Audits Division and an independent auditor. Wendell shall write-off all inactive accounts considered uncollectible and adjust other accounts to a current status prior to Raleigh's assumption of the financial accounts.

5.0 Expansion and Extension of Water and Sewer Services

Raleigh shall provide, maintain, and extend the water and sewer systems and facilities as may be required under applicable laws and regulations so as to serve present and future demands, and in particular so as not to impede the orderly growth and development of Wendell, except as provided in Paragraph 5.1 below. Raleigh shall not practice or permit any discrimination against Wendell in the provision of such services based upon location of the point of service within Wendell or its Urban Services Area.

5.1 Growth and Development Index

The City of Raleigh will provide water and sewer services to customers in the Town of Wendell within the following parameters:

1) For the period extending from the Transfer Date to September 30, 2011, the peak day water use allocations will be limited to 4.65 million gallons per day, and the total wastewater flow allocation for Wendell will be 2.50 million gallons per day average day wastewater flow.

2) For the period extending from October 1, 2011 to September 30, 2021, the annual growth rate in average day water use, peak day water use, and average day wastewater flow will be limited to 4 percent per year, compounded upon the prior year's allocation.

3) For the period extending from October 1, 2021 to September 30, 2031, the annual growth in average day water use, peak day water use and average day wastewater flow will be limited to 3 percent, compounded upon the prior year's allocation.

4) For the period extending beyond September 30, 2031, the annual growth in average day water demands, peak day water demands and average day wastewater flow will be the same as for the City of Raleigh service area as determined by the Raleigh City Council.

The calculation of Wendell's water and wastewater flow allocation will be based on the summation of estimated flows for new connection permits and actual flows metered for the Wendell service area. An exceedance of the prescribed growth rate in any given year will be allowed, provided it is reconciled within the following 2 years. For example, during the period October 1, 2011 to September 30, 2021, the annual growth rate limit is 4 percent. Annual

growth over a three consecutive year period may be 6 percent (year 1), 2 percent (year 2) and 4 percent (year 3), equivalent to an average 4 percent growth rate. Because the growth exceedance in year 1 was reconciled to the prescribed average within the following 2 years, the overall growth for this period would not violate this agreement.

These growth levels would be subject to modification by the City of Raleigh if problems are encountered with the implementation of treatment plant expansions. If such is necessary, Wendell's water and sewer growth capacity would be no less than 1 percent of the total treatment capacity of the Raleigh system for water and for wastewater at that time.

The City of Raleigh may offer the town of Wendell additional water and sewer capacity beyond the agreed-upon indexes, on a case-by-case basis, to accommodate major industrial or commercial projects that elect to locate within Wendell's Urban Services Area and provide benefits to both Raleigh and Wendell.

5.2 Requests for Service

Upon the Transfer Date, all future requests for new service connections will be made to Raleigh, through Wendell. Request for new services that require extensions will be first presented to Wendell to assure all zoning and land use issues have been addressed then forwarded to Raleigh for approval of water and sewer plans. Both Wendell and Raleigh, in conjunction with the UAC, will provide information to customers and potential customers regarding details of service. Raleigh agrees to provide existing and future water and sewer customers located within Wendell's corporate or the portion of the Urban Services Area within the extra-territorial jurisdiction (ETJ), service of a quality comparable to the quality and quantity of service provided to water and sewer customers within the municipal boundaries of Raleigh. Raleigh specifically agrees that the geographical location of the water and sewer customers in Wendell or in the portion of its Urban Services Area within the ETJ shall not have any substantial effect on the quality of service or timing of repairs to be made by Raleigh.

5.3 Developer-Requested Extensions to the System

Subject to the provisions of this Agreement, extensions of the subject water and sewer system that are undertaken by third-party developers shall be made under the policies published and used by Raleigh, and as may be amended from time to time. Said policies shall be uniform throughout Raleigh's water and sewer system, including those areas affected by this Agreement. Raleigh may, at its discretion, make changes to the extension policies as Raleigh determines to be appropriate. Said changes shall apply to all portions of the water and sewer system operated and maintained by Raleigh, including those areas located in Wendell's corporate and Urban Services Area limits.

For water and sewer extensions outside of Wendell's municipal corporate limits, all applicable water and sewer extension policies that apply outside of Raleigh's corporate municipal limits will apply.

Any request to Raleigh for water and sewer service extensions in Wendell's corporate limits, ETJ, or Urban Services Area (USA) will require prior written approval by Wendell's governing board before the service can be provided by Raleigh.

Utility fees and charges for new Wendell customers may not be paid by Wendell or any other public entity, either directly or indirectly, as a part of an economic development program for Wendell. Violation of this condition will constitute a breach of the Agreement.

Approval for request for service or extension under provisions of this section will not be unreasonably withheld by either Raleigh or Wendell.

5.4 Wendell-Requested Extensions to the System

Wendell-requested extensions to the merged water and sewer system or extensions thereof required by Wendell beyond those included in the Raleigh Capital Improvement Program, shall be financed by Wendell and shall be accomplished by contract between Wendell and Raleigh. Reasonable notice to proceed with such extensions will be provided to Raleigh by Wendell, such that applicable time limitations can be met. However, under no circumstances shall Raleigh be liable to Wendell for the payment of damages, penalties, fines or any other monetary recovery as a result of any failure to satisfy such time limitations for Wendell-requested extensions. For extensions required due to annexation, annexation plans shall be submitted by Wendell to Raleigh to evaluate the feasibility thereof under then existing conditions, prior to proceeding with implementation of the annexation.

Raleigh shall reimburse Wendell for costs associated with extensions by Wendell in accordance with established extension and reimbursement procedures applicable to developers and customers of Raleigh.

5.5 Annexations

Any annexation considerations will be resolved based on the Urban Service Area for the Town of Wendell (See Exhibit F). Prior to approval of extension of service to property outside the corporate limits of Wendell, Wendell must require application for annexation into Wendell's municipal corporate limits. Wendell must require application for annexation and act on an annexation petition prior to approval to add new water and sewer customers into Wendell limits.

Raleigh will provide water and sewer services to areas that cannot be annexed, only by exceptions to be considered on a case-by-case basis, to address specific health-related concerns. All required annexations must proceed within a reasonable amount of time of committing to the provision of water and sewer service. Any assessments levied on property by Wendell associated with extension to the system will be paid to Wendell.

For water and sewer extensions required as a part of an annexation by Wendell, the cost of said extensions shall be the responsibility of Wendell, to be paid by Wendell prior to initiation of annexation project. Wendell may use assessments as a means of providing for financing of these annexation water and sewer extensions.

5.6 Assessments

Assessments for extension needs generated by and for the benefit of Wendell will be developed and implemented by Wendell. Assessments needed by Raleigh, as a part of the Raleigh Capital Improvement Program, within the corporate limits of Wendell will be developed by Raleigh, and implemented on Raleigh's behalf by Wendell.

6.0 Employee Transfer

All existing staff of Wendell's water and sewer utility system will be offered employment with Raleigh's water and sewer utility system. Wendell employees accepting positions with Raleigh will suffer no loss of pay, annual leave, sick leave, or years credit in retirement program. Relative to level of compensation, Raleigh has conducted a wage and salary analysis and confirms that employees transferring will suffer no loss of current compensation. The benefit package that will be available to Wendell employees transferring to Raleigh will be similar but

not exactly the same as the Wendell package. Wendell employees transferring to Raleigh will retain equivalent tenure and length of service for annual and sick leave, retirement, and other benefits at Raleigh, as they possessed at Wendell. The rate of accrual of length of service-dependent benefits for Wendell employees transferring to Raleigh will be commensurate with the rate of accrual for Raleigh employees of similar length of service.

6.1 Employee Probation Period

All transferring employees will serve a six (6) months probation period during which each employee must demonstrate proficiency in the job assigned. Following the probation period, each employee will receive a performance evaluation similar to that applicable to existing water and sewer utility employees of Raleigh. For employees requesting transfer from Wendell to Raleigh, it will be necessary for the employees to successfully pass a criminal background check and a drug screening.

6.2 Fund Transfers for Accrued Employee Benefits

In accordance with the terms of the financial closeout (section 4.5), Wendell will transfer funds sufficient to pay for all accrued vacation and sick leave for each transferring employee. Information relative to the total number of hours of accrued leave and sick leave will be provided to Raleigh prior to the Transfer Date of this Agreement.

Pending governmental accounting standards will require the recording of post employment healthcare and other benefits over the active employment term of recipients. Implementation for Raleigh will be in fiscal year 2006-07. At the time that an actuarial study has determined the prior liability for the transferring employees, Wendell will have the option of either (1) paying Raleigh for the accumulated value of such benefits, or (2) adjusting the financial proforma results at such point to allow for their existing rate structure to pay for the accumulated expense.

7.0 Records Transfer

Wendell shall transfer to Raleigh all available reproducible and electronic copies of any and all records, data, information, and models arising from the construction, operation and maintenance of Wendell's water and sewer utility system and any other related activity, including projects in progress, and including, but not limited to, the following:

1) Construction contracts, drawings, maps, and all other related documents evidencing the condition or location of any portion of the subject water and sewer systems including such documents as may be in the possession of any engineer or other consultant of Wendell;

2) Billing, collection and payment records on all present customers of the subject water and sewer systems;

3) An accurate tabulation or listing of all actual service locations in the Wendell system to be transferred to Raleigh from Wendell, to include:

    a) Address - Number and Street;

    b) Account Name (if active);

    c) Billing Address for Each Account Number;

    d) Account Numbers and all meter reading books and the history of all accounts for the past twelve (12) months;

    e) One Year's Account History;

f) Meter Location Description;

4) Contracts or agreements for the supply of equipment, materials, supplies, and products;

5) Pending applications for water and sewer service;

6) Contracts or agreements to provide water and or sewer service currently in effect;

7) Receipts, accounts and other records of deposits made by all present and past customers of the subject water and sewer systems;

8) Any and all warranty information on any facilities, property, land, and equipment transferred to Raleigh pursuant to this Agreement;

9) Repair, maintenance, trouble, and emergency response records for all portions of Wendell's water and sewer systems;

10) Any and all notices of violation, legal actions, and lawsuits pertaining to Wendell's water and sewer system;

11) Plans, permits, reports, specifications, surveys, etc., for water and sewer facilities and operations;

12) Number and locations of all unmetered services;

13) Copies of all water and sewer system maps;

14) Copies of all easements;

15) Copies of all encroachment agreements;

16) Identification of all inside Wendell customers;

17) Identification of all outside Wendell customers;

18) Record of all assessments for system extensions;

19) Identification of all taps for which payment has been made;

20) Identification of all backflow prevention installations;

21) Identification of all Pretreatment Program installations;

22) Copies of such records as are necessary to inform Raleigh of the location of all facilities of Wendell for other utility operations;

23) Accounts receivable records;

24) Accounts payable records;

25) Communication Tower Agreements; and,

26) Any other information, data, and records pertaining to Wendell's water and sewer utility.

Wendell agrees that within a reasonable time after the Transfer Date, Wendell shall submit to Raleigh such accounting, commercial, engineering, planning, personnel, and facility records pertaining to Wendell's water and sewer utility system. Wendell may make copies of said materials for Wendell's records and archives. Prior to the Transfer Date, the City Manager of Raleigh and Town Manager of Wendell, or their designees, shall determine mutually satisfactory administrative details for the transfer of the above-referenced records.

8.0 Customer Transfer

As of the Transfer Date, all customers and users of Wendell's water and sewer system shall become subject to all rules, regulations and ordinances of Raleigh as the same apply to all users and customers of the water and sewer system of Raleigh, and as same are now or may hereafter be amended. Such rules, regulations and ordinances and schedule of rates, fees, charges and penalties shall constitute a part of the Agreement between Raleigh and any customer or user of the subject water and sewer system and any extensions thereof for the provision of water and sewer service.

A team comprised of Raleigh and Wendell staff shall develop a seamless transfer of customer accounts at Transfer Date in order to provide continuity of account activity after the merger. All accounting after the Transfer Date shall be made within the Raleigh utility enterprise fund.

8.1 Customer Deposits

Prior to the Transfer Date, Wendell, under the direction of the Wendell Town Manager or his designee, shall refund deposits to its customers or credit customer accounts for deposit balances.

8.2 Billing Cycles

The billing cycle for Wendell water and sewer customers is currently a monthly cycle. The billing cycle for Raleigh water and sewer customers is currently a bi-monthly (every two months) cycle. As of the Transfer Date, Raleigh agrees to continue to bill Wendell customers monthly for water and sewer. The first bill of a two-month cycle may be based on an estimated reading and the second will be based on an actual meter reading. Raleigh reserves the right to adjust the billing cycle for Wendell water and sewer customers to a bi-monthly cycle at a later time, if Raleigh deems this is necessary.

8.3 Water Meter Readings

As of the Effective Date, Wendell's water meters measure water volume in units of 1,000 gallons, and Raleigh's water meters measure water volume in units of 100 cubic feet. At the Transfer Date, Raleigh shall assume all responsibility for reading all customer meters and for preparation of water and sewer bills, and water and sewer customers in Wendell will be billed for water and sewer service based on 100 cubic feet units. Wendell's gallon unit water meters shall be replaced with cubic feet water meters and upgraded to radio read capability by Raleigh as part of the System Upgrades and Improvements identified in Exhibit D. If the replacement of Wendell's water meters cannot be completed prior to the initial collection of water meter readings by Raleigh staff, Raleigh will collect water meter readings from Wendell customers using 1,000 gallon units, and Raleigh's water billing system will convert the readings to 100 cubic feet units for the purposes of producing water and sewer bills.

The transition of meter readings will be coordinated by a joint implementation team.

9.0 Bonded Indebtedness

Raleigh agrees to pay Wendell all amounts necessary to enable Wendell to make all debt service payments when due and payable on all existing outstanding bonded indebtedness of Wendell for water and sewer facilities covered under this Agreement. The payments required to be made in accordance with this provision of the Agreement shall be made in a timely manner, and Raleigh's obligation hereunder shall be a continuing one until all outstanding bonded indebtedness of Wendell borrowed for such purposes shall have been paid in full. A statement of Wendell's outstanding bonded indebtedness and a schedule of the debt service to be made

pursuant to this provision of the Agreement shall be submitted to Raleigh prior to the Transfer Date of this Agreement (See Exhibit G). Wendell agrees to cooperate with Raleigh in determining opportunities for early retirement or refinancing of any of the outstanding debt, when such adjustments are permitted by the bonding agencies, and Raleigh retains the right to exercise an option of debt refinancing or retirement if costs to the water and sewer utility can be lowered as a result. Projected debt service shall be included as a part of the transfer cost calculated as a part of this agreement.

10.0 Prior Agreements

10.1 Wendell and Raleigh

All prior agreements between Wendell and Raleigh pertaining to water and sewer services are rescinded as of the Transfer Date.

10.2 Wendell Commitments to Private Third Parties

Wendell has a commitment to Mercury Development for a satellite annexed project known as Wendell Falls. This agreement between Wendell and Mercury Development will be honored by Raleigh, provided that any required expenditure of Raleigh funds shall be considered “merger costs” recoverable by Raleigh pursuant to the terms of Section 3.7 of this Agreement.

Wendell will install the meters, set the boxes, and collect tap fees in this development to fulfill its existing commitments prior to Transfer Date. Such completed services shall become a part of the property to be conveyed herein from Wendell to Raleigh.

Wendell also has a commitment to the owners of certain property located on Lions Club Road to give credit for certain development fees relating to this property. This agreement between Wendell and the owners will be honored by Raleigh, provided that any required expenditure of Raleigh funds shall be considered “merger costs” recoverable by Raleigh pursuant to the terms of Section 3.7 of this Agreement. A copy of the agreement is included as Exhibit H.

Any contract or agreement with third parties entered into by Wendell between the Effective Date and the Transfer Date shall require approval by Raleigh.

10.3 Wendell Commitments to Public Entities

If it is determined that Wendell has some existing vendor agreements relating to water and sewer services, Wendell shall provide notice to these entities regarding these agreements and Wendell’s intent to rescind its agreements as of the Transfer Date. However, Raleigh at its option may elect to continue these agreements through the current terms, subject to the consent of the contracting parties. In the event Raleigh chooses to continue the existing Town of Wendell Agreement, any water sold or to be consumed by Wendell shall not count against the allocations provided to be made to Wendell in this Agreement.

Wendell has existing agreements relating to water service (as of the Effective Date) with Zebulon. Wendell also has an existing agreement with Johnston County for the provision of water in emergency situations.

10.4 Wendell Commitments to Communications Firms for Transmission Towers on Wendell Water and Sewer Assets

Wendell has existing contracts with communications firms for transmission towers located on Wendell water and sewer assets. It is agreed that these contracts, including revenue to be derived from the contracts will be transferred to Raleigh.

10.5 Discriminatory Agreement Disclaimer

No existing special, discriminatory agreements with specific customers will be continued, honored, or assumed by Raleigh.

Wendell represents and warrants to Raleigh that there are no discriminatory agreements between Wendell and any customer or user of Wendell's water and sewer system which will nor may survive this Agreement and be binding upon Raleigh. For purposes of this Agreement, a discriminatory agreement is any agreement, contract or other understanding between Wendell and any customer or user of Wendell's water and sewer system that provides that:

1. Water and sewer service be extended and provided in a different manner than such service is extended and provided to the remaining customers or users of Wendell's water and sewer system as to quality, quantity, or any other aspect of extending and providing such service;
2. Water and sewer service be extended and provided upon the payment of a different schedule of rates, fees, charges, or penalties than is imposed upon the remaining customers or users of Wendell's water and sewer system;
3. Water and sewer service be extended and provided at a different cost or schedule for reimbursement of costs or any other aspect of paying for the extension and provision of water and sewer service than is imposed upon the remaining customers or users of Wendell's water and sewer system.

In the event that an unlawful discriminatory agreement exists and survives this Agreement, and is determined to be binding upon Raleigh, Wendell shall indemnify and hold Raleigh harmless from any and all demands, claims, or actions (including the reasonable costs, expenses and attorney fees incurred by Raleigh), of such discriminatory agreement. Further, Wendell shall indemnify and hold Raleigh harmless from any and all demands, claims, or actions, without regard to the relief sought or awarded and without regard to whether the claim, demand or action is raised by a party to the discriminatory agreement.

11.0 Contracted Services Between Raleigh and Wendell

Raleigh will negotiate separate agreements with Wendell for Wendell's operation of a Raleigh Satellite Customer Service Center, beginning on the Transfer Date. Wendell will collect payments for City of Raleigh services and tax revenues, including but not limited to water and sewer bills. Wendell will negotiate a separate agreement with Raleigh for Raleigh to collect solid waste or other mutually agreeable fees on behalf of Wendell. Wendell will also be accessible by telephone for Wendell residents for billing or service-related inquiries. Obligations of Wendell and Raleigh for the operation of the Satellite Customer Service Center shall be as specified in the referenced agreement.

Additional services that may require separate agreements between Raleigh and Wendell include paving alternatives as shown in paragraph 3.3; and potential of purchasing or leasing space from Wendell Public Works for remote field operations.

12.0 Conflict/ Default Resolution

In the event of conflict or default that might arise for matters associated with this Agreement, the parties involved agree to informally and formally communicate to resolve the conflict. If this communication is not successful in resolving the conflict, the matter will be presented to the City Manager of Raleigh and the Town Manager of Wendell for resolution. If the Managers are

unable to resolve the conflict, the matter will be presented to the respective governing boards for resolution.

13.0 Fire Protection Services

Raleigh shall be responsible for maintaining fire hydrants and services in a reasonable manner at a level equivalent to that maintained by Wendell at time of transfer of the system. This level of service shall include hydrant spacing, hydrant maintenance, hydrant specifications and appropriate water volume and pressure available at each hydrant. Raleigh shall coordinate with the Wendell Fire Department for any maintenance to be done by the Wendell Fire Department.

14.0 Ordinances to be Adopted

As a condition of entering into this Agreement, Wendell shall adopt such ordinances as are reasonably necessary to regulate the proper use of the subject water and sewer system and any extensions thereof by the customers and users within the jurisdiction of Wendell. Said ordinances shall be reviewed and approved by Raleigh prior to adoption by Wendell, and will further grant to Raleigh all administrative, permitting, regulatory, and enforcement authority necessary for the regulation, operation, maintenance, and improvement of the water and sewer systems serving the corporate and Urban Services Area limits of Wendell. Wendell shall maintain updates and enforce such ordinances. Raleigh shall reimburse Wendell for the reasonable expenses of enforcing such ordinances. Said ordinances shall have the same or similar provisions as are included in Raleigh's use ordinance related to Raleigh's water and sewer utility system. Adoption of necessary Ordinances and Resolutions may be adopted by reference by the Wendell Town Board. Ordinances to be considered shall include the Sanitary Sewer Use Ordinance, the Backflow Prevention Ordinance, and the Reuse Ordinance.

By approval and upon execution of this Agreement, Wendell shall be deemed to have adopted by reference any water conservation ordinance or restriction of Raleigh which may from time to time be adopted by the Raleigh City Council (during drought conditions or arising from other, special circumstances) so that such measures will be fully effective in, and shall be enforceable by Wendell, as though adopted by direct action of the Wendell governing board.

14.1 Environmental Permit Requirements

Wendell and Raleigh acknowledge that the merger of Wendell's and Raleigh's utility systems, and anticipated population growth in both municipalities and surrounding utility service areas, will require Raleigh to obtain specific State regulatory permits. These permits may be expected to include requirements for adoption of environmental conditions, requirements and mitigation measures, including land use regulations and restrictions, at the municipal level. In event such conditions, restrictions and mitigation measures are imposed by State regulatory authorities as a condition of permit issuance for the operation, upgrade, or expansion of utility services contemplated hereunder, Wendell agrees to duly adopt by ordinance or otherwise, and to make effective within its corporate limits and extraterritorial jurisdiction area, as applicable, such conditions, restrictions and mitigation measures.

15.0 Delegation of Permitting Authority

Wendell shall adopt a resolution or ordinance as may be required to support the delegation of water and wastewater permitting authority to Raleigh from the North Carolina Department of Environment and Natural Resources, Division of Environment Health and Division of Water Quality, within the jurisdiction of Wendell.

16.0 Amendment to Agreement

This agreement may be amended only by a document in writing, approved by the Town Board of Commissioners of Wendell and the City Council of Raleigh and executed by the respective Mayors. In the event Raleigh, by written agreement or otherwise, makes provision for utility services or concessions to another municipality or other Raleigh utility customer which are more favorable than the terms, provisions, and concessions herein granted to Wendell, then and in that event, the parties agree to negotiate in good faith to incorporate into this Agreement identical or equivalent provisions, terms, and concessions for the benefit of Wendell.

17.0 Customer Notification

Wendell agrees to use all practical means, including direct mailing, to notify customers of changes associated with this merger. Such notification shall include information on schedule and mechanics of transfer and information concerning Raleigh's policies and procedures.

18.0 Severability

It is hereby the declared intention of Wendell and Raleigh that the paragraphs, sections, sentences, clauses, and phrases of this agreement are severable. If one or more paragraphs, sections sentences, clauses, or phrases shall be declared void, invalid or otherwise unenforceable for any reason by the valid, final judgment or decree of any court of competent jurisdiction, such judgment or decree shall not affect the remaining provisions of this agreement and the same shall continue to be fully effective and enforceable on the basis that said remaining provisions would have been agreed to by Wendell and Raleigh without the incorporation of such void, invalid or otherwise unenforceable paragraph, section, sentence, clause or phrase.

19.0 Notices

Whenever written notice is required under this agreement, said notice shall be sufficient when received by the Town Manager of Wendell and the City Manager of Raleigh. Said notice may be mailed or hand-delivered but shall not be effective unless actually received.

20.0 Covenant of Good Faith and Fair Dealing

Raleigh and Wendell shall cooperate and act in good faith to perform their obligations under this agreement and shall refrain from any action inconsistent with their contractual rights or obligations that would prejudice or injure the other party's rights to receive the benefits of this Agreement.

Approved this _____day of _____200__

Town of Wendell

BY:_____

Town Mayor

Attest:

_____

Town Clerk

_____

Approved as to form, Wendell Town Attorney

City of Raleigh

BY:_____

City Manager

Attest:

_____

City Clerk

_____

Approved as to form, Raleigh City Attorney

EXHIBITS

Exhibit A	Fixed Assets to be Transferred
Exhibit B	List of Real Property, Easements and Encroachments Agreements
Exhibit C	Water and Sewer Utility Property and Fixed Assets to be Retained by Wendell
Exhibit D	Schedule of Upgrades and Improvements
Exhibit E	Schedule of Estimated Revenues and Expenses
Exhibit F	Service Area Maps
Exhibit G	Bonded Indebtedness
Exhibit H	Lions Club Road Agreement

EXHIBIT A

Fixed Assets to be Transferred

Property	Address
Wastewater Pre-Treatment Plant	450 Lake Glad Road
Grit/Bar Screen System	
Clarifiers (4)	
Blower Building	
Influent Pump House (Jones Landing)	
Effluent Pump Vault	
Water Tanks/Reservoirs	
Poplar Street Tank - 500,000 Gallon Elevated	301 Poplar Street
Old Zebulon Road Water Reservoir	418 Old Zebulon Road
Lions Club Road Tank	801 Chevrolet Way
Sewer Lift Stations	
Vishay/Measurement Group Lift Station	1001 Wendell Blvd.
West Town Lift Station	99 Church Street (at end of Church St. in corner)
Greenwillow Circle Lift Station	515 Greenwillow Circle
Whitley Way Lift Station	4790 Wendell Boulevard
Carver School Lift Station	944 Morphous Bridge Road (across on dirt road behind Old Carver School)
Selma Road Lift Station	390 South Selma Road
Deerfield Lift Station	103 Jones Market Square
Wellington Lift Station	112-A Grange Drive (behind house)
Northwinds I Lift Station	733 Old Zebulon Road
Northwinds II Lift Station	209-A Northwinds North Drive (in cul-de-sac)
Piedmont Lift Station	430 Industrial Drive (behind building)
Water Meter Stations	
Knightdale Water Meter Pit	9200 US64 East (Lahoya Farms area)
Wendell Chemical Booster Station	1501 South Hollybrook Road
Zebulon Water Meter Pit	2226 Highway 97 (before 2216 Highway 97)
Little River Water Pump Stations	5171 Wendell Blvd.
Sewer Meter Station	

Raleigh Sewer Meter Station	6225 Grasshopper Road
Water Valve Vault	
Wendell Underground Water Valve Vault	2904 Wendell Blvd. (across from CITGO station)
Water Booster Station	
Booster Station	2350 Wendell Blvd.

Rolling Stock and Equipment to be Transferred

Asset ID	Asset Description	Serial Number
205	2006 Ford F-350 1 ton 4x4 Utility Truck	
203	1998 Chevrolet 3/4 ton Truck	
204	1997 Chevrolet 3/4 ton Utility Truck	
502	1995 Chevrolet ¾ ton Truck	
212	Kohler Portable Generator - 100 kW with light	
	Cargo Mate Trailer - 8.5'x16', enclosed with generator	
	Ramax Packer-24" width	
	Concrete Saw	
	Rigid Model K500 Drain Cleaner Roding Machine	
	Mytanna Model M98 Sewer Drain Cleaner Roding Machine	
	2.5" Boring Missile	
	Blower-Smoke Machine	

Exhibit B List of Real Property, Easements and Encroachments Agreements

Real Property	Address
Wastewater Pre-Treatment Plant	450 Lake Glad Road
Water Tanks/Reservoirs	
Poplar Street Tank - 500,000 Gallon Elevated	301 Poplar Street
Old Zebulon Road Water Reservoir	418 Old Zebulon Road
Lions Club Road Tank	801 Chevrolet Way
Sewer Lift Stations	
Vishay/Measurement Group Lift Station	1001 Wendell Blvd.
West Town Lift Station	99 Church Street (at end of Church St. in corner)
Greenwillow Circle Lift Station	515 Greenwillow Circle
Whitley Way Lift Station	4790 Wendell Boulevard
Carver School Lift Station	944 Morphous Bridge Road (across on dirt road behind Old Carver School)
Selma Road Lift Station	390 South Selma Road
Deerfield Lift Station	103 Jones Market Square
Wellington Lift Station	112-A Grange Drive (behind house)
Northwinds I Lift Station	733 Old Zebulon Road
Northwinds II Lift Station	209-A Northwinds North Drive (in cul-de-sac)
Piedmont Lift Station	430 Industrial Drive (behind building)
Water Meter Stations	
Knightdale Water Meter Pit	9200 US64 East (Lahoya Farms area)
Wendell Chemical Booster Station	1501 South Hollybrook Road
Zebulon Water Meter Pit	2226 Highway 97 (before 2216 Highway 97)
Little River Water Pump Stations	5171 Wendell Blvd.
Sewer Meter Station	
Raleigh Sewer Meter Station	6225 Grasshopper Road
Water Valve Vault	
Wendell Underground Water Valve Vault	2904 Wendell Blvd. (across from CITGO station)
Water Booster Station	
Booster Station	2350 Wendell Blvd.

Exhibit B List Easements and Encroachments Agreements

Last Name	Location	Type	Book	Page	Date
Pearce	Pine and Haywood	sewer	6730	95	10/31/1995
Norfolk Southern	Railway at milepost 213	water			
Brantley	Third Street	sewer	8604	01706-01708	6/7/2000
Brantley	Wake County Schools	utility	8679	671-674	9/7/2000
Herthum	Nowell and Green Willow Circle	utility	8378	2620-2622	8/2/1999
Crews	Hall Street	sewer	8233	1894	1/22/1999
Elliott and Phillips	Meadowbrook subdivision	utility	8189	116	11/17/1998
United Realty		sewer	7886	891	2/6/1998
Dean		sewer	7886	884	2/6/1998
Little River Corp		sewer	7886	887	2/6/1998
Lee	lot 37 Knott Heights	sewer	8142	1651	9/9/1998
Ayscue		sewer	7799	154	12/12/1997
Phillips	near Haywood Street	sewer	7408	264	4/8/1997
Henderson	Haywood Street	sewer	7385	213	3/25/1997
Helping Hand		sewer	7046	62	6/27/1996
Freeman	Lot 33 Knott Heights	water and sewer	4560	745	9/6/1989
Kelly	East of Hwy 64 Business	utility			
Peeler	West of Marshburn Avenue	utility			
Johnson	West of Marshburn Avenue	utility			
Gossman	East of Hwy 64 Business	utility			
Johnson	North of SR 2511	utility	5477	496	1/21/1993
Willis	North of SR 2511	utility	5477	500	1/21/1993
Lavine	Western ROW of State Road 2358	utility	5477	494	1/21/1993
CP&L	Phipps property	sewer	5476	23	1/20/1992
Earp	Northeast side of hwy 64	sewer	5011	270	10/15/1991
Parrish		water	3680	3	3/19/1986

Last Name	Location	Type	Book	Page	Date
Ide	Meadowbrook subdivision	sewer	2894	563	1/14/1981
Hartman	Meadowbrook subdivision	sewer	2893	697	1/9/1981
Vishay	North side of Hwy 64	sewer	2696	383	1/2/1979
Medlin	South of 64 north of SR 2365	sewer	4097	876	8/31/1987
Anderson	both sides of Hwy 64	sewer	2804	298	1/25/1980
Anderson	Siemens plant	sewer			1/16/1980
Tongue and Strain	North of 64 and west of SR 2300	sewer	2804	301	1/25/1980
Regency Associates	lot 2 Meadowbrook	sewer	2903	690	2/23/1981
Regency Associates	lots 27,37,38,39 Meadowbrook	sewer	2894	916	1/15/1981
Stevens	lot 4 Meadowbrook	sewer	2894	919	1/15/1981
Guy	lot 3 Meadowbrook	sewer	2894	560	1/14/1981
Ide	lot 3 block b Meadowbrook	sewer	2894	563	1/14/1981
Sasser	lot 2 Meadowbrook	sewer	2893	700	1/9/1981
Hartman	lot 1 Meadowbrook	sewer	2893	697	1/9/1981
Yates	lot 49 Meadowbrook	sewer	2893	703	1/9/1981
Permenter	lot 6 Meadowbrook	sewer	2893	706	1/9/1981
Lawrence	lot 28 Meadowbrook	sewer	2916	610	4/13/1981
Beasley	lot 1 block G Meadowbrook	sewer	2893	709	1/9/1981
Parker	lot 5 Meadowbrook	sewer	2897	945	1/28/1981
Ayscue	West Street	sewer	2728	555	4/9/1979
Todd	Church St	sewer	2719	790	4/6/1979
Carolina and Northwestern Railway	Buffalo Street	water			11/12/1985
Carolina and Northwestern Railway	Selma Road	water			11/12/1985
Norfolk Southern		water			10/14/1985
Mazzeo	East of Hwy 64 Business	utility	3517	480	7/17/1985
Marshburn	East of Hwy 64 Business	utility	3517	478	7/17/1985
Mazzeo	East of Hwy 64 Business	utility	3517	476	7/17/1985

Last Name	Location	Type	Book	Page	Date
Rhodes	Pine Street	sewer			7/31/1985
Ellis, Andrews, Whitley	Lakewood subdivision	sewer			2/25/1976
Piedmont Assembly	ROW line of Cemetery Road	sewer	3056	748	10/22/1982
DMD Enterprises	Maple Court Apts	utility	3199	356	11/17/1983
Whitley	First Street and Oakwood Ave	utility	2711	767	3/12/1979
Todd	Marshburn to Green Willow to Poplar	sewer	2699	664	1/18/1979
Brantley	east of Hwy 64 Business	sewer	2673	622	10/16/1978
Robertson	east of Hwy 64 Business	sewer	2673	619	10/14/1978
Atkinson		sewer			1/27/1978
Whitley	south of 64 Business	sewer			1/26/1978
S&E Fashions	south of 64 Business	sewer			1/26/1978
Kirk	railroad track	water			12/31/1969
White	Selma Road	sewer	2380	573	2/9/1976
Pearce	northwestern ROW Hwy 64	water	2144	441	3/17/1973
Tarpley	Wendell Zebulon water booster	water	2144	439	3/16/1973
White	Selma Road	sewer			2/25/1976
United Realty	lots 6,7,8 of BW Todd Heirs subdivision	sewer	2940	834	7/7/1981
Jones	west of SR 231	sewer	2936	945	6/24/1981
United Realty	lots 13,14,15 of BW Todd Heirs subdivision	sewer	2875	609	11/3/1980
Rinaldi	Second Street	sewer			7/8/1970
Wake Industrial Facilities	north of 64 Business	sewer	2696	383	12/5/1978
Norfolk Southern	along railroad tracks	sewer			
Bateman	1774.04-55-1916	sewer			
Anderson	1774.02-65-0534	sewer			
Anderson	1774.04-73-1848	sewer			
Anderson heirs	1774.04-73-3510	sewer			

Last Name	Location	Type	Book	Page	Date
Bateman	1774.04-72-4863	sewer			
Dean	1774.04-92-6463	sewer			
Debnam	1784.17-10-2906	sewer			
Town of Wendell	1784.18-30-5523	sewer			
Town of Wendell	1783.06-39-7602	sewer			
NC Baptist Foundation	1783.06-38-6757	sewer			
Ayscue	1784.17-22-1112	sewer			
Dean and others	1784.14-43-1566	sewer			
Big B Enterprises	1784.14-32-2442	sewer			
Wendell/Larue	1784. -32-8832	sewer			
Dixon	1784.14-33-8406	sewer			
Moss	1783.10-36-7812	sewer			
Nowell and others	1783.10-37-6987	sewer			
CP&L	1783.11-56-2563	sewer			

Exhibit C Water and Sewer Utility Property and Fixed Assets to be Retained by Wendell

Property/Asset	Address
Backhoe	Public Works facility
Compressor	Public Works facility
Jet Machine	Public Works facility
John Deere Tractor	Public Works facility
1 Concrete Saw	Public Works facility
2001 Chevrolet 4x4 truck (504)	Parks and Recreation Department
1996 Ford Truck (202)	Parks and Recreation Department
2000 Chevrolet 4x4 Truck (102)	Parks and Recreation Department
Public Works Building	450 Lake Glad Road
Public Works Equipment/Vehicle Shelter	450 Lake Glad Road
Wastewater Control Building	450 Lake Glad Road

Exhibit D Summary of System Upgrade and Improvement Projects

Project Identifier	Project Title		Estimated Fiscal Year	Total Project Cost	Project Description
	Water Distribution System				
WD01	AMR and Backflow Retrofit Program	Merger	2007	$900,000	Project includes backflow retrofit program. $425 for AMR and backflow; $250 backflow only. 2800 accounts; 1200 without backflow (or non-double check valve).
WD02	Replace Hydrants	Merger	2007	$60,000	Replacement of defective hydrants. 23 hydrant. Assume 13 @ $3000 and 10 @ $2000.
WD03	Replace 2" Galvanized with 4" PVC/Ductile Iron Pipe	Merger	2007	$325,000	Replace 6500 ft of galvanized pipe with 4" PVC or ductile iron. Addresses/ locations of galvanized pipe held by Wendell.
WD04	Water Distribution System Study	Merger	2007	$50,000	Modeling study, including investigation of Chlorine residuals issues.
WD05	Rehabilitation of Old Zebulon Road Ground Storage Tank Pumps	Merger	2008	$100,000	Rehabilitation of pumps to bring storage tank back into service.
WD06	Poole Road Water Line Extension	Expansion	2010	$2,740,000	Cost share in Raleigh Project from Bethlehem to Martin Pond Rd. Cost based on East Wake Water Study report by Hazen and Sawyer.
WD07	West 64 Bypass Water Supply	Wendell CIP	2007	$81,000	Construct 1,700 LF of 6" water line bored under Rolesville Rd. and extended north along US Hwy 64 bypass. Cost from McKim & Creed.
WD08	Water Booster Station Upgrade (Liles Dean Road)	Wendell CIP	2008	$150,000	Upsize the existing water booster station pump impellers. Cost from McKim & Creed.
WD09	Lake Glad Road Water Line Extension	Wendell CIP	2010	$205,000	Construct 4,300 LF of 6" and 8" water line along Lake Glad Road. Cost from McKim & Creed.
WD10	Water Distribution System Rolling Stock/Equipment Needs	Merger	2007	$100,000	Details of equipment needs still being finalized. Allowance based on costs from Knightdale merger.

Exhibit D Summary of System Upgrade and Improvement Projects

Project Identifier	Project Title		Estimated Fiscal Year	Total Project Cost	Project Description
WD11	East Wake Water Transmission Improvements (Martin Pond Rd and Wendell Blvd Segments)	Expansion	2010	$1,162,000	Cost share for segment from Poole Road to Martin Pond Road only. Cost based on East Wake Water Study report by Hazen and Sawyer.
WD12	Fencing and Alarms to facilities (2 meter stations and GST)	Raleigh Recommended	2008	$80,000	$20k for 3 alarm systems; $5k BPS fence; $10k GST fence
WD13	Forrestville Road Pump Station oversizing payment		2008	$300,000	Share in City of Raleigh Forrestville Road pump station expansion. Estimated by Withers & Ravenel.
WD14	Little River Pump Station Rehab	Raleigh Recommended	2008	$200,000	PS has no SCADA. Not known whether pumps still work.$30k SCADA; $120k pumps; $50k elec/inst
WD15	Disribution System Rehab Projects	Merger	2008	$0	Allowance for projects arising from studies (looping/upsizing)
	Wastewater Collection System				
WW01	Collection System Study	Merger	2007	$200,000	Targeted sewer system study to identify areas where projects could reduce infiltration and inflow in the Wendell system
WW02	Collection System Rehab projects	Merger	2008	$800,000	Allowance for manhole repairs and replacements throughout Wendell to address deficiencies identified through inventory, field inspections and analysis conducted under project WW01.
WW03	West Wendell Boulevard Sewer Service	Wendell CIP	2007	$464,000	Extend 4,000 LF of 8" gravity sewer along Wendell Boulevard eastward from the intersection of NC 97 with Wendell Boulevard (US Business 64). Construct 1,700 LF of 3" low pressure sewer main from end of new gravity sewer east to Ledford Rd. Cost from McKim & Creed.
WW04	Poole Road Gravity Sewer Extension Across Buffalo Creek	Wendell CIP	2007	$120,000	Extend 800 LF of 12" gravity sewer westward along the south side of Poole Road under Buffalo Creek. Cost from McKim & Creed.

Exhibit D Summary of System Upgrade and Improvement Projects

Project Identifier	Project Title		Estimated Fiscal Year	Total Project Cost	Project Description
WW05	Hanor Lane Gravity Sewer Improvements	Wendell CIP	2007	$310,000	Construct 1,735 LF of 12" gravity sewer from the Buffalo Creek Interceptor on the west side of Wendell Boulevard to Hanor Lane. Bore and Jack under Wendell Boulevard and Hanor Lane. Sewer easements will be required. Cost from McKim & Creed.
WW06	West 64 Bypass Wastewater Service (Gravity Sewer, Pump Station and Force Main)	Wendell CIP	2007	$775,000	Construct 4,000 LF of 8" gravity sewer along north side of US Hwy 64 from Rolesville Road to a new pump station constructed near the intersection of Keiths Road and US Hwy 64. Pump Station will be a duplex vacuum prime station sized to deliver 320 gpm. 8,500 LF of 8" force main will be constructed along US 64 eastward to the Buffalo Creek Interceptor. Cost from McKim & Creed.
WW07	Lake Glad Road Sewer Main Replacement/Sliplining (Rehab project)	Wendell CIP	2007	$338,000	Rehab or replace 2,500 LF of 16" gravity along Lake Glad Road that serves as the final section of the Town's gravity sewer system discharging to the Lake Glad Road Pretreatment Facility. Cost from McKim & Creed.
WW08	Buffalo Creek Basin Sewer Basin Improvements (Pump Station and Force Main)	Wendell CIP	2009	$690,000	Construct new vacuum primed pump station along Buffalo Creek near the County line. The pump station will be sized to deliver 1220 gpm through 6,200 LF of new 12" force main, discharging to the Lake Glad Road Pretreatment Facility. Cost from McKim & Creed.
WW09	Wendell Park Gravity Sewer to the Buffalo Creek Interceptor	Wendell CIP	2009	$99,000	Extend 1,000 LF of 8" gravity sewer from the Wendell Park to the Buffalo Creek Interceptor. Abandon the park pump station. Sewer easements may be required. Cost from McKim & Creed.
WW10	Lake Glad Road Gravity Sewer	Wendell CIP	2010	$197,000	Extend 2,000 LF of 8" gravity sewer from the Wellington Pump Station to Lake Glad Road. Sewer easements will be required. Cost from McKim & Creed.

Exhibit D Summary of System Upgrade and Improvement Projects

Project Identifier	Project Title		Estimated Fiscal Year	Total Project Cost	Project Description
WW11	Marshburn Road Sewer Improvements (Gravity Sewer, Pump Station and Force Main)	Wendell CIP	2010	$1,780,000	Construct new vacuum primed pump station along Marshburn Road near Little River. The pump station will be sized to deliver 700 gpm through 5,000 LF of new 10" force main, discharging to the gravity sewer at Hanor Lane. Cost from McKim & Creed.
WW12	Old Wilson Road Sewer Extension	Wendell CIP	2012	$350,000	Construct 3,035 LF of 8" gravity sewer along Old Wilson Road. Cost from McKim & Creed.
WW13	Lizard Lick Interchange Sewer Service	Wendell CIP	2013	$188,000	Construct 1,700 LF of 8" gravity sewer along Old Marshburn Road, north of the intersection at NC Highway 97. Cost from McKim & Creed.
WW14	Old Zebulon Road Sewer Service	Wendell CIP	2014	$277,000	Construct 3,000 LF of 8" gravity sewer along Old Zebulon Road to service the area south of the Northwinds I Pump Station. Cost from McKim & Creed.
WW15	Highway NC 97 Gravity Sewer Extension from Wendell Modular School to Lizard Lick Area	Wendell CIP	2016	$698,000	Extend 6,300 LF of 8" gravity sewer along NC Highway 97 from the Wendell Modular School to the Lizard Lick Area. Cost from McKim & Creed.
WW16	Green Willow Pump Station Upgrade (Increase to 285 gpm and wet well rehab)	Wendell CIP/Raleigh Recommended	2016	$200,000	$105k pumps; $95k wet well rehab. Project to increase to 285gpm was part of Wendell CIP. Rehabilitation of wet well is a Raleigh recommended addition to project.
WW17	Whitley Way Pump Station and Force Main Improvements	Wendell CIP	2016	$722,000	Upgrade the existing Whitley Way Pump Station to deliver 430 gpm through 10,200 LF of new 8" force main, discharging to gravity sewer at the Selma Pump Station. Cost from McKim & Creed.
WW18	Wellington Sewer Basin Improvements (Abandonment of Deerfield and Selma Pump Stations, Gravity Sewer and Force Main)	Wendell CIP	2016	$1,357,000	Construct 5,100 LF of 12" gravity sewer from the Selma Pump Station to the Wellington Pump Station. Abandon the Selma and Deerfield Pump Stations, diverting flow into the new 12" gravity sewer to Wellington. Upgrade the Wellington Pump Station to deliver approximately 1000 gpm through 2,270 LF of new 10" force main, discharging to the Lake Glad Road Pretreatment Facility. Cost from McKim & Creed.

Exhibit D Summary of System Upgrade and Improvement Projects

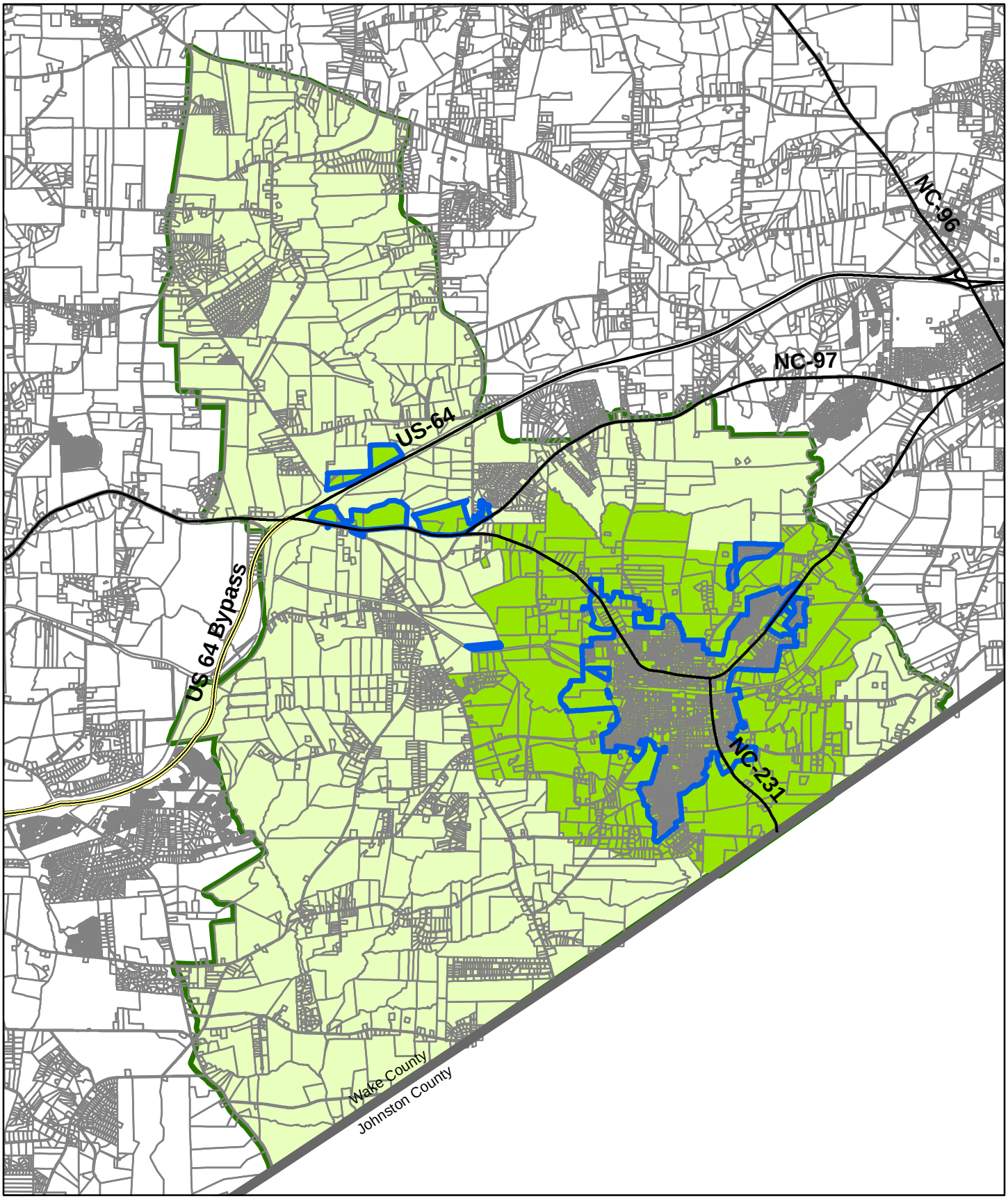
Project Identifier	Project Title		Estimated Fiscal Year	Total Project Cost	Project Description
WW19	Lake Glad Road Aeration basin demolition	Raleigh Recommended	2007	$150,000	Demolition of two basins, plus 300ft of 24" aerial line extension, and splitter box.
WW20	Jones Landing PS abandonment or upgrade	Raleigh Recommended	2007	$100,000	Project to abandon or upgrade Jones Landing PS
WW21	Northwinds I PS structural problems	Raleigh Recommended	2007	$35,000	Based on price of a replacement building
WW22	Abandonment of Vishay Pump Station, including gravity sewer to Buffalo Creek interceptor	Raleigh Recommended	2007	$300,000	Diversion of flows from Vishay force main into gravity main discharging into Buffalo Creek Interceptor
WW23	Wastewater collection System Rolling Stock/Equipment Needs	Merger	2007	$150,000	Details of equipment needs still being finalized. Allowance based on Knightdale.
WW24	East Wake Sewer Study Projects	Expansion	2008	$3,000,000	Cost share for Wendell Falls pump station and 13,200ft of 16-inch force main segment from Lake Myra to Poplar Creek along Poole Road. Cost for 5,760 ft of 12-in sewer interceptor to serve segment of Wendell service area in Marks Creek upstream of Wendell Falls, and upsizing (size to be determined) of 16,400 ft of sewer interceptor through Wendell Falls. Cost based on April 2006 report by Withers and Ravenel.
WW25	WWTP and Pump Station SCADA & Telemetry Upgrade. Includes radio survey	Merger	2007	$300,000	Includes SCADA and generator provision/replacement. 2 generators needed for PSs, plus small generators for SCADA. $225k + 2x$30k = $285k
	General Utility Projects				
GEN01	Billing Data Conversion	Merger	2007	$85,000	Conversion of Wendell Utility customer account information and billing data by Contractor
GEN02	Consultant Services	Merger	2007	$115,000	Merger Implementation Assistance and Shares in East Wake Water/Sewer Plans
GEN03	IWOS Devices	Merger	2007	$20,000	Estimated 4 laptop computers to be mounted in service vehicles, with maintenance management software.
GEN04	Customer Service Center Set-Up	Merger	2007	$10,000	Allowance for computer, software, T1 link and telephone for customer service station at Wendell.

Exhibit D Summary of System Upgrade and Improvement Projects

Project Identifier	Project Title		Estimated Fiscal Year	Total Project Cost	Project Description
GEN05	Public Works Facility	Merger	2007	$250,000	Allowance for Wendell's purchase of buildings at Lake Glad Road facility for use by Wendell Public Works
	Total Merger Project Cost			**$20,033,000**	
WT01	Additional water treatment capacity from Raleigh	Expansion	2007	$5,106,000	Purchase of 1.15 MGD capacity at $4.44 per gallon
WT02	Additional water treatment capacity from Raleigh	Expansion	2007	$9,000,000	Purchase of 2.5 MGD capacity at $3.60 per gallon
WWT01	Additional wastewater treatment capacity from Raleigh	Expansion	2007	$2,850,000	Purchase of 0.75 MGD capacity at $3.80 per gallon
WWT02	Additional wastewater treatment capacity from Raleigh	Expansion	2007	$3,550,000	Purchase of 1.0 MGD capacity at $3.55 per gallon
	Total Capacity Purchase Costs			**$20,506,000**	

Exhibit E Schedule of Estimated Revenues and Expenses

Exhibit F Corporate Limits and Urban Service Area



Major Roads
Parcels
Corporate Limits
ETJ
Urban Service Area

0 1 2 Miles

1:75,000

Town of Wendell
Urban Service Area

CH2MHILL

Exhibit G Bonded Indebtedness

Exhibit H Lions Club Road Agreement

Prepared by and return to: John E. Tantum, Post Office Box 785, Wendell, NC 27591

NORTH CAROLINA

MEMORANDUM OF AGREEMENT

WAKE COUNTY

THIS MEMORANDUM OF AGREEMENT, made and entered into this 22 day of January, 2001, by and between the ***Town of Wendell,*** *a North Carolina Municipal Corporation* (hereinafter referred to as "the Town"), and ***Wallace Paul White*** *and wife,* ***Rebecca W. White***; and ***Phillip Allen White*** *and wife,* ***Jenny M. White***; owners of certain property located on Lions Club Road near the Town of Wendell (hereinafter referred to as "the Whites");

W I T N E S S E T H:

WHEREAS, the Town is preparing to construct a new elevated water storage tank in or near the Town of Wendell and is in need of a site for the construction of said tank, together with any necessary easement for the purpose of ingress and egress from a public right-of-way to said tank and for the purpose of the installation of a waterline from the public right-of-way to said tank; and

WHEREAS, the Whites own certain real estate fronting on Lions Club Road, said real estate having PIN Nos. 1793.05 07 5897 000, 1793.05 07 8689 000, 1793.05 17 0996 000, 1793.05 17 7991 000, 1793.09 17 7440 000; and

WHEREAS, the Whites have agreed to convey to the Town approximately .62 acre from the above-described property for use by the Town in the construction of said elevated water tank, and have further agreed to convey to the Town a forty (40) foot wide easement from said .62 acre to and from Lions Club Road for use by the Town for ingress and egress to the water tank and for use by the Town in the installation of a waterline from Lions Club Road to the new water tank; and

WHEREAS, the Town has agreed to provide certain considerations to the Whites in exchange for the water tank site and the forty (40) foot easement above described.

NOW, THEREFORE, for the considerations passing to each party, the Town and the Whites agree as follows:

1. The Whites agree to convey to the Town in fee simple a parcel of land containing .62 acre as shown on map by McKim & Creed Engineers, dated February 13, 2001. Book2001/Page 283

2. The Whites agree to convey to the Town a forty (40) foot wide easement to and from the above-referenced .62 acre and Lions Club Road, said easement as shown on map by McKim & Creed Engineers, dated February 13, 2001.

3. The Town agrees that the utility line to be placed in the forty (40) foot easement described above shall be within fifteen (15) feet of the western boundary of that easement, the remaining portion of the easement being used by the Town for purposes of ingress and egress to and from Lions Club Road and the water tank site.

4. The Town agrees to fence the water tank site after the tank is erected and to locate that fence within the property lines at a distance that will allow the Town to plant vegetation buffers between the fence and the property line should the remaining property of the Whites be developed.

5. The Town agrees that when the remaining property of the Whites is developed, the Town will plant vegetation buffers between the water tank fence and the property line on the water tank site. Such vegetation buffers will comply with Town specifications as of the date of this Agreement.

6. The Town agrees that all surveys required for this transaction and all deeds required to be prepared and recorded for this transaction will be done at the cost of the Town and that the Whites will bear no cost for the surveys or the deeds.

7. The Town agrees that the water tank to be constructed will be a new-style tank such as is now located in Wakefield near Zebulon, North Carolina.

8. The Town agrees that the front foot fees along Lions Club Road and across the front of the Whites' property as described above, the front foot fees along the forty (40) foot easement from Lions Club Road through the Whites' property to the water tank, and any front foot fees that would be due within the subdivision of the Whites' property that would otherwise be due and payable from the Whites will be considered as consideration for the transfer of the tank site and easement, and the Whites will not be obligated to pay any additional front foot fees for the waterline being installed, either along Lions Club Road or from Lions Club Road to the tank site along the forty (40) foot easement or within the subdivision of the Whites' property.

9. Both parties agree that the Whites have paid all applicable acreage fees on the above-described property prior to this Agreement.

10. Both parties agree that should the Whites' property be developed, the property owners will be obligated to pay only those additional fees or charges for water and sewer (including capacity fees) that are in existence at the time of this Agreement. The fees will be paid, however, at the rate being charged at the time of development.

11. The waterline along Lions Club Road will be placed on the South side of Lions Club Road. The Town therefore agrees to provide one (1) eight (8) inch service line and bore from the waterline on the South side of Lions Club Road to the Whites' property located on the North side of Lions Club Road at no cost to the Whites. Such tap and bore will be made at the location chosen by the Whites and at a time requested by the Whites.

12. Acreage fees having previously been paid by the Whites, the Town agrees that the Whites will not owe or be assessed any additional acreage fees for the five (5) parcels described above unless the property is developed so as to provide more than one hundred thirty-six (136) total units on all five (5) parcels described above.

13. In keeping with Town policy, the Town agrees that it will not provide water service to adjoining properties through direct access to the water tank. Tie-ins to water service for any other property will be to water service lines.

14. If the Whites develop their property in the future, the Town agrees to assist the Whites in the acquisition of any sewer access or easement needed by the Whites to the extent allowed by law. It is specifically understood that the assistance given by the Town in this regard will be without cost to the Town, and all costs of acquiring any necessary sewer access or easement will be borne by the Whites or their successor.

15. The Town and the Whites further agree that should the property described above be developed into a residential subdivision, the subdivision regulations for the Town of Wendell as they are currently constituted shall control the requirements of that development.

IN WITNESS WHEREOF, the undersigned have set their hands and seals to this Memorandum of Agreement the day and year first above written.

TOWN OF WENDELL

BY: Lucius S. Jones

LUCIUS S. JONES, *Mayor*

ATTEST:

_____
IRA C. FULLER, ***Town Clerk***

(TOWN SEAL)

_____(SEAL)
WALLACE PAUL WHITE

_____(SEAL)
REBECCA W. WHITE

_____(SEAL)
PHILLIP ALLEN WHITE

_____(SEAL)
JENNY M. WHITE

1793.05 07 5897-000
1793.05 17 0996-000
1793.05 17 7991-000
1793.05 07 8689-000
1793.09 17 7440-000

STATE OF NORTH CAROLINA
COUNTY OF WAKE

MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING is entered into this ____ day of _____, 2007, by and between the City of Raleigh, hereinafter referred to as the "City," and the Town of Wendell, hereinafter referred to as the "Town."

W I T N E S S E T H:

WHEREAS, the City and the Town entered into an agreement to merge the utility functions of both municipalities (Merger Agreement) on October 2, 2006.

WHEREAS, as part of that agreement, a portion of the Lake Glad Road Public Works Facility was transferred to the City.

WHEREAS, the transferred property included all land that contained the wastewater transportation, pumping and storage facilities, but excluded the administration building, the maintenance building and the equipment storage shed.

WHEREAS, the property retained by the Town will herein be referred to as the "Public Works Facility" and the property transferred to the City will herein be referred to as the "Wastewater Facilities".

WHEREAS, one consequence of this division of property was the need to provide separate electrical service and standby power to the property now owned by the City.

WHEREAS, the current electrical service and standby power system is located in the administration building on the Public Works Facility site.

WHEREAS, as part of negotiation during merger meetings, the Town agreed to fund the cost associated with providing new electrical service and standby power to the Wastewater Facilities.

WHEREAS, another issue concerning the respective properties involves an ongoing Wastewater Facilities improvement project. The Town retained the services of McKim & Creed Engineering, Ralph Hodge Construction and Dellinger, Inc. to make improvements to the pumping capacity and influent structures at the Lake Glad Road Public Works Facility as well as construct the Buffalo Creek interceptor and Poole Road Pump Station.

WHEREAS, the initial design at the Lake Glad Road Wastewater Facilities included a submersible pump design and discharge of the new 16-inch forcemain from the Poole Road Pump Station directly upstream of the bar screen and influent flow monitoring channel.

WHEREAS, the City asked for a design change in the pumps to allow for a wet well/dry well approach and agreed to fund the cost difference via a credit on the Merger Proforma associated with the merger.

WHEREAS, the City also expressed concerns with the influent design and asked for a design change that would allow the flow from the Poole Road Pump Station to utilize the upstream manhole (eliminating a complicated valve arrangement) and to investigate the apparent "bottle necking" resulting from a 6-inch and 16-inch forcemain, and a 16-inch gravity line all discharging into a 16-inch gravity line.

WHEREAS, after the effective merger date of October 2nd, City personnel expressed concerns about the short term (5-7 years) maintenance of the flow equalization basins and some of the associated electrical equipment. Specific concerns included the need to replace an electrical distribution panel (Panel 'DP'), the need to demolish the abandoned grit chamber and 16" aerial line, the need to clean and paint exposed metal on the equalization basins, and paint the blower building. The City asked McKim & Creed to investigate and advise. It has been agreed between the City and Town that any project resulting from this investigation would be administered and funded by the City.

WHEREAS, the Town prepared and executed Change Order #1 to address the change in pump station design requested by the City. Subsequent investigation of site conditions and a change in the Base Flood Regulations within the Town necessitated an additional change order to modify the elevation of the Lake Glad Road pump station electrical building, drywell and drywell entrance, and generator pad. The City also asked for flow pacing capability on the pump seal water. The Town prepared Change Order #2 to cover these changes.

WHEREAS, the Town continues to administer the construction contract associated with the Lake Glad Road improvements, the Buffalo Creek interceptor, and the Poole Road Pump Station and forcemain. Cost overruns associated with significant rock excavation and delays associated with the approved and proposed change orders have impacted the available cash flow associated with the projects.

WHEREAS, within the utility merger agreement, Exhibit A refers to Fixed Assets to be Transferred, Exhibit B refers to the list of Real Property, Easements and Encroachments Agreements, Exhibit C refers to Water and Sewer Utility Property and Fixed Assets to be Retained by Wendell, and Exhibit D refers to System Upgrades and Improvement Projects.

NOW THEREFORE in consideration of terms, representations and considerations stated herein, the City and Town do hereby agree as follows:

1. To help address the cash flow issues set forth above, the City will design and construct the electrical improvements associated with establishing a second electrical service at

the Lake Glad Road Wastewater Facilities. Costs associated with this work will be paid for by the City. The Town will continue to design and construct the current wastewater modifications. Cost associated with change orders requested by the City will be paid for by the Town.

2. The cost of establishing a new electrical service and standby power system (a Town of Wendell responsibility) will be reconciled with the costs associated with the change in pump design (a City of Raleigh responsibility) at the end of the project. The reconciliation may result in cash payment to the City, cash payment to the Town, a credit to the Town in the Merger Proforma or a debit from the Town in the Merger Proforma as the final costs dictate.

3. The Town recognizes shared costs associated with Change Order #2 and has proposed a cost-sharing formula based upon recommendations from the design engineer. That proposal was sent to the City Public Utilities Department for consideration, discussion and mutual agreement. The City Public Utilities Department has agreed to be responsible for $60,646 of the Change Order #2 cost which includes cost for the VFD changes for operation of the seal water system and cost to elevate the pump station structures.

4. The design engineer (McKim & Creed) will continue to investigate the apparent "bottle necking" at the influent and will make a report to the City and Town.

5. The City will undertake a project to address the maintenance concerns that have arisen with continued use of the flow equalization basins. Those individual components will be evaluated by McKim & Creed, PA and most likely included in informal bidding by the City Public Utilities Department.

6. The City will substitute the Hanor Lane Gravity Sewer Improvements Project, listed as WW05 in the Merger Agreement, for an additional sewer line in the Western Wendell Boulevard area, to be added to Merger Project WW03 (Western Wendell Boulevard Sewer Service). The additional sewer added to Merger Project WW03 includes the Wendell Boulevard Sewer Extension originally bid as part of the Buffalo Creek Interceptor, Pump Station, and Forcemain project. This work will be removed from that contact by the Town. The Town will proceed with the Hanor Lane project outside of the utility merger with the City of Raleigh.

7. The City agrees to provide to the Town an easement on the Wastewater Facilities property sufficient to encompass the existing underground storage tank that serves the generator for the Public Works facility. The City also agrees to provide to the Town an easement sufficient to allow the Town to perform maintenance on the administration building found on the Public Works Facility site. The Town will draft and provide for review the new deeds (with easements) for final approval by the City. The Town agrees to accept full legal responsibility for, including any required remediation, any groundwater contamination associated with the under ground storage tank located on the Wastewater Facilities site.

8. Because the flow equalization basins are required for the foreseeable future, the City agrees to modify merger project WW20 to upgrade the Jones Landing Pump Station rather than abandon the station. This cost will be borne by the City of Raleigh.

9. The Town and the City do contract and agree to amend the Merger Agreement Exhibits as follows:

a. Exhibit A – Fixed Assets to be Transferred: Reference to the "Public Works Building", "Public Works Equipment/Vehicle Shelter" and "Wastewater Control Building" shall be removed.

b. Exhibit B - List of Real Property, Easements and Encroachments Agreements: Exhibit references shall be revised to reflect current status of easements and real property ownership of utility sites.

c. Exhibit C – Water and Sewer Utility Property and Fixed Assets to be Retained by Wendell: "Public Works Building", "Public Works Equipment/Vehicle Shelter" and "Wastewater Control Building" shall be added to the list of fixed assets to be retained by Wendell.

d. Exhibit D – Summary of System Upgrade and Improvement Projects: Exhibit references shall be revised to reflect the agreements between the Town and the City.

The Merger Agreement Exhibits A, B, C and D, revised through this Memorandum of Understanding, are included as attachments to this memorandum.

10. Except as amended according to the terms hereof, the Merger Agreement shall remain in full force and effect.

IN WITNESS WHEREOF, the City has executed the foregoing with the signature(s) of its duly authorized officer(s), under seal, and the Town has executed with the signature of its Town Manager, attested by its Town Clerk, with the official seal affixed, the day and year first above written.

CITY OF RALEIGH	TOWN OF WENDELL
By: _____	By: _____
City Manager	Mayor
ATTEST:	ATTEST:
By: _____	By: _____
(Asst. Clerk-Treasurer)	Town Clerk
(Affix Seal)	(Affix Seal)
_____	_____
Approved as to form, City Attorney	Approved as to form, Town Attorney

EXHIBIT A

Fixed Assets to be Transferred

Property	Address
Wastewater Pre-Treatment Plant	450 Lake Glad Road
Grit/Bar Screen System	
Clarifiers (4)	
Blower Building	
Influent Pump House (Jones Landing)	
Effluent Pump Vault	
Water Tanks/Reservoirs	
Poplar Street Tank - 500,000 Gallon Elevated	301 Poplar Street
Old Zebulon Road Water Reservoir	418 Old Zebulon Road
Lions Club Road Tank	801 Chevrolet Way
Sewer Lift Stations	
Vishay/Measurement Group Lift Station	1001 Wendell Blvd.
West Town Lift Station	99 Church Street (at end of Church St. in corner)
Greenwillow Circle Lift Station	515 Greenwillow Circle
Whitley Way Lift Station	4790 Wendell Boulevard
Carver School Lift Station	944 Morphous Bridge Road (across on dirt road behind Old Carver School)
Selma Road Lift Station	390 South Selma Road
Deerfield Lift Station	103 Jones Market Square
Wellington Lift Station	112-A Grange Drive (behind house)
Northwinds I Lift Station	733 Old Zebulon Road
Northwinds II Lift Station	209-A Northwinds North Drive (in cul-de-sac)
Piedmont Lift Station	430 Industrial Drive (behind building)
Poole Road Lift Station	320 Poole Road
Water Meter Stations	
Knightdale Water Meter Pit	9200 US64 East (Lahoya Farms area)
Wendell Chemical Booster Station	1501 South Hollybrook Road
Zebulon Water Meter Pit	2226 Highway 97 (before 2216 Highway 97)
Little River Water Pump Stations	5171 Wendell Blvd.

(AMENDMENT NO. 1)

Sewer Meter Station	
Raleigh Sewer Meter Station	6225 Grasshopper Road
Water Valve Vault	
Wendell Underground Water Valve Vault	2904 Wendell Blvd. (across from CITGO station)
Water Booster Station	
Booster Station	2350 Wendell Blvd.

Rolling Stock and Equipment to be Transferred

Asset ID	Asset Description	Serial Number
205	2006 Ford F-350 1 ton 4x4 Utility Truck	
203	1998 Chevrolet 3/4 ton Truck	
204	1997 Chevrolet 3/4 ton Utility Truck	
502	1995 Chevrolet ¾ ton Truck	
212	Kohler Portable Generator - 100 kW with light	
	Cargo Mate Trailer - 8.5'x16', enclosed with generator	
	Ramax Packer-24" width	
	Concrete Saw	
	Rigid Model K500 Drain Cleaner Roding Machine	
	Mytanna Model M98 Sewer Drain Cleaner Roding Machine	
	2.5" Boring Missile	
	Blower-Smoke Machine	

Exhibit B List of Real Property, Easements and Encroachments Agreements

Real Property	Address
Wastewater Pre-Treatment Plant	450 Lake Glad Road
Water Tanks/Reservoirs	
Old Zebulon Road Water Reservoir	418 Old Zebulon Road
Lions Club Road Tank	801 Chevrolet Way
Sewer Lift Stations	
Vishay/Measurement Group Lift Station	1001 Wendell Blvd.
West Town Lift Station	99 Church Street (at end of Church St. in corner)
Greenwillow Circle Lift Station	515 Greenwillow Circle
Whitley Way Lift Station	4790 Wendell Boulevard
Selma Road Lift Station	390 South Selma Road
Northwinds I Lift Station	733 Old Zebulon Road
Poole Road Lift Station	320 Poole Road
Water Meter Stations	
Wendell Chemical Booster Station	1501 South Hollybrook Road
Little River Water Pump Stations	5171 Wendell Blvd.
Sewer Meter Station	
Raleigh Sewer Meter Station	6225 Grasshopper Road
Water Booster Station	
Booster Station	2350 Wendell Blvd.

Exhibit B List Easements and Encroachments Agreements

Last Name	Location	Type	Book	Page	Date
Poplar Street Tank	301 Poplar Street	utility	3482	603	
Carver School Lift Station	944 Morphous Bridge Road (on dirt road behind Old Carver School)				pending
Wellington Lift Station	112-A Grange Drive (behind house)	sewer	1988	1766	
Northwinds II Lift Station	209-A Northwinds North Drive (in cul-de-sac)	sewer	1995	796	
Piedmont Lift Station	430 Industrial Drive	sewer			pending
Knightdale Water Meter Pit	9200 US64 East (Lahoya Farms area)	utility	2696	383	
Zebulon Water Meter Pit	2226 Highway 97 (before 2216 Highway 97)	utility	2091 2300	489 219	
Wendell Underground Water Valve Vault	2904 Wendell Blvd. (across from CITGO station)	utility	1984	104	
Pearce	Pine and Haywood	sewer	6730	95	10/31/1995
Norfolk Southern	Railway at milepost 213	water			
Brantley	Third Street	sewer	8604	01706-01708	6/7/2000
Brantley	Wake County Schools	utility	8679	671-674	9/7/2000
Herthum	Nowell and Green Willow Circle	utility	8378	2620-2622	8/2/1999
Crews	Hall Street	sewer	8233	1894	1/22/1999
Elliott and Phillips	Meadowbrook subdivision	utility	8189	116	11/17/1998
United Realty		sewer	7886	891	2/6/1998
Dean		sewer	7886	884	2/6/1998
Little River Corp		sewer	7886	887	2/6/1998
Lee	lot 37 Knott Heights	sewer	8142	1651	9/9/1998
Ayscue		sewer	7799	154	12/12/1997
Phillips	near Haywood Street	sewer	7408	264	4/8/1997
Henderson	Haywood Street	sewer	7385	213	3/25/1997
Helping Hand		sewer	7046	62	6/27/1996

Last Name	Location	Type	Book	Page	Date
Freeman	Lot 33 Knott Heights	water and sewer	4560	745	9/6/1989
Kelly	East of Hwy 64 Business	utility			
Peeler	West of Marshburn Avenue	utility			
Johnson	West of Marshburn Avenue	utility			
Gossman	East of Hwy 64 Business	utility			
Johnson	North of SR 2511	utility	5477	496	1/21/1993
Willis	North of SR 2511	utility	5477	500	1/21/1993
Lavine	Western ROW of State Road 2358	utility	5477	494	1/21/1993
CP&L	Phipps property	sewer	5476	23	1/20/1992
Earp	Northeast side of hwy 64	sewer	5011	270	10/15/1991
Parrish		water	3680	3	3/19/1986
Ide	Meadowbrook subdivision	sewer	2894	563	1/14/1981
Hartman	Meadowbrook subdivision	sewer	2893	697	1/9/1981
Vishay	North side of Hwy 64	sewer	2696	383	1/2/1979
Medlin	South of 64 north of SR 2365	sewer	4097	876	8/31/1987
Anderson	both sides of Hwy 64	sewer	2804	298	1/25/1980
Anderson	Siemens plant	sewer			1/16/1980
Tongue and Strain	North of 64 and west of SR 2300	sewer	2804	301	1/25/1980
Regency Associates	lot 2 Meadowbrook	sewer	2903	690	2/23/1981
Regency Associates	lots 27,37,38,39 Meadowbrook	sewer	2894	916	1/15/1981
Stevens	lot 4 Meadowbrook	sewer	2894	919	1/15/1981
Guy	lot 3 Meadowbrook	sewer	2894	560	1/14/1981
Ide	lot 3 block b Meadowbrook	sewer	2894	563	1/14/1981
Sasser	lot 2 Meadowbrook	sewer	2893	700	1/9/1981
Hartman	lot 1 Meadowbrook	sewer	2893	697	1/9/1981
Yates	lot 49 Meadowbrook	sewer	2893	703	1/9/1981

Last Name	Location	Type	Book	Page	Date
Permenter	lot 6 Meadowbrook	sewer	2893	706	1/9/1981
Lawrence	lot 28 Meadowbrook	sewer	2916	610	4/13/1981
Beasley	lot 1 block G Meadowbrook	sewer	2893	709	1/9/1981
Parker	lot 5 Meadowbrook	sewer	2897	945	1/28/1981
Ayscue	West Street	sewer	2728	555	4/9/1979
Todd	Church St	sewer	2719	790	4/6/1979
Carolina and Northwestern Railway	Buffalo Street	water			11/12/1985
Carolina and Northwestern Railway	Selma Road	water			11/12/1985
Norfolk Southern		water			10/14/1985
Mazzeo	East of Hwy 64 Business	utility	3517	480	7/17/1985
Marshburn	East of Hwy 64 Business	utility	3517	478	7/17/1985
Mazzeo	East of Hwy 64 Business	utility	3517	476	7/17/1985
Rhodes	Pine Street	sewer			7/31/1985
Ellis, Andrews, Whitley	Lakewood subdivision	sewer			2/25/1976
Piedmont Assembly	ROW line of Cemetery Road	sewer	3056	748	10/22/1982
DMD Enterprises	Maple Court Apts	utility	3199	356	11/17/1983
Whitley	First Street and Oakwood Ave	utility	2711	767	3/12/1979
Todd	Marshburn to Green Willow to Poplar	sewer	2699	664	1/18/1979
Brantley	east of Hwy 64 Business	sewer	2673	622	10/16/1978
Robertson	east of Hwy 64 Business	sewer	2673	619	10/14/1978
Atkinson		sewer			1/27/1978
Whitley	south of 64 Business	sewer			1/26/1978
S&E Fashions	south of 64 Business	sewer			1/26/1978
Kirk	railroad track	water			12/31/1969
White	Selma Road	sewer	2380	573	2/9/1976
Pearce	northwest ROW Hwy 64	water	2144	441	3/17/1973
Tarpley	Wendell Zebulon water booster	water	2144	439	3/16/1973

Last Name	Location	Type	Book	Page	Date
White	Selma Road	sewer			2/25/1976
United Realty	lots 6,7,8 of BW Todd Heirs subdivision	sewer	2940	834	7/7/1981
Jones	west of SR 231	sewer	2936	945	6/24/1981
United Realty	lots 13,14,15 of BW Todd Heirs subdivision	sewer	2875	609	11/3/1980
Rinaldi	Second Street	sewer			7/8/1970
Wake Industrial Facilities	north of 64 Business	sewer	2696	383	12/5/1978
Norfolk Southern	along railroad tracks	sewer			
Bateman	1774.04-55-1916	sewer			
Anderson	1774.02-65-0534	sewer			
Anderson	1774.04-73-1848	sewer			
Anderson heirs	1774.04-73-3510	sewer			
Bateman	1774.04-72-4863	sewer			
Dean	1774.04-92-6463	sewer			
Debnam	1784.17-10-2906	sewer			
Town of Wendell	1784.18-30-5523	sewer			
Town of Wendell	1783.06-39-7602	sewer			
NC Baptist Foundation	1783.06-38-6754	sewer			
Ayscue	1784.17-22-1112	sewer			
Dean and others	1784.14-43-1566	sewer			
Big B Enterprises	1784.14-32-2442	sewer			
Wendell/Larue	1784. -32-8832	sewer			
Dixon	1784.14-33-8406	sewer			
Moss	1783.10-36-7812	sewer			
Peggy Moss	1783.06-37-3699	sewer			
Nowell and others	1783.10-46-6987	sewer			
Kallas Properties LLC	1784.18-42-5308	sewer			
Town of Wendell	1774.04-82-5186	sewer			

Exhibit C Water and Sewer Utility Property and Fixed Assets to be Retained by Wendell

Property/Asset	Address
Backhoe	Public Works facility
Compressor	Public Works facility
Jet Machine	Public Works facility
John Deere Tractor	Public Works facility
1 Concrete Saw	Public Works facility
2001 Chevrolet 4x4 truck (504)	Parks and Recreation Department
1996 Ford Truck (202)	Parks and Recreation Department
2000 Chevrolet 4x4 Truck (102)	Parks and Recreation Department
Public Works Building	450 Lake Glad Road
Public Works Equipment/Vehicle Shelter	450 Lake Glad Road
Wastewater Control Building	450 Lake Glad Road

Exhibit D Summary of System Upgrade and Improvement Projects

Project Identifier	Project Title		Estimated Fiscal Year	Total Project Cost	Project Description
	Water Distribution System				
WD01	AMR and Backflow Retrofit Program	Merger	2007	$900,000	Project includes backflow retrofit program. $425 for AMR and backflow; $250 backflow only. 2800 accounts; 1200 without backflow (or non-double check valve).
WD02	Replace Hydrants	Merger	2007	$60,000	Replacement of defective hydrants. 23 hydrant. Assume 13 @ $3000 and 10 @ $2000.
WD03	Replace 2" Galvanized with 4" PVC/Ductile Iron Pipe	Merger	2007	$325,000	Replace 6500 ft of galvanized pipe with 4" PVC or ductile iron. Addresses/ locations of galvanized pipe held by Wendell.
WD04	Water Distribution System Study	Merger	2007	$50,000	Modeling study, including investigation of Chlorine residuals issues.
WD05	Rehabilitation of Old Zebulon Road Ground Storage Tank Pumps	Merger	2008	$100,000	Rehabilitation of pumps to bring storage tank back into service.
WD06	Poole Road Water Line Extension	Expansion	2010	$2,740,000	Cost share in Raleigh Project from Bethlehem to Martin Pond Rd. Cost based on East Wake Water Study report by Hazen and Sawyer.
WD07	West 64 Bypass Water Supply	Wendell CIP	2007	$81,000	Construct 1,700 LF of 6" water line bored under Rolesville Rd. and extended north along US Hwy 64 bypass, or bore under Knightdale Blvd. Cost from McKim & Creed.
WD08	Water Booster Station Upgrade (Liles Dean Road)	Wendell CIP	2008	$150,000	Upsize the existing water booster station pump impellers. Cost from McKim & Creed.
WD09	Lake Glad Road Water Line Extension	Wendell CIP	2010	$205,000	Construct 4,300 LF of 6" and 8" water line along Lake Glad Road. Cost from McKim & Creed.
WD10	Water Distribution System Rolling Stock/Equipment Needs	Merger	2007	$100,000	Details of equipment needs still being finalized. Allowance based on costs from Knightdale merger.

Exhibit D Summary of System Upgrade and Improvement Projects

Project Identifier	Project Title		Estimated Fiscal Year	Total Project Cost	Project Description
WD11	East Wake Water Transmission Improvements (Martin Pond Rd and Wendell Blvd Segments)	Expansion	2010	$1,162,000	Cost share for segment from Poole Road to Martin Pond Road only. Cost based on East Wake Water Study report by Hazen and Sawyer.
WD12	Fencing and Alarms to facilities (2 meter stations and GST)	Raleigh Recommended	2008	$80,000	$20k for 3 alarm systems; $5k BPS fence; $10k GST fence
WD13	Forrestville Road Pump Station oversizing payment		2008	$300,000	Share in City of Raleigh Forrestville Road pump station expansion. Estimated by Withers & Ravenel.
WD14	Little River Pump Station Rehab	Raleigh Recommended	2008	$200,000	PS has no SCADA. Not known whether pumps still work.$30k SCADA; $120k pumps; $50k elec/inst
WD15	Disribution System Rehab Projects	Merger	2008	$0	Allowance for projects arising from studies (looping/upsizing)
	Wastewater Collection System				
WW01	Collection System Study	Merger	2007	$200,000	Targeted sewer system study to identify areas where projects could reduce infiltration and inflow in the Wendell system
WW02	Collection System Rehab projects	Merger	2008	$800,000	Allowance for manhole repairs and replacements throughout Wendell to address deficiencies identified through inventory, field inspections and analysis conducted under project WW01.
WW03	West Wendell Boulevard Sewer Service	Wendell CIP	2007	$774,000	Extend 4,000 LF of 8" gravity sewer along Wendell Boulevard eastward from the intersection of NC 97 with Wendell Boulevard (US Business 64). Construct 1,700 LF of 3" low pressure sewer main from end of new gravity sewer east to Ledford Rd. Installation of approximately 1,600 LF of 8” gravity sewer from Village of Wendell to Ledford Lane. Cost from McKim & Creed.

Exhibit D Summary of System Upgrade and Improvement Projects

Project Identifier	Project Title		Estimated Fiscal Year	Total Project Cost	Project Description
WW04	Poole Road Gravity Sewer Extension Across Buffalo Creek	Wendell CIP	2007	$120,000	Extend 800 LF of 12" gravity sewer westward along the south side of Poole Road under Buffalo Creek. Cost from McKim & Creed.
WW06	West 64 Bypass Wastewater Service (Gravity Sewer, Pump Station and Force Main)	Wendell CIP	2007	$775,000	Construct 4,000 LF of 8" gravity sewer along north side of US Hwy 64 from Rolesville Road to a new pump station constructed near the intersection of Keiths Road and US Hwy 64. Pump Station will be a duplex vacuum prime station sized to deliver 320 gpm. 8,500 LF of 8" force main will be constructed along US 64 eastward to the Buffalo Creek Interceptor. Construction pending notification to proceed from Town based on need. Cost from McKim & Creed.
WW07	Lake Glad Road Sewer Main Replacement/Sliplining (Rehab project)	Wendell CIP	2007	$338,000	Rehab or replace 2,500 LF of 16" gravity along Lake Glad Road that serves as the final section of the Town's gravity sewer system discharging to the Lake Glad Road Pretreatment Facility. Cost from McKim & Creed.
WW08	Buffalo Creek Basin Sewer Basin Improvements (Pump Station and Force Main)	Wendell CIP	2009	$690,000	Construct new vacuum primed pump station along Buffalo Creek near the County line. The pump station will be sized to deliver 1220 gpm through 6,200 LF of new 12" force main, discharging to the Lake Glad Road Pretreatment Facility. Cost from McKim & Creed.
WW09	Wendell Park Gravity Sewer to the Buffalo Creek Interceptor	Wendell CIP	2009	$99,000	Extend 1,000 LF of 8" gravity sewer from the Wendell Park to the Buffalo Creek Interceptor. Abandon the park pump station. Sewer easements may be required. Cost from McKim & Creed.
WW10	Lake Glad Road Gravity Sewer	Wendell CIP	2010	$197,000	Extend 2,000 LF of 8" gravity sewer from the Wellington Pump Station to Lake Glad Road. Sewer easements will be required. Cost from McKim & Creed.
WW11	Marshburn Road Sewer	Wendell CIP	*2008*	$1,780,000	Construct new vacuum primed pump station along

Exhibit D Summary of System Upgrade and Improvement Projects

Project Identifier	Project Title		Estimated Fiscal Year	Total Project Cost	Project Description
	Improvements (Gravity Sewer, Pump Station and Force Main)				Marshburn Road near Little River. The pump station will be sized to deliver 700 gpm through 5,000 LF of new 10" force main, discharging to the gravity sewer at Hanor Lane. Cost from McKim & Creed.
WW12	Old Wilson Road Sewer Extension	Wendell CIP	2012	$350,000	Construct 3,035 LF of 8" gravity sewer along Old Wilson Road. Cost from McKim & Creed.
WW13	Lizard Lick Interchange Sewer Service	Wendell CIP	2013	$188,000	Construct 1,700 LF of 8" gravity sewer along Old Marshburn Road, north of the intersection at NC Highway 97. Cost from McKim & Creed.
WW14	Old Zebulon Road Sewer Service	Wendell CIP	2014	$277,000	Construct 3,000 LF of 8" gravity sewer along Old Zebulon Road to service the area south of the Northwinds I Pump Station. Cost from McKim & Creed.
WW15	Highway NC 97 Gravity Sewer Extension from Wendell Modular School to Lizard Lick Area	Wendell CIP	2016	$698,000	Extend 6,300 LF of 8" gravity sewer along NC Highway 97 from the Wendell Modular School to the Lizard Lick Area. Cost from McKim & Creed.
WW16	Green Willow Pump Station Upgrade (Increase to 285 gpm and wet well rehab)	Wendell CIP/Raleigh Recommended	2016	$200,000	$105k pumps; $95k wet well rehab. Project to increase to 285gpm was part of Wendell CIP. Rehabilitation of wet well is a Raleigh recommended addition to project.
WW17	Whitley Way Pump Station and Force Main Improvements	Wendell CIP	2016	$722,000	Upgrade the existing Whitley Way Pump Station to deliver 430 gpm through 10,200 LF of new 8" force main, discharging to gravity sewer at the Selma Pump Station. Cost from McKim & Creed.
WW18	Wellington Sewer Basin Improvements (Abandonment of Deerfield and Selma Pump Stations, Gravity Sewer and Force Main)	Wendell CIP	2016	$1,357,000	Construct 5,100 LF of 12" gravity sewer from the Selma Pump Station to the Wellington Pump Station. Abandon the Selma and Deerfield Pump Stations, diverting flow into the new 12" gravity sewer to Wellington. Upgrade the Wellington Pump Station to deliver approximately 1000 gpm through 2,270 LF of new 10" force main, discharging to the Lake Glad Road Pretreatment Facility. Cost from McKim & Creed.
WW19	Lake Glad Road Aeration basin	Raleigh	2007	$150,000	Demolition of two basins, plus 300ft of 24" aerial line

Exhibit D Summary of System Upgrade and Improvement Projects

Project Identifier	Project Title		Estimated Fiscal Year	Total Project Cost	Project Description
	demolition	Recommended			extension, and splitter box.
WW20	Jones Landing PS abandonment or upgrade	Raleigh Recommended	2007	$100,000	Project to abandon or upgrade Jones Landing PS
WW21	Northwinds I PS structural problems	Raleigh Recommended	2007	$35,000	Based on price of a replacement building
WW22	Abandonment of Vishay Pump Station, including gravity sewer to Buffalo Creek interceptor	Raleigh Recommended	2007	$300,000	Diversion of flows from Vishay force main into gravity main discharging into Buffalo Creek Interceptor
WW23	Wastewater collection System Rolling Stock/Equipment Needs	Merger	2007	$150,000	Details of equipment needs still being finalized. Allowance based on Knightdale.
WW24	East Wake Sewer Study Projects	Expansion	*2010*	$3,000,000	Cost share for Wendell Falls pump station and 13,200ft of 16-inch force main segment from Lake Myra to Poplar Creek along Poole Road. Cost for 5,760 ft of 12-in sewer interceptor to serve segment of Wendell service area in Marks Creek upstream of Wendell Falls, and upsizing (size to be determined) of 16,400 ft of sewer interceptor through Wendell Falls. Cost based on April 2006 report by Withers and Ravenel.
WW25	WWTP and Pump Station SCADA & Telemetry Upgrade. Includes radio survey	Merger	2007	$300,000	Includes SCADA and generator provision/replacement. 2 generators needed for PSs, plus small generators for SCADA. $225k + 2x$30k = $285k
	General Utility Projects				
GEN01	Billing Data Conversion	Merger	2007	$85,000	Conversion of Wendell Utility customer account information and billing data by Contractor
GEN02	Consultant Services	Merger	2007	$115,000	Merger Implementation Assistance and Shares in East Wake Water/Sewer Plans
GEN03	IWOS Devices	Merger	2007	$20,000	Estimated 4 laptop computers to be mounted in service vehicles, with maintenance management software.
GEN04	Customer Service Center Set-Up	Merger	2007	$10,000	Allowance for computer, software, T1 link and telephone for customer service station at Wendell.

Exhibit D Summary of System Upgrade and Improvement Projects

Project Identifier	Project Title		Estimated Fiscal Year	Total Project Cost	Project Description
GEN05	Public Utilities Facility	Merger	2007	$250,000	Allowance for Wendell's purchase of buildings at Lake Glad Road facility for use by Wendell Public Works
	Total Merger Project Cost			***$20,533,000***	
WT01	Additional water treatment capacity from Raleigh	Expansion	2007	$5,106,000	Purchase of 1.15 MGD capacity at $4.44 per gallon
WT02	Additional water treatment capacity from Raleigh	Expansion	2007	$9,000,000	Purchase of 2.5 MGD capacity at $3.60 per gallon
WWT01	Additional wastewater treatment capacity from Raleigh	Expansion	2007	$2,850,000	Purchase of 0.75 MGD capacity at $3.80 per gallon
WWT02	Additional wastewater treatment capacity from Raleigh	Expansion	2007	$3,550,000	Purchase of 1.0 MGD capacity at $3.55 per gallon
	Total Capacity Purchase Costs			**$20,506,000**	

Merger Agreement

Merging
The Water and Sewer Utility Systems
of
Zebulon, North Carolina
And
Raleigh, North Carolina

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STATE OF NORTH CAROLINA

COUNTY OF WAKE

AGREEMENT

This Agreement is made and entered into by and between the Town of Zebulon, a North Carolina municipal corporation, duly organized and existing under the laws of the State of North Carolina, hereinafter referred to as “Zebulon”, and the City of Raleigh, a North Carolina municipal corporation, duly organized and existing under the laws of the State of North Carolina, hereinafter referred to as “Raleigh”.

The purposes of this Agreement are to:

- Assure the continued provision of high quality, reliable, economical, safe and sanitary water, sewer, and reclaimed water service within the present and future corporate limits and Urban Service Area limits of Zebulon;
- Provide for the orderly and permanent transfer of responsibility for the ownership, construction, operation, maintenance, management, and financing of Zebulon’s water, sewer, and reclaimed water utility system from Zebulon to Raleigh, and;
- Transfer the managerial, operational, and financial responsibility of operating, maintaining, and expanding the water, sewer, and reclaimed water utility systems serving the present and future corporate limits and Urban Service Area limits of Zebulon from Zebulon to Raleigh.

WHEREAS, Article 20, Interlocal Cooperation of North Carolina General Statutes 160A authorizes and empowers any units of local government to enter into interlocal agreements for the ownership, construction, operation, maintenance, management, and financing of all or portions of water, sewer, and reclaimed water utility systems within or outside the corporate limits of those units of local government;

WHEREAS, Zebulon owns, operates, and maintains water, sewer, and reclaimed water utility systems within and outside its corporate limits;

WHEREAS, Zebulon desires to transfer its water, sewer, and reclaimed water utility systems to Raleigh in accordance with the terms and conditions hereinafter stated;

WHEREAS, Raleigh agrees to assume full responsibility for the provision of water and sewer services in Zebulon, including responsibility for Zebulon’s water, sewer, and reclaimed water utility systems and related equipment and property rights;

WHEREAS, Raleigh further agrees to operate, maintain and expand said water, sewer, and reclaimed water utility systems to accommodate planned growth and development within Zebulon’s planning and zoning jurisdiction in accordance with the terms and conditions hereinafter stated;

NOW, THEREFORE, for the considerations hereinafter stated, the parties do agree as follows:

a) This agreement shall have a term of 99 years. The expiration of the term shall only affect the agreements hereunder with respect to events and performances that occur after the expiration date of such term, and shall not affect the existence of validity of any transfer,

conveyance, undertaking, liability, or other action or right that occurred or arose prior to the end of the term of this Agreement. Notwithstanding the expiration of the term of this Agreement, Raleigh hereby acknowledges that Zebulon is entering into this Agreement in reliance upon the agreement set forth in the final paragraph of Section 3.7 to the effect that once all merger costs have been recovered, Raleigh shall apply rates and non-consumption fees and charges to customers located in Zebulon that are equivalent to those that are being charged to customers in Raleigh and represents that it shall continue such practice after the expiration of the term hereof.

b) No joint agency is established by this Agreement.

c) Raleigh shall have the sole responsibility and authority to appoint or otherwise employ the personnel necessary for the implementation of this Agreement.

d) The responsibility for financing the construction, operation and maintenance of the merged water, sewer, and reclaimed water utility system and any extensions thereof shall be in accordance with the terms of this Agreement. Raleigh shall be entitled to the receipt of all revenues from the merged water and sewer system and any extensions thereof.

e) Zebulon agrees and grants the authority for appropriate employees of Raleigh to work and act in Zebulon as necessary to carry out the purposes of this agreement as appropriate under the ordinances and regulations of both Raleigh and Zebulon.

f) Zebulon shall transfer to Raleigh and its assignees or successors, and Raleigh and its assignees and successors shall receive from Zebulon, in accordance with the terms and conditions set forth in this Agreement:

   i) All pipes, water lines, hydrants, sewer lines, pump stations, force mains, mains, meters, meter boxes, and service laterals, elevated water tanks, maintenance facilities, and all other appurtenances normally associated with, and owned by Zebulon, and presently in use within Zebulon's water, sewer and reclaimed water utility system (See Exhibit A);

   ii) All of Zebulon's rights, titles and interests in land, easements, and encroachment agreements necessary to own and operate Zebulon's water, sewer and reclaimed water utility systems. All of the property and rights described above shall be hereafter referred to as "the Property" (See Exhibit B);

   iii) All property currently used in the operation of the water, sewer and reclaimed water utility system, but that is to be retained by Zebulon, will be identified prior to the Transfer Date as defined in this Agreement (See Exhibit C);

g) Raleigh shall have the right to exercise its power of eminent domain within the current and future municipal and planning limits of Zebulon for activities necessary to fulfill Raleigh's water, sewer and reclaimed water service obligations defined in this Agreement; and

h) Cost of the transfer of ownership of the systems from Zebulon to Raleigh will be borne by Raleigh, and will be recovered through the water, sewer and reclaimed water rates, fees, and charges that will be charged to Zebulon customers as set forth in this Agreement.

1.0 Definitions

The following words and phrases are defined as set forth below when used in this Agreement, unless a contrary meaning is clearly required by the context in which the word or phrase is used:

1.1 **Effective Date:** The date on which all of this Agreement is approved and signed by all parties.

1.2 **Transfer Date or Closing Date:** The date on which title or leasehold to the subject water, sewer and reclaimed water system passes from Zebulon to Raleigh, which shall be a reasonable time after the Effective Date of this Agreement.

1.3 **Systems:** The real and personal property comprising Zebulon's water, sewer and reclaimed water system which is to be transferred to Raleigh.

1.4 **Inside City Rate(s):** The rate(s) charged by Raleigh to the water, sewer and reclaimed water customers inside the corporate limits of Raleigh.

1.5 **Outside City Rate(s):** The rate(s) charged by Raleigh to the water, sewer and reclaimed water customers outside the corporate limits of Raleigh.

2.0 Transfer Date

The City Manager of Raleigh and the Town Manager of Zebulon, or their designees, shall be responsible for determining all implementation details related to this Agreement not specifically addressed in this Agreement. The Transfer Date for this Agreement is October 2, 2006. The Transfer Date shall not be delayed unreasonably by either party.

2.1 Due Diligence Assessment

Upon execution of the Agreement, Raleigh and Zebulon will conduct a final due diligence assessment for the merger. The activities of the due diligence assessment will be completed by September 1, 2006.

The purpose of the due diligence assessment will be to verify that the merger can be accomplished in accordance with the assumptions used to develop the terms and conditions of the Agreement, including the revenue and expense projections used to develop the business/financial plan for the merger.

The due diligence assessment will include, but is not limited to, a review of the capital improvements plan, operations plan, employee transfer plan and customer information/billing migration plan required to implement the merger. The findings of the due diligence assessment will be submitted to the City Manager of Raleigh and the Town Manager of Zebulon in the form of a summary report.

2.2 Due Diligence Disposition

If the City Manager of Raleigh and the Town Manager of Zebulon determine that the merger can proceed in accordance with the terms and conditions of the Agreement, then the City Manager of Raleigh and the Town Manager of Zebulon will submit a letter to their respective governing boards documenting the completion of the due diligence assessment, and confirming that the Transfer Date for the merger will be October 2, 2006.

If the City Manager of Raleigh and the Town Manager of Zebulon determine that the merger can not proceed in accordance with the terms and conditions of the Agreement, then the City

Manager of Raleigh and the Town Manager of Zebulon will notify their respective governing boards and conduct additional studies and analyses as required to address specific issues of concern. The Transfer Date will be deferred until the additional studies and analyses have been completed and the issues of concern have been addressed to the mutual satisfaction of the City Manager of Raleigh and the Town Manager of Zebulon.

If upon completion of the additional studies and analyses, the issues of concern can not be resolved to the mutual satisfaction of the City Manager of Raleigh and the Town Manager of Zebulon, then either party can terminate this Agreement by providing written notice to the other party.

3.0 Responsibility for Merged System

Upon the Transfer Date, Raleigh shall assume immediate and sole duty and responsibility for financing; operating; maintaining; improving; and expanding the water, sewer and reclaimed water systems serving Zebulon's existing and future corporate limits and Urban Services Area. Zebulon water, sewer and reclaimed water system planning activities will be performed in accordance with the terms of Section 3.1 of this Agreement. Prior to the Transfer Date, Zebulon will be responsible for the operation and maintenance of Zebulon's water, sewer and reclaimed water system. During the period after the Effective Date, but prior to the Transfer Date, Zebulon will be responsible for the expansions to the Zebulon water, sewer and reclaimed water system, but will solicit participation from Raleigh staff regarding design standards and utility operations planning, to ensure that future expansions are in accordance with Raleigh policies, standards, and procedures. After the Transfer Date, Zebulon's water, sewer and reclaimed water system shall be fully incorporated into the water, sewer and reclaimed water system operated and maintained by Raleigh. Said duty and responsibility shall be in accordance with current and future policies, standards, and procedures of Raleigh, and shall be applied in the same extent and in the same manner as applied to other inside city customers of Raleigh. Said duty shall involve the input and recommendations from the Water and Sewer Utility Advisory Committee addressed in Section 3.1 below.

3.1 Water and Sewer Utility Advisory Committee

Prior to the Transfer Date, a permanent Water and Sewer Utility Advisory Committee (UAC) will be established and shall meet periodically at a frequency to be determined by the City Manager of Raleigh, the Town Manager of Garner, the Town Manager of Rolesville, the Town Manager of Wake Forest, the Town Manager of Knightdale, the Town Manager of Wendell, and the Town Manager of Zebulon to review and develop planning recommendations for the upgrade, expansion, and extension of water, sewer and reclaimed water utility services in Zebulon service areas. The Utility Advisory Committee will periodically report its findings and recommendations to the City/ Town Managers of all parties to the UAC. The ultimate responsibility for the operation of the merged water, sewer and reclaimed water system shall be Raleigh. The role of the UAC will be limited to an advisory role. The composition of the UAC will be as follows:

- Two staff members appointed by the Raleigh City Manager
- Two staff members appointed by the Garner Town Manager
- Two staff members appointed by the Rolesville Town Manager
- Two staff members appointed by the Wake Forest Town Manager
- Two staff members appointed by the Knightdale Town Manager

- Two staff members appointed by the Wendell Town Manager
- Two staff members appointed by the Zebulon Town Manager
- Planning Director, Wake County

As other utilities join the merged water, sewer and reclaimed water utility, additional members may be added to the UAC.

3.2 Name of Merged Water and Sewer Utility

The name of the merged water, sewer and reclaimed water utility will be the City of Raleigh Public Utilities Department. Raleigh may, at its discretion, change the name of the utility to correspond to Raleigh's broader regional role as future growth or mergers with other water, sewer and reclaimed water service providers occur.

3.3 Right to Operate

Zebulon hereby irrevocably grants Raleigh the right to design, construct, operate, maintain and perform all related activities required to operate, maintain, expand, upgrade and improve Zebulon's existing water, sewer and reclaimed water utility system in accordance with Raleigh's water, sewer and reclaimed water utility system standards and policies for operation and performance, level of service, reliability, and redundancy. Said Right to Operate includes the encroachment authority for Raleigh to operate in all public rights-of-way over which Zebulon has the sole authority or joint authority with the North Carolina Department of Transportation. Said water, sewer and reclaimed water utility system standards and policies shall be applied in Zebulon to the same extent and in the same manner as applied to other customers of Raleigh's water, sewer and reclaimed water utility system.

In all instances, Raleigh or its authorized contractor shall be required to restore and repair any street or other property of Zebulon upon the completion of any construction, operation, maintenance, replacement, improvement or related activity causing damage thereto. Said restoration or repair shall be to the standards acceptable to Zebulon and shall be subject to inspection by Zebulon. As an alternative, Zebulon will provide street patching at Zebulon standards and charge Raleigh on a quarterly basis for such service.

3.4 System Upgrades and Improvements

Raleigh shall undertake and complete all activities relating to the design; construction; startup; and operation of the system upgrade and improvement projects agreed upon as a part of this Agreement and listed in Exhibit D, including the purchases of an additional 1.5 million gallons per day of water capacity (based on the maximum day usage) to be included in Exhibit D at $4.44 per gallon, for a total water capacity cost of $6,660,000.

If the Little Creek Waste Water Treatment Plant expansion does not provide Zebulon with sufficient wastewater capacity within the merger cost recovery period then Zebulon will purchase 1.0 million gallons per day of wastewater capacity to be included in Exhibit D at $3.80 per gallon, for a total wastewater capacity cost of $3,800,000. Purchase of such wastewater capacity shall be considered "merger costs" recoverable by Raleigh pursuant to the terms of Section 3.7 of this Agreement.

Said upgrade and improvement projects will be undertaken and completed by Raleigh to upgrade and improve Zebulon's water, sewer and reclaimed water utility system in accordance with Raleigh's water, sewer and reclaimed water utility system standards for operation and performance, level of service, reliability, and redundancy. Raleigh may, at its discretion,

undertake alternative upgrade and improvement projects that accomplish the same purposes as the projects agreed upon. In the event the alternative project is an enhancement and more costly than the project as defined in Exhibit D based upon an up to date cost estimate and quote (and which is agreed to be a design upgrade beyond the original project scope which does not provide commensurate benefits to the present Zebulon service area), then the increased cost shall be borne by Raleigh.

Any upgrades by Raleigh beyond those outlined in Exhibit D will be accomplished in accordance with Raleigh's normal operations and capital program prioritization process. Raleigh will notify in writing, and confer with representatives of Zebulon's governing Board and the UAC, before final adoption of any upgrade and improvement projects beyond those outlined in Exhibit D, any water, sewer and reclaimed water utility system expansion program, or water, sewer and reclaimed water utility system master plan or capital improvements plan affecting the water, sewer and reclaimed water utility systems within the corporate or Urban Service Area limits of Zebulon.

The costs for the upgrade and improvement projects will be recovered from customers located in Zebulon's municipal corporate and Urban Services Area limits through the schedule of rates, fees and charges as described elsewhere in this Agreement. Cost-sharing for projects of mutual benefit to Zebulon and other municipalities will be reviewed on a case-by-case basis.

3.5 Notices of Violation

In the event that fines or penalties are levied by the State of North Carolina for violation of Zebulon water or wastewater system permits following the Transfer Date, payment of fines for notices of violations will be paid by Raleigh. Any fines or penalties for actions prior to the Transfer Date will be paid completely by Zebulon.

3.6 Rates, Fees, Charges, and Penalties

Raleigh shall have the sole responsibility and authority to establish and set rates, fees, charges, and penalties necessary for the operation, maintenance, upgrade, improvement, and expansion of the water, sewer and reclaimed water utility system. Subject to the provisions hereof, it is intended that the expansion, upgrade, improvement, operation and maintenance of the water, sewer and reclaimed water system shall be on a self-sustaining basis. All revenues of Raleigh water, sewer and reclaimed water utility shall be used exclusively by the water, sewer and reclaimed water utility fund for direct and indirect costs of the water, sewer and reclaimed water utility operations. In maintaining and operating the water, sewer and reclaimed water system, Raleigh will:

1) Set and charge reasonable rates, based on cost of service principles, to all classes of users of the water, sewer and reclaimed water system;

2) Operate and maintain the water, sewer and reclaimed water system at the lowest possible rates, consistent with Raleigh's obligation and commitment to provide proper, efficient, and environmentally sound water, sewer and reclaimed water services now and in the future;

3) Use the revenues of the water, sewer and reclaimed water system for:

    a) The maintenance and operation of the water, sewer and reclaimed water system,

    b) The payment of debt service or other debt instruments issued therefore, and the funding of resources in connection with the issuance of such debt for the water, sewer and reclaimed water system,

c) The expansion, extension, upgrade, and improvement of the water, sewer and reclaimed water system and such other purposes as Raleigh may deem proper for the operation of the water, sewer and reclaimed water system,

d) Watershed protection activities, or

e) Other lawful public purposes.

3.7 Schedules of Rates, Fees, Charges, and Penalties

Raleigh shall apply to customers located in Zebulon's corporate limits and Urban Services Area a schedule of rates, fees and charges sufficient to recover all of the costs, as determined by Raleigh, required to accomplish the water, sewer and reclaimed water utility merger between Raleigh and Zebulon. Said costs will include, but not be limited to, capital upgrades and improvements, administration and other transfer costs directly related to the water, sewer and reclaimed water utility merger.

Capital cost estimates for system upgrade and improvement projects are listed in Exhibit D. It is understood that the actual costs for the upgrade and improvement projects may vary from the estimated costs presented in Exhibit D because of changes in scope, site conditions, schedule or other factors beyond the control of Raleigh. Potential cost increases resulting from factors beyond the control of Raleigh will be recovered through the schedules of rates, fees and charges applied to customers in the Zebulon service area.

The cost recovery program for the water, sewer and reclaimed water utility merger will be phased over a 15-year period. The schedule of estimated revenues and expenses for the Zebulon service area is presented in Exhibit E. The sequence of rates, fees and charges to be applied to customers in the Zebulon area during this period is scheduled as follows:

1) For the period extending from the Transfer Date to July 1, 2021, the base water, sewer and reclaimed water charge and water, sewer and reclaimed water consumptive retail rates for Zebulon customers will increase annually by 3 percent above the rate in effect on the Transfer Date.

2) For the period extending from July 1, 2011 to July 1, 2021, a surcharge may be applied to the consumptive retail rate of Zebulon customers if:

   a) The actual capital costs, and associated annual debt service, exceed the estimated capital costs for the upgrade and improvement projects identified in Exhibit D, or

   b) The actual revenue from the Zebulon service area is insufficient to recover all of the merger-related costs within the 15-year period.

   If a surcharge is required, then the surcharge will apply for a future period to be determined based upon the recovery period projected as of July 1, 2011.

3) After July 1, 2021, the consumptive retail rate for Zebulon customers will be same as for Raleigh customers, subject to any continuing surcharge that may be added to the rates in subparagraph 2 above.

4) If net revenues collected from the Zebulon service area during the approximate 15-year period exceed the merger-related costs as defined by Raleigh, and as verified by audit, then Raleigh shall offer one of two options to Zebulon, the choice being solely that of Zebulon. The first option is to apply the excess revenues toward the purchase of additional water and/or sewer capacity allocations beyond the agreed upon indexes specified in Section 5.1.

The second option is to adjust the consumptive retail rate for Zebulon customers to the same as Raleigh customers prior to the date in paragraph 3.7.3, above. In the event the additional capacity allocations is chosen, the quantity of additional water and/or sewer capacity under this provision will be determined by dividing the excess revenues by Raleigh water and/or wastewater capacity fee(s) in effect at the time that the calculation is taking place.

Zebulon's non-consumption fees and charges related to utility service, such as acreage fees, capacity fees, frontage fees, Neuse River nitrogen fees and utility connection ("tap") charges will continue to be assessed and collected by the Zebulon customer service center, and remitted to Raleigh, until all said merger costs have been fully recovered. Zebulon will implement a Neuse River nitrogen fee beginning July 1, 2006, and this fee will continue following the Transfer Date. For the period extending from the Transfer Date to July 1, 2021, the non-consumptive, development fees and charges for Zebulon customers relating to utility service will remain at the rate in effect on the Transfer Date. However, within this period Zebulon will review fees and may make annual adjustments to ensure recovery of merger costs.

Once all said merger costs have been fully recovered, Raleigh shall apply rates and non-consumption fees and charges to customers located inside the municipal limits of Zebulon that are equivalent to those that are being charged to customers inside the municipal limits of Raleigh, and shall apply rates and non-consumption fees and charges to customers located outside the municipal limits of Zebulon that are equivalent to those that are being charged to customers outside the municipal limits of Raleigh. During the 15-year period from the Transfer Date through July 1, 2021, Raleigh shall provide Zebulon with an annual statement summarizing the status of Zebulon utility revenues and merger costs as compared to original estimates.

Raleigh will provide at least thirty (30) days written notice to Zebulon customers prior to adopting any revisions to the schedule of rates, fees, and charges.

Zebulon has an established policy that the cost of reclaimed water will be no more than 50% of rate for potable water. This policy is consistent with that of Raleigh and will be maintained by Raleigh. For the period extending from the Transfer Date to July 1, 2021, the fees and charges for Zebulon customers relating to reclaimed water service will increase by 3 percent above the rate in effect on the Transfer Date.

4.0 Zebulon Existing Facilities and Property

Zebulon’s water, sewer and reclaimed water utility system provides water, sewer and reclaimed water service to approximately 4,714 persons through approximately 1,885 water accounts and 1,790 sewer accounts.

Zebulon’s water distribution system consists of approximately 34 miles of water mains and two elevated storage tanks, with capacities of one million gallons and one/half million gallons. In addition to elevated storage, Zebulon has one/half million gallons of storage in the Zebulon Water Treatment Plant clearwell. Zebulon’s water is supplied by contract with Raleigh, Wendell, and Knightdale.

Zebulon’s wastewater collection system consists of approximately 35 miles of gravity and pressure mains and 9 wastewater-pumping stations. Wastewater is treated at the Little Creek WWTP (1.85 mgd maximum month average daily flow capacity), owned by Zebulon.

Zebulon’s reclaimed water system utilizes effluent from the Little Creek WWTP to supply approximately one mile of reclaimed water main and a 250,000 gallon elevated storage tank.

4.1 Representation and Warranties by Zebulon

Zebulon makes the following representations and warranties to Raleigh:

1) Zebulon is the sole owner of all water, sewer and reclaimed water lines, pipes, meters, valves, meter boxes, laterals, and any other property transferred to Raleigh under the terms and conditions of this Agreement, and

2) Said facilities, property, land, equipment, information, and data is free and clear of all encumbrances (except as it may be included in the full, faith and credit of Zebulon as a part of existing bonded indebtedness or loans). In the event that Zebulon's bonds have provisions that do not allow the sale of the systems while bonds are outstanding, Zebulon and Raleigh agree to enter into a long term leasing arrangement for the portions of the system that are affected until such time as the bonds are retired. Upon retirement of the bonds, the full ownership transfer will take place.

4.2 Property Transfer

Upon the Transfer Date of this Agreement, a Bill of Sale shall be executed by Zebulon to transfer ownership of all facilities, property, land, equipment, financial assets, information, and data subject to this Agreement to Raleigh. Such documents shall be sufficient to convey to Raleigh all of Zebulon's right, title, and interest in Zebulon's water, sewer and reclaimed water system, including easements and rights-of-way, whether or not recorded. Said rights-of-way shall include the right to operate and maintain the subject water, sewer and reclaimed water system within any public streets within Zebulon. Any documents needed to memorialize this passage of title shall not be required to contain any warranties of condition or title, except as expressly set forth herein. A non-warranty deed shall be executed by Zebulon to convey all interests in real property and improvements thereto which are subject to this Agreement.

Zebulon shall cooperate with Raleigh in establishing title to any portion of Zebulon's water, sewer and reclaimed water system where ownership may be contested.

A detailed list of real property and easements and encroachment agreements is included as Exhibit B. A list of water, sewer and reclaimed water utility property and fixed assets to be retained by Zebulon is included as Exhibit C. If at any time in the future property transferred to Raleigh is no longer used for water, sewer and reclaimed water purposes, Raleigh shall return the land to Zebulon.

The former Water Treatment Plant site will be transferred to Raleigh in its entirety. However, a portion of this asset, as identified on the plan included as Exhibit F, will revert to Zebulon ownership, at no cost to Zebulon, should Raleigh determine that the site is not required for the purpose of a future Little River Water Treatment Plant. Until the time that a decision is made on the use of the site for the Little River Water Treatment Plant, Raleigh will grant an easement, for the area shown on the plan in Exhibit F, to Zebulon for the continued use of the area as a park facility. Additional details of this use of the facility for recreation are to be addressed in a separate agreement as outlined in paragraph 11.0.

Raleigh shall grant an easement for a walking trail at the Little Creek Wastewater Treatment Plant, as identified on the plan included in Exhibit F.

4.3 Easements and Encroachments

Zebulon has fully-executed and properly recorded easements and encroachment agreements for portions of Zebulon's water, sewer and reclaimed water utility system. As a condition of this Agreement, a complete list of all recorded easements and encroachment agreements will be

provided to Raleigh. To the extent possible, all easements for Zebulon's water, sewer and reclaimed water utility system shall be conveyed by Zebulon to Raleigh by an appropriate instrument suitable for recording in the Office of the Register of Deeds for Wake County, North Carolina. As a condition of this Agreement, Zebulon will provide Raleigh with copies of any encroachment agreements it has with the North Carolina Department of Transportation and with any other utility companies (See Exhibit B). To the extent allowed by North Carolina law, the City shall indemnify and hold harmless Zebulon from all liability, costs and legal fees arising out of use of the referenced easements or encroachments. The parties understand and acknowledge that no North Carolina case, statute, or Constitutional provision authorizes a local government to indemnify another party and that this contract provision may be unenforceable. Zebulon agrees to resolve any known easement or encroachment issues prior to the effective date of this merger.

For new easements acquired by Raleigh as a part of the operational needs of the Zebulon system and system expansions, Raleigh agrees to allow Zebulon to acquire easements for the same area, to include greenway/park needs.

Zebulon has some facilities installed on the properties of others for which it does not have express easements or encroachment agreements, and some facilities installed in streets and rights-of-way for which it has no encroachment agreements. In the event a landowner on whose land such a facility exists contests Raleigh's right to maintain such facilities, Raleigh shall notify Zebulon in writing and Zebulon shall be responsible to obtain at its expense the necessary easement, encroachment agreements or fee simple title across said land either by negotiation or by eminent domain. After Zebulon has obtained such easement or fee simple title, it shall transfer ownership thereof to Raleigh. Any reasonable and direct expense borne by Raleigh in resolution of these disputed easements shall be paid by Zebulon, and Zebulon shall also make adequate reservation for the necessary rights-of-way for all planned water, sewer and reclaimed water facilities prior to closing any street. If Zebulon fails to comply with the provisions of this paragraph, Zebulon shall reimburse Raleigh in full for all expenses incurred in acquiring the necessary rights-of-way by purchase or condemnation.

4.4 Existing Water and Sewer Capacity Allocations

Zebulon currently has a water supply allocation from Raleigh for 1 mgd, for maximum daily demand flows. Zebulon currently has no wastewater capacity allocation in the Neuse River Wastewater Treatment Plant, although Zebulon's Little Creek WWTP has a current permitted capacity of 1.85 mgd on a maximum month average daily flow basis.

Raleigh will construct additional wastewater and water supply capacity as necessary to accommodate new growth and development within the corporate limits and Urban Service Area of Zebulon, consistent with Paragraph 5.1 of this agreement. See Exhibit G for identification of corporate and urban service area limits. Said additional wastewater and water supply capacity will be financed by Raleigh using revenues generated by Raleigh's schedule of rates, fees, and charges, or other debt instruments as determined by Raleigh. During the period prior to the system being fully accepted by Raleigh, and the Zebulon customers' rates being adjusted to the same as the rates for Raleigh customers, the financing by Raleigh for the additional constructed water and wastewater facilities will be offset by the differential in rates being paid by Zebulon customers and the rate that they would pay if inside Raleigh.

4.5 Financial Assets and Closeout

The financial records of Zebulon water, sewer and reclaimed water enterprise fund will be closed as of the Transfer Date of this Agreement. As of this closeout, with the exception of

funds necessary to complete existing capital projects that are in process, the full amount of the Zebulon capital reserve and operating fund balances will be transferred to Raleigh to be used for payments of water/wastewater transition and other approved capital and merger costs. Payment of the funds equity will be made following the special audit. The accounting for all other asset and liability accounts will transfer at closeout to Raleigh water, sewer and reclaimed water enterprise fund, subject to audit verification by the Raleigh Internal Audits Division and an independent auditor. Zebulon shall write-off all inactive accounts considered uncollectible and adjust other accounts to a current status prior to Raleigh's assumption of the financial accounts.

5.0 Expansion and Extension of Water, Sewer and Reclaimed Water Services

Raleigh shall provide, maintain, and extend the water, sewer and reclaimed water systems and facilities as may be required under applicable laws and regulations so as to serve present and future demands, and in particular so as not to impede the orderly growth and development of Zebulon, except as provided in Paragraph 5.1 below. Raleigh shall not practice or permit any discrimination against Zebulon in the provision of such services based upon location of the point of service within Zebulon or its Urban Services Area.

5.1 Growth and Development Index

Raleigh will provide water services to customers in Zebulon within the following parameters:

1) For the period extending from the Transfer Date to September 30, 2011, the total water flow allocation for Zebulon will be 2.5 mgd maximum day water flow, which includes 1.5 mgd additional capacity which Zebulon must purchase from Raleigh on the Transfer Date.

2) For the period extending from October 1, 2011 to September 30, 2021, the annual growth rate in peak day water use will be limited to 4 percent per year, compounded upon the prior year's allocation.

3) For the period extending from October 1, 2021 to September 30, 2031, the annual growth in peak day water use will be limited to 3 percent, compounded upon the prior year's allocation.

4) For the period extending beyond September 30, 2031, the annual growth in peak day water demands will be the same as for the Raleigh service area as determined by the Raleigh City Council.

Following the Transfer Date, Zebulon's initial allocation for wastewater treatment capacity will be the permitted capacity of the Little Creek WWTP. Zebulon is applying to increase the rated capacity of the Little Creek WWTP from the current 1.85 mgd to 2.2 mgd, on a maximum month average day basis.

1) For the period extending from the Transfer Date to September 30, 2011, the total wastewater flow allocation for Zebulon will be 1.0 mgd on an average daily flow basis, if required and as identified in Section 3.4 of this Agreement.

2) For the period extending from October 1, 2011 to September 30, 2021, the annual growth rate in wastewater flow will be limited to 4 percent per year, compounded upon the prior year's allocation.

3) For the period extending from October 1, 2021 to September 30, 2031, the annual growth in wastewater flow will be limited to 3 percent, compounded upon the prior year's allocation.

4) For the period extending beyond September 30, 2031, the annual growth in wastewater flow will be the same as for Raleigh service area as determined by Raleigh City Council.

The calculation of Zebulon's water and wastewater flow allocations will be based on the summation of estimated flows for new connection permits and actual flows metered for the Zebulon service area. An exceedance of the prescribed growth rate in any given year will be allowed, provided it is reconciled within the following 2 years. For example, during the period October 1, 2011 to September 30, 2021, the annual growth rate limit is 4 percent. Annual growth over a three consecutive year period may be 6 percent (year 1), 2 percent (year 2) and 4 percent (year 3), equivalent to an average 4 percent growth rate. Because the growth exceedance in year 1 was reconciled to the prescribed average within the following 2 years, the overall growth for this period would not violate this agreement.

These growth levels would be subject to modification by Raleigh if problems are encountered with the implementation of treatment plant expansions. If such is necessary, Zebulon's water growth capacity would be no less than 1 percent of the total treatment capacity of the Raleigh system for water at that time.

Raleigh may offer Zebulon additional water capacity beyond the agreed-upon indexes, on a case-by-case basis, to accommodate major industrial or commercial projects that elect to locate within Zebulon's Urban Services Area and provide benefits to both Raleigh and Zebulon.

5.2 Requests for Service

Upon the Transfer Date, all future requests for new service connections will be made to Raleigh through Zebulon. Request for new services that require extensions will be first presented to Zebulon to assure all zoning and land use issues have been addressed then forwarded to Raleigh for approval of water, sewer and reclaimed water plans. Both Zebulon and Raleigh, in conjunction with the UAC, will provide information to customers and potential customers regarding details of service. Raleigh agrees to provide existing and future water, sewer and reclaimed water customers located within Zebulon's corporate limits or the portion of the Urban Services Area within the extra-territorial jurisdiction (ETJ), service of a quality comparable to the quality and quantity of service provided to water, sewer and reclaimed water customers within the municipal boundaries of Raleigh. Raleigh specifically agrees that the geographical location of the water, sewer and reclaimed water customers in Zebulon or in the portion of its Urban Services Area within the ETJ shall not have any substantial effect on the quality of service or timing of repairs to be made by Raleigh.

5.3 Developer-Requested Extensions to the System

Subject to the provisions of this Agreement, extensions of the subject water, sewer and reclaimed water system that are undertaken by third-party developers shall be made under the policies published and used by Raleigh, and as may be amended from time to time. Said policies shall be uniform throughout Raleigh's water, sewer and reclaimed water system, including those areas affected by this Agreement. Raleigh may, at its discretion, make changes to the extension policies as Raleigh determines to be appropriate. Said changes shall apply to all portions of the water, sewer and reclaimed water system operated and maintained by Raleigh, including those areas located in Zebulon's corporate and Urban Services Area limits.

For water, sewer and reclaimed water extensions outside of Zebulon's municipal corporate limits, all applicable water, sewer and reclaimed water extension policies that apply outside of Raleigh's corporate municipal limits will apply.

Any request to Raleigh for water, sewer and reclaimed water service extensions in Zebulon's corporate limits, extra-territorial jurisdiction (ETJ), or Urban Services Area (USA) will require prior written approval by Zebulon's governing board before the service can be provided by Raleigh.

Utility fees and charges for new Zebulon customers may not be paid by Zebulon or any other public entity, either directly or indirectly, as a part of an economic development program for Zebulon. Violation of this condition will constitute a breach of the Agreement.

Approval for request for service or extension under provisions of this section will not be unreasonably withheld by either Raleigh or Zebulon.

5.4 Zebulon-Requested Extensions to the System

Zebulon-requested extensions to the merged water, sewer and reclaimed water system or extensions thereof required by Zebulon beyond those included in the Raleigh Capital Improvement Program, shall be financed by Zebulon and shall be accomplished by contract between Zebulon and Raleigh. Reasonable notice to proceed with such extensions will be provided to Raleigh by Zebulon, such that applicable time limitations can be met. However, under no circumstances shall Raleigh be liable to Zebulon for the payment of damages, penalties, fines or any other monetary recovery as a result of any failure to satisfy such time limitations for Zebulon-requested extensions. For extensions required due to annexation, annexation plans shall be submitted by Zebulon to Raleigh to evaluate the feasibility thereof under then existing conditions, prior to proceeding with implementation of annexation.

Raleigh shall reimburse Zebulon for costs associated with extensions by Zebulon in accordance with established extension and reimbursement procedures applicable to developers and customers of Raleigh.

5.5 Annexations

Any annexation considerations will be resolved based on the urban service areas for Zebulon (See Exhibit G). Prior to approval of extension of service to property outside the corporate limits of Zebulon, Zebulon must require application for annexation into Zebulon's municipal corporate limits. Zebulon must require application for annexation and act on an annexation petition prior to approval to add new water, sewer and reclaimed water customers into Zebulon limits.

Raleigh will provide water, sewer and reclaimed water services to areas that cannot be annexed, only by exceptions to be considered on a case-by-case basis, to address specific health-related concerns. All required annexations must proceed within a reasonable amount of time of committing to the provision of water, sewer and reclaimed water service. Any assessments levied on property by Zebulon associated with extensions to the system will be paid to Zebulon.

For water, sewer and reclaimed water extensions required as a part of an annexation by Zebulon, the cost of said extensions shall be the responsibility of Zebulon, to be paid by Zebulon prior to initiation of annexation project. Zebulon may use assessments as a means of providing for financing of these annexation water, sewer and reclaimed water extensions.

5.6 Assessments

Assessments for extension needs generated by and for the benefit of Zebulon will be developed and implemented by Zebulon. Assessments needed by Raleigh, as a part of the Raleigh Capital Improvement Program, within the corporate limits of Zebulon will be developed by Raleigh, and implemented on Raleigh's behalf by Zebulon.

6.0 Employee Transfer

All existing staff of Zebulon's water, sewer and reclaimed water utility system will be offered employment with Raleigh's water, sewer and reclaimed water utility system. Zebulon employees accepting positions with Raleigh will suffer no loss of pay, annual leave, sick leave, or years credit in retirement program. It is anticipated that ten of the eleven Zebulon employees will accept the new positions with Raleigh. Relative to level of compensation, Raleigh has conducted a wage and salary analysis and confirms that employees transferring will suffer no loss of current compensation. The benefit package that will be available to Zebulon employees transferring to Raleigh will be similar but not exactly the same as the Zebulon package. Zebulon employees transferring to Raleigh will retain equivalent tenure and length of service for annual and sick leave, retirement, and other benefits at Raleigh, as they possessed at Zebulon. The rate of accrual of length of service-dependent benefits for Zebulon employees transferring to Raleigh will be commensurate with the rate of accrual for Raleigh employees of similar length of service.

6.1 Employee Probation Period

All transferring employees will serve a six (6) months probation period during which each employee must demonstrate proficiency in the job assigned. Following the probation period, each employee will receive a performance evaluation similar to that applicable to existing water and sewer utility employees of Raleigh. For employees requesting transfer from Zebulon to Raleigh, it will be necessary for the employees to successfully pass a criminal background check and a drug screening.

6.2 Fund Transfers for Accrued Employee Benefits

In accordance with the terms of the financial closeout (section 4.5), Zebulon will transfer funds sufficient to pay for all accrued vacation and sick leave for each transferring employee. Information relative to the total number of hours of accrued leave and sick leave will be provided to Raleigh prior to the Transfer Date of this Agreement.

Pending governmental accounting standards will require the recording of post employment healthcare and other benefits over the active employment term of recipients. Implementation for Raleigh will be in fiscal year 2006-07. At the time that an actuarial study has determined the prior liability for the transferring employees, Zebulon will have the option of either (1) paying Raleigh for the accumulated value of such benefits, or (2) adjusting the financial proforma results at such point to allow for their existing rate structure to pay for the accumulated expense.

7.0 Records Transfer

Zebulon shall transfer to Raleigh all available reproducible and electronic copies of any and all records, data, information, and models arising from the construction, operation and maintenance of Zebulon's water, sewer and reclaimed water utility system and any other related activity, including projects in progress, and including, but not limited to, the following:

1) Construction contracts, drawings, maps, and all other related documents evidencing the condition or location of any portion of the subject water, sewer and reclaimed water systems including such documents as may be in the possession of any engineer or other consultant of Zebulon;

2) Billing, collection and payment records on all present customers of the subject water, sewer and reclaimed water systems;

3) An accurate tabulation or listing of all actual service locations in the Zebulon system to be transferred to Raleigh from Zebulon, to include:
   a) Address - Number and Street;
   b) Account Name (if active);
   c) Billing Address for Each Account Number;
   d) Account Numbers and all meter reading books and the history of all accounts for the past twelve (12) months;
   e) One Year's Account History;
   f) Meter Location Description;
4) Contracts or agreements for the supply of equipment, materials, supplies, and products;
5) Pending applications for water, sewer and reclaimed water service;
6) Contracts or agreements to provide water and or sewer service currently in effect;
7) Receipts, accounts and other records of deposits made by all present and past customers of the subject water, sewer and reclaimed water systems;
8) Any and all warranty information on any facilities, property, land, and equipment transferred to Raleigh pursuant to this Agreement;
9) Repair, maintenance, trouble, and emergency response records for all portions of Zebulon's water, sewer and reclaimed water systems;
10) Any and all notices of violation, legal actions, and lawsuits pertaining to Zebulon's water, sewer and reclaimed water system ;
11) Plans, permits, reports, specifications, surveys, etc., for water, sewer and reclaimed water facilities and operations;
12) Number and locations of all unmetered services;
13) Copies of all water, sewer and reclaimed water system maps;
14) Copies of all easements;
15) Copies of all encroachment agreements;
16) Identification of all inside Zebulon customers;
17) Identification of all outside Zebulon customers;
18) Record of all assessments for system extensions;
19) Identification of all taps for which payment has been made;
20) Identification of all backflow prevention installations;
21) Identification of all Pretreatment Program installations;
22) Copies of such records as are necessary to inform Raleigh of the location of all facilities of Zebulon for other utility operations;

23) Accounts receivable records;

24) Accounts payable records; and,

25) Any other information, data, and records pertaining to Zebulon's water, sewer and reclaimed water utility.

Zebulon agrees that within a reasonable time after the Transfer Date, Zebulon shall submit to Raleigh such accounting, commercial, engineering, planning, personnel, and facility records pertaining to Zebulon's water, sewer and reclaimed water utility system. Zebulon may make copies of said materials for Zebulon's records and archives. Prior to the Transfer Date, the City Manager of Raleigh and Town Manager of Zebulon, or their designees, shall determine mutually satisfactory administrative details for the transfer of the above-referenced records.

8.0 Customer Transfer

As of the Transfer Date, all customers and users of Zebulon's water, sewer and reclaimed water system shall become subject to all rules, regulations and ordinances of Raleigh as the same apply to all users and customers of the water, sewer and reclaimed water system of Raleigh, and as same are now or may hereafter be amended. Such rules, regulations and ordinances and schedule of rates, fees, charges and penalties shall constitute a part of the Agreement between Raleigh and any customer or user of the subject water, sewer and reclaimed water system and any extensions thereof for the provision of water, sewer and reclaimed water service.

A team comprised of Raleigh and Zebulon staff shall develop a seamless transfer of customer accounts at Transfer Date in order to provide continuity of account activity after the merger. All accounting after the Transfer Date shall be made within the Raleigh utility enterprise fund.

8.1 Customer Deposits

Prior to the Transfer Date, Zebulon, under the direction of the Zebulon Town Manager or his designee, shall refund deposits to its customers or credit customer accounts for deposit balances.

8.2 Billing Cycles

The billing cycle for Zebulon water, sewer and reclaimed water customers is currently a monthly cycle. The billing cycle for Raleigh water and sewer customers is currently a bi-monthly (every two months) cycle. As of the Transfer Date, Raleigh agrees to continue to bill Zebulon customers monthly for water, sewer and reclaimed water. The first bill of a two-month cycle may be based on an estimated reading and the second will be based on an actual meter reading. Raleigh reserves the right to adjust the billing cycle for Zebulon water, sewer and reclaimed water customers to a bi-monthly cycle at a later time, if Raleigh deems this is necessary.

8.3 Water Meter Readings

As of the Effective Date, Zebulon's water meters measure water volume in units of 1,000 gallons, and Raleigh's water meters measure water volume in units of 100 cubic feet. At the Transfer Date, Raleigh shall assume all responsibility for reading all customer meters and for preparation of water, sewer and reclaimed water bills, and water, sewer and reclaimed water customers in Zebulon will be billed for water, sewer and reclaimed water service based on 100 cubic feet units. Zebulon's gallon unit water meters shall be replaced with cubic feet water meters and upgraded to radio read capability by Raleigh as part of the System Upgrades and Improvements identified in Exhibit D. If the replacement of Zebulon's water meters cannot be

completed prior to the initial collection of water meter readings by Raleigh staff, Raleigh will collect water meter readings from Zebulon customers using 1,000 gallon units, and Raleigh's water billing system will convert the readings to 100 cubic feet units for the purposes of producing water, sewer and reclaimed water bills.

The transition of meter readings will be coordinated by a joint implementation team.

9.0 Bonded Indebtedness

Raleigh agrees to pay Zebulon all amounts necessary to enable Zebulon to make all debt service payments when due and payable on all existing outstanding bonded indebtedness of Zebulon for water, sewer and reclaimed water facilities covered under this Agreement. The payments required to be made in accordance with this provision of the Agreement shall be made in a timely manner, and Raleigh's obligation hereunder shall be a continuing one until all outstanding bonded indebtedness of Zebulon borrowed for such purposes shall have been paid in full. A statement of Zebulon's outstanding bonded indebtedness and a schedule of the debt service to be made pursuant to this provision of the Agreement shall be submitted to Raleigh prior to the Transfer Date of this Agreement (See Exhibit H). Zebulon agrees to cooperate with Raleigh in determining opportunities for early retirement or refinancing of any of the outstanding debt, when such adjustments are permitted by the bonding agencies, and Raleigh retains the right to exercise an option of debt refinancing or retirement if costs to the water, sewer and reclaimed water utility can be lowered as a result. Projected debt service shall be included as a part of the transfer cost calculated as a part of this agreement.

10.0 Prior Agreements

10.1 Zebulon and Raleigh

All prior agreements between Zebulon and Raleigh pertaining to water, sewer and reclaimed water services are rescinded as of the Transfer Date.

10.2 Zebulon Commitments to Private Third Parties

Zebulon has certain commitments to developers of residential and non-residential projects inside and outside the corporate boundaries of Zebulon. All agreements previously entered into between Zebulon and developers will be honored by Raleigh, provided that such contracts that require expenditure of Raleigh funds shall be considered "merger costs" recoverable by Raleigh pursuant to the terms of Section 3.7 of this Agreement.

Zebulon will install the meters, set the boxes, and collect tap fees in all of such developments to fulfill its existing commitments prior to Transfer Date. Such completed services shall become a part of the property to be conveyed herein from Zebulon to Raleigh.

Any contract or agreement with third parties entered into by Zebulon between the Effective Date and the Transfer Date shall require approval by Raleigh.

A contract exists between Zebulon, Wake County and the Carolina Mudcats Organization concerning the Carolina Mudcats' use of Five County Stadium (owned jointly by Zebulon and Wake County) and the reclaimed water tank property (owned by Zebulon) (see Exhibit I). Raleigh agrees to take ownership of the reclaimed water property subject to the terms and conditions of the contract as it pertains to the maintenance of the reclaimed water tank property. Zebulon reserves the rights and responsibilities of the reclaimed water tank property as it pertains to approval of decorative paint design and signage. Zebulon and Raleigh will mutually agree to all changes made to the design placed on the ball or trunk of the reclaimed water tank,

or any changes as they relate to free-standing signage placed on the property by the Carolina Mudcats.

10.3 Existing Agreements

If it is determined that Zebulon has some existing vendor agreements relating to water, sewer and reclaimed water services, Zebulon shall provide notice to these entities regarding these agreements and Zebulon's intent to rescind its agreements as of the Transfer Date. However, Raleigh at its option may elect to continue these agreements through the current terms, subject to the consent of the contracting parties. In the event Raleigh chooses to continue the existing Zebulon Agreement, any water sold or to be consumed by Zebulon shall not count against the allocations provided to be made to Zebulon in this Agreement.

Zebulon has an existing agreement with the Town of Middlesex, in Nash County, relating to wastewater services. This Agreement, dated August 16, 1995, provides for sanitary sewer service to the Town of Middlesex by the Zebulon Little Creek WWTP at the rate of 0.19 mgd (with no peaking factor).

Following the Effective Date, Raleigh and Zebulon will proceed to work toward a formal assignment of the existing Middlesex agreement or, alternatively, assignment of a revised agreement, as may be renegotiated. Raleigh and Zebulon agree to seek the consent of Middlesex for such an assignment. In no event will any agreement by Raleigh with Middlesex, whether by assignment of the existing Zebulon-Middlesex agreement, or as may be negotiated in the future, result in an increase in wastewater treatment capacity allocation to Middlesex which exceeds its allocation under the existing agreement, so as to reduce the wastewater treatment capacities available to Zebulon under this Merger Agreement, unless consented to by Zebulon..

10.4 Zebulon Commitments to Communications Firms for Transmission Towers on Zebulon Water, Sewer and Reclaimed Water Assets

Zebulon has no existing contracts with communications firms for transmission towers located on Zebulon water, sewer and reclaimed water assets.

Zebulon has a verbal agreement with a local amateur radio club for the provision of a repeater on the Vance Street tank. Zebulon also has a repeater on the tank for use of the emergency services. Raleigh agrees to allow continued use of the water tower for the location of these repeaters, subject to any such repeaters being to Raleigh's approval. Zebulon will assume responsibility for the design and installation of any repeater for the amateur radio club.

10.5 Discriminatory Agreement

No existing special, discriminatory agreements with specific customers will be continued, honored, or assumed by Raleigh.

Zebulon represents and warrants to Raleigh that there are no discriminatory agreements, except as noted below, between Zebulon and any customer or user of Zebulon's water, sewer and reclaimed water system which will nor may survive this Agreement and be binding upon Raleigh. For purposes of this Agreement, a discriminatory agreement is any agreement, contract or other understanding between Zebulon and any customer or user of Zebulon's water, sewer and reclaimed water system that provides that:

1. Water, sewer and reclaimed water service be extended and provided in a different manner than such service is extended and provided to the remaining customers or users of

Zebulon's water, sewer and reclaimed water system as to quality, quantity, or any other aspect of extending and providing such service;

2. Water, sewer and reclaimed water service be extended and provided upon the payment of a different schedule of rates, fees, charges, or penalties than is imposed upon the remaining customers or users of Zebulon's water, sewer and reclaimed water system;

3. Water, sewer and reclaimed water service be extended and provided at a different cost or schedule for reimbursement of costs or any other aspect of paying for the extension and provision of water, sewer and reclaimed water service than is imposed upon the remaining customers or users of Zebulon's water, sewer and reclaimed water system.

In the event that an unlawful discriminatory agreement exists and survives this Agreement, and is determined to be binding upon Raleigh, Zebulon shall indemnify and hold Raleigh harmless from any and all demands, claims, or actions (including the reasonable costs, expenses and attorney fees incurred by Raleigh), of such discriminatory agreement. Further, Zebulon shall indemnify and hold Raleigh harmless from any and all demands, claims, or actions, without regard to the relief sought or awarded and without regard to whether the claim, demand or action is raised by a party to the discriminatory agreement.

Zebulon and Wake County currently have an agreement with the Carolina Mudcats Organization for water, wastewater and reclaimed water to be provided for the Five County Stadium at no cost to the Carolina Mudcats. At the Transfer Date, charges for these services will be billed by Raleigh to Zebulon.

10.6 Wake County Reimbursement Project

Zebulon has two active reimbursement agreements dated 1987 and 1995 in effect with Wake County, North Carolina for access to the Highway 64 Water Booster Station, and for the water and sewer lines extended to serve the PYA/Monarch Facility.

Pursuant to the 1987 agreement, acreage fees are to be collected by Zebulon for each property owner that connects to the booster station and is located within a designated collection area. These acreage fees are to be remitted by Zebulon to Wake County as reimbursement for construction costs in accordance with the terms of the agreement.

Pursuant to the 1995 agreement, acreage fees are to be collected by Zebulon for each property owner that connects to the above referenced sewer projects and is located within a designated collection area. These acreage fees are to be remitted by Zebulon to Wake County as reimbursement for construction costs in accordance with the terms of the agreement. The acreage fees that it is expected could be collected will be sufficient to repay approximately half of the obligation to Wake County. The balance is to be paid through the merger and will be recorded as a debt.

Zebulon has agreed a final amount due to Wake County to fulfill the 1995 obligation. Raleigh and Zebulon agree to include this amount as a part of the merger cost to be recovered during the recovery period.

11.0 Contracted Services Between Raleigh and Zebulon

Raleigh will negotiate separate agreements with Zebulon for Zebulon's operation of a Raleigh Satellite Customer Service Center, beginning on the Transfer Date. Zebulon will collect payments for Raleigh services and tax revenues, including but not limited to water, sewer and reclaimed water bills. Zebulon will negotiate a separate agreement with Raleigh for Raleigh to

collect solid waste or other mutually agreeable fees on behalf of Zebulon. Zebulon will also be accessible by telephone for Zebulon residents for billing or service-related inquiries. Obligations of Zebulon and Raleigh for the operation of the Satellite Customer Service Center shall be as specified in the referenced agreement.

Additional services that may require separate agreements between Raleigh and Zebulon include paving alternatives as shown in paragraph 3.3; Wake County fees repayment, which it is intended will be paid in the same way as a debt service; and a repeater tower for emergency services.

12.0 Conflict/ Default Resolution

In the event of conflict or default that might arise for matters associated with this Agreement, the parties involved agree to informally and formally communicate to resolve the conflict. If this communication is not successful in resolving the conflict, the matter will be presented to the City Manager of Raleigh and the Town Manager of Zebulon for resolution. If the Managers are unable to resolve the conflict, the matter will be presented to the respective governing boards for resolution.

13.0 Fire Protection Services

Raleigh shall be responsible for maintaining fire hydrants and services in a reasonable manner at a level equivalent to that maintained by Zebulon at the time of transfer of the system. This level of service shall include hydrant spacing, hydrant maintenance, hydrant specifications, and appropriate water volume and pressure available at each hydrant. Raleigh shall coordinate with the Zebulon Fire Department for necessary flow and pressure testing to be done by the Zebulon Fire Department.

14.0 Ordinances to be Adopted

As a condition of entering into this Agreement, Zebulon shall adopt such ordinances as are reasonably necessary to regulate the proper use of the subject water, sewer and reclaimed water system and any extensions thereof by the customers and users within the jurisdiction of Zebulon. Said ordinances shall be reviewed and approved by Raleigh prior to adoption by Zebulon, and will further grant to Raleigh all administrative, permitting, regulatory, and enforcement authority necessary for the regulation, operation, maintenance, and improvement of the water, sewer and reclaimed water systems serving the corporate and Urban Services Area limits of Zebulon. Zebulon shall maintain updates and enforce such ordinances. Raleigh shall reimburse Zebulon for the reasonable expenses of enforcing such ordinances. Said ordinances shall have the same or similar provisions as are included in Raleigh's use ordinance related to Raleigh's water, and sewer utility system. Adoption of necessary Ordinances and Resolutions may be adopted by reference by the Zebulon Town Board.

As a condition of entering into this Agreement, Raleigh shall adopt such ordinances as are reasonably necessary to regulate the proper use of the subject reclaimed water system and any extensions thereof.

By approval and upon execution of this Agreement, Zebulon shall be deemed to have adopted by reference any water conservation ordinance or restriction of Raleigh which may from time to time be adopted by Raleigh City Council (during drought conditions or arising from other, special circumstances) so that such measures will be fully effective in, and shall be enforceable by Zebulon, as though adopted by direct action of the Zebulon governing board.

14.1 Environmental Permit Requirements

Zebulon and Raleigh acknowledge that the merger of Zebulon's and Raleigh's utility systems, and anticipated population growth in both municipalities and surrounding utility service areas, will require Raleigh to obtain specific State regulatory permits. These permits may be expected to include requirements for adoption of environmental conditions, requirements and mitigation measures, including land use regulations and restrictions, at the municipal level. In event such conditions, restrictions and mitigation measures are imposed by State regulatory authorities as a condition of permit issuance for the operation, upgrade, or expansion of utility services contemplated hereunder, Zebulon agrees to duly adopt by ordinance or otherwise, and to make effective within its corporate limits and extraterritorial jurisdiction area, as applicable, such conditions, restrictions and mitigation measures.

15.0 Delegation of Permitting Authority

Zebulon shall adopt a resolution or ordinance as may be required to support the delegation of water and wastewater permitting authority to Raleigh from the North Carolina Department of Environment and Natural Resources, Division of Environment Health and Division of Water Quality, within the jurisdiction of Zebulon.

16.0 Amendment to Agreement

This agreement may be amended only by a document in writing, approved by the Town Board of Commissioners of Zebulon and the City Council of Raleigh and executed by the respective Mayors. In the event Raleigh, by written agreement or otherwise, makes provision for utility services or concessions to another municipality or other Raleigh utility customer which are more favorable than the terms, provisions, and concessions herein granted to Zebulon, then and in that event, the parties agree to negotiate in good faith to incorporate into this Agreement identical or equivalent provisions, terms, and concessions for the benefit of Zebulon.

17.0 Customer Notification

Zebulon agrees to use all practical means, including direct mailing, to notify customers of changes associated with this merger. Such notification shall include information on schedule and mechanics of transfer and information concerning Raleigh's policies and procedures.

18.0 Severability

It is hereby the declared intention of Zebulon and Raleigh that the paragraphs, sections, sentences, clauses, and phrases of this agreement are severable. If one or more paragraphs, sections sentences, clauses, or phrases shall be declared void, invalid or otherwise unenforceable for any reason by the valid, final judgment or decree of any court of competent jurisdiction, such judgment or decree shall not affect the remaining provisions of this agreement and the same shall continue to be fully effective and enforceable on the basis that said remaining provisions would have been agreed to by Zebulon and Raleigh without the incorporation of such void, invalid or otherwise unenforceable paragraph, section, sentence, clause or phrase.

19.0 Notices

Whenever written notice is required under this agreement, said notice shall be sufficient when received by the Town Manager of Zebulon and the City Manager of Raleigh. Said notice may be mailed or hand-delivered but shall not be effective unless actually received.

20.0 Covenant of Good Faith and Fair Dealing

Raleigh and Zebulon shall cooperate and act in good faith to perform their obligations under this agreement and shall refrain from any action inconsistent with their contractual rights or obligations that would prejudice or injure the other party's rights to receive the benefits of this Agreement.

Approved this _____day of _____200__

Town of Zebulon

BY:_____

Town Manager

Attest:

_____

Town Clerk

_____

Approved as to form, Zebulon Town Attorney

City of Raleigh

BY:_____

City Manager

Attest:

_____

City Clerk

_____

Approved as to form, Raleigh City Attorney

EXHIBITS

Exhibit A	Fixed Assets to be Transferred
Exhibit B	List of Real Property, Easements and Encroachments Agreements
Exhibit C	Water, Sewer and Reclaimed water Utility Property and Fixed Assets to be Retained by Zebulon
Exhibit D	Schedule of Upgrades and Improvements
Exhibit E	Schedule of Estimated Revenues and Expenses
Exhibit F	WTP Property Transfer and WWTP Easement
Exhibit G	Service Area Maps
Exhibit H	Bonded Indebtedness
Exhibit I	Extract of Agreement with Carolina Mudcats
Exhibit J	Agreement with Town of Middlesex

EXHIBIT A

Fixed Assets to be Transferred

Property	Address
Wastewater Collection System	
Station #2 - Mack Todd Rd. (180 GPM @ 106' TDH)	Mack Todd Road
Station #3 - W. Gannon Ave. (200 GPM @ 85' TDH)	1301 W. Gannon Ave
Station #4 - Westside Master Station (1470 GPM @181' TDH)	700 Worth Hinton Road
Station #5 - Taryn Meadows	Taryn Meadows
Station #6 - Spruce Drive (85 GPM @ 100' TDH)	Spruce Drive
Station #7 - Southland Drive (270 GPM @ 126' TDH)	Southland Drive
Station #8 - Azalea Drive (100 GPM @ 22' TDH)	Azalea Drive
Station #9 - Water Plant Road (350 GPM @ 145' TDH)	Water Plant Road
Station #10 - Tippett Road (180 GPM @ 42' TDH)	Tippett Road
Station #11 - New Station (Shepherd's Park)	Shepherd's Park
Wastewater Treatment Plant	
Little Creek WWTP	NC Hwy 39. PIN #'s 2715525434; 2715249414; 2715343068
Water Treatment Plant	
Zebulon Water Treatment Plant (1.5 mgd)	Used as a water booster station. PIN #'s 1795255305; 1795257543; 1795252265
Water Distribution System	
Elevated Tank 1 (1 MG)	75 Green Pace Road
Elevated Tank 2 (0.5 MG)	228 W. Vance Street
Ground Storage Tank (0.5 MG at WTP Clearwell)	
Reuse System	
Elevated Tank (1.25 MG)	1545 Old US 264 Highway

Fixed Assets to be Transferred

Asset ID	Asset Description	Serial Number
	Vehicles	
1	1987 4x4 Chevy Truck	1GCEV14H5H5145399
7	1994 F-150 4X4	1FTEF14N5RNB34373
8	2000 F-250 4x4 Utility Truck	1FTNF21L5YE936320
9	2000 F-250 Truck	1FTNF20LXYED93630
15	2004 F-250	1FTNF20L34EA73205
17	1997 F-250HD Truck	3FTHF25H6VMA44973
18	2000 F-450 Utility Truck	1FDXF46FYEA70918
19	1997 F-250 HD Truck	1FTHF25H2VEA85719
	General Fund Items *(split-use items that will transfer)*	
22	1997 Wacker Jumping Jack	
26	Core Cut CC1300 Pavement Saw	
28	94 JCB Backhoe 214 w/ 4 in 1	
37	87 Hudson 9-ton Trailer	
38	98' Hudson 5-ton Trailer	
39	97' Currachee 2000 lbs Trailer (pipe)	
44	Pressure Washer	
48	Confined Entry Hoist	
49	Air Ventilator -Gas	
50	Air Ventilator -Electric	
51	Homelite Mudpumps (1)	
56	Lincoln Electric Welder	
63	Metro-tech Line Locator	
64	Pipehorn Metal Detector	
65	Honda ATV 4x4	
68	24 ft Fiberglass Ladder	
69	24 ft Fiberglass Ladder A-Frame	
70	16 ft Aluminum Ladder	
71	8 ft Folding Alum. Ladder	
76	6-5 HP Air Compressor	

Asset ID	Asset Description	Serial Number
	Enterprise Fund Items	
1	1998 MultiQuip 70 KVA Generator	
2	1998 MultiQuip 70 KVA Generator	
3	Generac GT85 Portable Generator 68 KW	
4	TCM F6ZON6 Forklift	
5	Stihl Pipe Saw	
7	Pipe Saws- Huskvara	
8	1998 Hydrant Watch Dog	
9	Neptune Hydrant Meter/RPZ Stand # 1	
11	2000 MeyersSeth 6" High Volume w/pipe	
12	Hurca Liquid Smoker	
13	Dura-lite Trench Box 6-ft Tall	
15	Ridge Tapping Machine	
16	4 Gas detector(2)	
18	MQ 2" Submersible elec. Pump	
19	Schonstedt magnetic locator	
20	2001 Woods 360Z Mower	
21	2004 Olympian 60KW Generator	
22	250 Gallon Fuel tank with trailer	
23	Stihl 036 Chain Saw	
24	12 Ton Metal Press	
25	1 HP Air Compressor	
26	Portable Band Saw	
27	W/S Misc Supplies/repair parts inv.	

Exhibit B List of Real Property, Easements and Encroachments Agreements

Property	Address
Wastewater Collection System	
Station #2 - Mack Todd Rd. (180 GPM @ 106' TDH)	Mack Todd Road
Station #3 - W. Gannon Ave. (200 GPM @ 85' TDH)	PIN 1795541713 0 W. Gannon Avenue (tax listing address, Town addresses as 1301 W. Gannon Avenue) Book 08633, Page 1008, .10 acres
Station #4 - Westside Master Station (1470 GPM @181' TDH)	PIN 1795766524 700 Worth Hinton Road Book 03591, Page 0697, .06 acres
Station #5 - Taryn Meadows	Taryn Meadows
Station #6 - Spruce Drive (85 GPM @ 100' TDH)	Spruce Drive
Station #7 - Southland Drive (270 GPM @ 126' TDH)	Southland Drive
Station #8 - Azalea Drive (100 GPM @ 22' TDH)	Azalea Drive
Station #9 - Water Plant Road (350 GPM @ 145' TDH)	Water Plant Road
Station #10 - Tippett Road (180 GPM @ 42' TDH)	Tippett Road
Station #11 - New Station (Shepherd's Park)	Shepherd’s Park
Wastewater Treatment Plant	
Little Creek WWTP	PIN 2715525434 0 NC Hwy 39 Book 05038, Page 0278 30.95 acres PIN 2715525434 0 NC Hwy 39 Book 05038, Page 0278 30.95 acres (Sewer Plant property) PIN 2715249414 0 Old US 264 Highway Book 6849, Page 636 11.25 acres (up from Sewer Plant property-south of railroad track) PIN 2715343068 0 Old US 264 Highway Book 6849, Page 636 3.64 acres (up from Sewer Plant property-south of railroad track)

Water Treatment Plant	
Former Zebulon Water Treatment Plant	Used as a water booster station. PIN 1795255305 0 US 64 Highway (this is on NC Hwy 97) Book 02780, Page 888 3.13 acres (1 of 3 pieces of Water Plant property-this is the middle piece of land) PIN 1795257543 0 Water Plant Road Book 01533, Page 564 16.62 acres (1 of 3 pieces of Water Plant property-this is the eastern most piece of land) PIN 1795252265 No listed address Not in register of deeds book 2.89 acres (1 of 3 pieces of Water Plant property-this is the western most piece of land)
Water Distribution System	
Elevated Tank 1 (1 MG)	PIN 1796817484 75 Green Pace Road Book 07651, Page 348 1.0 acres
Elevated Tank 2 (0.5 MG)	PIN 2705248177 228 W. Vance Street Book 02434, Page 136, .39 acres
Ground Storage Tank (0.5 MG at WTP Clearwell)	
Reuse System	
Elevated Tank (1.25 MG)	PIN 2715640098 1545 Old US 264 Highway Book 5384, Page 882 1.78 acres

Zebulon List of Utility Easements

Book 1545, Page 560—W.W. Bullock and wife, Erdeane Bullock, dated March 25, 1963 for water line easement. (In the area of Old Mill Road and US 64 Hwy Bypass)

Book 1706, page 329—C.L. Tippett and wife, Edythe Lee Medlin Tippett, dated March 15, 1962 for water line easement. (In the area of Wakelon School, NC Hwy 96 and Bell Street) Map reference Apr 6, 1962

Book 1727, Page 320—Southern Enterprise Corporation, dated June 25, 1966 for water main easement. (In the area of US Highway 264 and Whitley and Sycamore Streets) Reference to

Avon Privett deeds Jan 14, 1954, Apr 14, 1956, and Oct 26, 1965 recorded in Wake Co. Registry

Book 1947, page 307—Southern Enterprise Corporation, date June 16, 1954 for water line easement and extension of Sycamore Street for purpose of water line extension. (In the area of Brantley Road and NC Highway 264) Deed in Book 1144, Page 326

Book 1710, Page 254—Marjan Ltd., dated March 15, 1966 for water main easement. (In the area west of NC Highway 96 and the Victor Bell land). Deed in Book 1212, Page 125

Book 1706, Page 595—Ethel Brown, widow, and James P. Brown and wife, Mary Wise Brown, and Margaret Brown Barber and husband, Milton A. Barber, Jr., date March 15, 1966 for water main easement. (In the area west of NC Hwy 96 on the G.M. Bell land) Deed in Book 289, Page 261-262

Book 2371, Page 399—Borden, Inc., dated December 24, 1975 for sewer line easement. (North of Vance on former alley between lots 12-13 of block 32) BM 1885, Page 68

Book 2589, Page 118—Southern Enterprise Corporation, dated January 16, 1978 for water main easement. Deed in Book 1947, Page 308

Book 3056, Page 849—Mary Reid, dated September 17, 1982 for sewer main easement. “Sanitary Sewer Easement-Town of Zebulon” Plat Book 1982, Page 891

Book 2989, Page 555—Elsie P. Oakley, dated January 12, 1982 for easement for sanitary sewer pumping station. (location uncertain)

Book 3056, Page 851—Regency Residential, Inc., dated September 17, 1982 for easement for sewer mains. “Sanitary Sewer Easement-Town of Zebulon” Plat Book 1982, Page 891

Book 3056, Page 853—Regency Residential, Inc., dated September 17, 1982 for easement for sewer mains. “Sanitary Sewer Easement-Town of Zebulon” Plat Book 1982, Page 891

Book 3056, Page 855—Beck Brothers Veneer Company, Inc., dated September 17, 1982 for easement for sewer mains. “Sanitary Sewer Easement-Town of Zebulon” Plat Book 1982, Page 891

Book 3056, Page 857—Regency Residential, Inc., dated September 17, 1982 for easement for sewer mains. “Sanitary Sewer Easement-Town of Zebulon” Plat Book 1982, Page 891

Book 3056, Page 859—Ocey T. Beck, dated September 17, 1982 for easement for sewer mains. “Sanitary Sewer Easement-Town of Zebulon” Plat Book 1982, Page 891

Book 3056, Page 861—Ronald Wayne Perry, Theodis Strickland, John J. Kirby, and Herbert G. King, Jr., trustees in the office of the Zebulon Lion’s Club, dated September 17, 1982 for easement for sewer mains. “Sanitary Sewer Easement-Town of Zebulon” Plat Book 1982, Page 891

Book 2322, Page 536—Parrish Supermarket No. 2, Incorporated, date June 2, 1975 for easement to maintain a public alley. (Barbee Street?) BM 1885, Page 68 (lots #11-12, block 33)

Book 3057, Page 215—Sidney C. Eddins and wife, Virginia H. Eddins, dated October 22, 1982 for sewer main easement. “Sanitary Sewer Easement-Town of Zebulon” Plat Book 1982, Page 891

Book 3660, Page 47—Bobby T. McGee and wife, Norma B. McGee, dated September 22, 1982 for sewer main easement. "Sanitary Sewer Easement-Town of Zebulon" Plat Book 1982, Page 891

Book 3062, Page 28-- Avon Privette and wife, Debbie D. Privette, dated November 5, 1982 for sewer main easement. "Sanitary Sewer Easement-Town of Zebulon" Plat Book 1982, Page 891

Book 3062, page 30-- Avon Privette and wife, Debbie D. Privette, dated November 5, 1982 for sewer main easement. "Sanitary Sewer Easement-Town of Zebulon" Plat Book 1982, Page 891

Book 3062, page 32-- Avon Privette and wife, Debbie D. Privette, dated November 5, 1982 for sewer main easement. "Sanitary Sewer Easement-Town of Zebulon" Plat Book 1982, Page 891

Book 3062, page 34-- Avon Privette and wife, Debbie D. Privette, dated November 5, 1982 for sewer main easement. "Sanitary Sewer Easement-Town of Zebulon" Plat Book 1982, Page 891

Book 3062, page 36-- Avon Privette and wife, Debbie D. Privette, dated November 5, 1982 for sewer main easement. "Sanitary Sewer Easement-Town of Zebulon" Plat Book 1982, Page 891

Book 3062, page 38-- Avon Privette and wife, Debbie D. Privette, dated November 5, 1982 for sewer main easement. "Sanitary Sewer Easement-Town of Zebulon" Plat Book 1982, Page 891

Book 3067, Page 387—Illinois Tool Works, Inc., dated November 19, 1982 for easement for sewer main. "Sanitary Sewer Easement-Town of Zebulon" Plat Book 1982, Page 891

Book 3101, Page 274—Grace Carpenter, dated March 11, 1983 for sewer line easement. (along Judd Street)

Book 3369, page 708—Mary F. Boyles and husband, Harlan E. Boyles, dated August 30, 1984 for water and sewer main easement. (Runs near/along NC Hwy 97 and connects with "Sanitary Sewer Easements and Right-of-Way Acquisitions" BM 1984, Pages 1521-1522)

Book 3369, Page 711—Roy B. Perry and wife, Kaye C. Perry, dated October 17, 1984 for water and sewer main. (Runs near/along NC Hwy 97 and connects with "Sanitary Sewer Easements and Right-of-Way Acquisitions" BM 1984, Pages 1521-1522)

Book 3369, page 713—Melvin M. Lanier and wife, Wilma Lanier, dated October 17, 1984 for water and sewer main easement. (Runs near/along NC Hwy 97 and connects with "Sanitary Sewer Easements and Right-of-Way Acquisitions" BM 1984, Pages 1521-1522)

Book 3369, Page 717—Salie K. Raybon, dated October 17, 1984 for sewer main easement. (From P/L Sta. 4 + 83.65 to P/L Sta. 10 + 66.71 on "Sanitary Sewer Easement-Town of Zebulon" MB 1984, Pages 1521-1522)

Book 3369, Page 719—Beck Brother Veneer Company, Inc., dated October 17, 1984 for sewer main easement. (From P/L Sta. 41 + 59.34 to P/L Sta. 42 + 94.34 on "Sanitary Sewer Easement-Town of Zebulon" MB 1984, Pages 1521-1522)

Book 3369, Page 721—Jesse Daniels and wife, Lovenia Daniels, dated June 26, 1983 for sewer main easement. Deed in Book 2132, Page 165 , connects with Apr 30, 1984 map "Town of Zebulon Utility Easements-Jesse Daniels/William Toney Property"

Book 3369, Page 723—William T. Toney and wife, Helen M. Toney, dated July 6, 1983 for sewer main easement. Deed in Book 2150, Page 475 , connects with Apr 30, 1984 map "Town of Zebulon Utility Easements-Jesse Daniels/William Toney Property"

Book 3369, Page 725—Elijah Guy Eakes and wife, Mary A. Eakes, dated July 2, 1983 for sewer main easement. Deed in Book 2738, Page 75 , connects with Apr 30, 1984 map “Town of Zebulon Utility Easements-Elijah Guy Eakes Property”

Book 3369, Page 727—Robert A. Lanier and wife, Cheryl G. Lanier, dated October 17, 1984 for sewer main easement. Deed in Book 2413, Page 61 , connects with “Sanitary Sewer Easements and Right-of-Way Acquisitions” BM 1984, Pages 1521-1522

Book 3369, Page 729—Norwood N. Smith and wife, Menda H. Smith, dated October 17, 1984 for sewer main easement. Deed in Book 2342, Page 686 , connects with “Sanitary Sewer Easements and Right-of-Way Acquisitions” BM 1984, Pages 1521-1522

Book 3369, Page 732—W.W. Watkins and wife, Aleene M. Watkins, dated October 17, 1984 for sewer main easement. Deed in Book 3243, Page 357 , connects with “Sanitary Sewer Easements and Right-of-Way Acquisitions” BM 1984, Pages 1521-1522

Book 3369, Page 735—Gerald Wayne Lanier and wife, Gina C. Lanier, dated October 17, 1984 for sewer main easement. Book 2630, Page 211 , connects with “Sanitary Sewer Easements and Right-of-Way Acquisitions” BM 1984, Pages 1521-1522

Book 3369, Page 737—W.H. Green, dated October 17, 1984 for sewer main easement. Book 870, Page 504 and Book 932, Page 170 , connects with “Sanitary Sewer Easements-Town of Zebulon” BM 1984, Pages 1521-1522

Book 3369, Page 739—N.R. Gill, Jr. and wife, Mary Sue L. Gill, dated October 17, 1984 for sewer main easement. Book 1850, Page 443 , connects with “Sanitary Sewer Easements-Town of Zebulon” BM 1984, Pages 1521-1522

Book 3397, Page 165—William E. Parrish and wife, Mageline H. Parrish, dated December 17, 1984 for sewer main easement. Book 2230, Page 484 , connects with “Sanitary Sewer Easements-Town of Zebulon” BM 1984, Page 1521

Book 3413, Page 305—Elsie P. Oakley, dated January 8, 1985 for sewer main easement. Book 2716, Page 939 , connects with “Sanitary Sewer Easements-Town of Zebulon” BM 1984, Page 1521

Book 5030, Page 183—Amos C. Estes and wife, Nancy W. Estes, dated November 7, 1991 for easement for sanitary sewer lines and mains. Deed Book 2754, Page 718 and Deed Book 2780, Page 886, referenced to BM 1991, Page 1084

Book 5038, Page 275—Geraldine E. Hood, widow, dated November 21, 1991 for easement for sanitary sewer lines and mains. Deed Book 1260, Page 108, referenced to BM 1991, Pages 1083-1084

Book 5047, page 798—Bertha Pulley Alford, widow, dated December 3, 1991 for easement for sanitary sewer lines and mains. Deed Book 1542, Page 333* (also found in Deed Book 932, Page 466 and Deed Book 5668, page 296), referenced to BM 1991, Page 1079

Book 5050, Page 563—Anne H. Perry Tant, widow, dated December 6, 1991 for easement for sanitary sewer lines and mains. Deed Book 1112, Page 511, referenced to BM 1991, Page 1082

Book 5050, Page 565—Leland W. Hocutt and wife, Magdelena M. Hocutt, dated December 9, 1991 for easement for sanitary sewer lines and mains. Book 3074, Page 752, referenced to BM 1991, Page 1079

Book 5069, Page 14—Neda High Harris, dated December 11, 1991 for easement for sanitary sewer lines and mains. Deed Book 3774, Page 133, referenced to BM 1991, Page 1079

Book 5141, Page 22—William T. Toney and wife, Helen M. Toney, dated March 19, 1992 for easement for sanitary sewer lines and mains. Deed Book 2150, Page 475, referenced to BM 1991, Page 1079

Book 5141, Page 24—Jesse Daniels and wife, Luvenia B. Daniels, dated March 19, 1992 for easement for sanitary sewer lines and mains. Deed Book 2132, Page 165, referenced to BM 1991, Page 1079

Book 5200, Page 407—Beck Brothers Veneer Company, Inc., dated December 10, 1991 for easement for sanitary sewer lines and mains. Deed Book 1144, Page 205 and Deed Book 1460, Page 156* (also in Book 1623, Page 563 and Book 4355, page 609) referenced to BM 1991, Page 1080

Book 5215, Page 637—Parrish Realty Company of Zebulon, Inc., dated May 2, 1992 for easement for sanitary sewer lines and mains. Deed Book 4758, Page 583, referenced to BM 1991, Page 1081

Book 3561, Page 184—Omark Properties, Inc., dated June 12, 1985 for sewer main easement. Deed Book 1854, Page 91, Deed Book 1948, Page 345, and Deed Book 2437, Page 55 (referenced to BM 1984, Pages 1521-1522 “Sanitary Sewer Easements-Property of Omark Properties”)

Book 5232, Page 65—Ulysses Ray Johnson and wife, Linda B. Johnson, dated June 4, 1992 for easement for sanitary sewer lines or mains. Deed Book 3041, Page 937 and Deed Book 1402, Page 169, referenced to “Town of Zebulon, Sanitary Sewer Easement Plat” BM 1991, Page 1081

Book 5293, Page 632—Elijah Guy Eakes and wife, Mary Ann Eakes, dated July 23, 1992 for easement for sanitary sewer lines or mains. Deed Book 2738, Page 75 and Deed Book 4074, Page 524, referenced to “Town of Zebulon, Sanitary Sewer Easement Plat” BM 1991, Page 1079

Book 5391, Page 823—F.H. Adams and wife, Bobbie T. Adams, dated November 4, 1992 for easement for sanitary sewer lines or mains. Deed Book 5391, Page 820 and Deed Book 1402, Page 169, referenced to “Town of Zebulon, Sanitary Sewer Easement Plat” BM 1991, Page 1078

Book 5426, Page 408—Glenn A. Todd, trustee for Zebulon First Baptist Church, dated August 6, 1992 for easement for sanitary sewer lines or mains. Deed Book 316, Page 28, Book 2114, Page 247, Book 2975, Page 497, and Book 2994, Page 570, referenced to “Town of Zebulon, Sanitary Sewer Easement Plat” BM 1991, Page 1078-1079

Book 5844, Page 538—Thomas D. Bunn and wife, Patricia H. Bunn, dated September 28, 1993 for easement for sanitary sewer lines or mains. Deed Book 1789, Page 496, referenced to “Town of Zebulon, Sanitary Sewer Easement Plat” BM 1991, Page 1083

Book 5844, Page 541—Bunn Farms, Inc., dated October 5, 1993 for easement for sanitary sewer lines or mains. Deed Book 5068, Page 215, referenced to “Town of Zebulon, Sanitary Sewer Easement Plat” BM 1991, Page 1082-1083

Book 6239, Page 442—Inez P. McNabb, widow, dated August 12, 1994 for easement for sanitary sewer lines or mains. Deed Book 568, Page 313, referenced to "Town of Zebulon, Sanitary Sewer Easement Plat" BM 1991, Pages 1084-1085

Book 6371, Page 353—Joseph E. Jacobs and wife, Marie W. Jacobs, dated January 1, 1993 for easement for sanitary sewer lines or mains. Deed Book 4142, Page 134, referenced to "Town of Zebulon, Sanitary Sewer Easement Plat" BM 1991, Page 1078

Book 6400, Page 703—Joseph W. Temple and wife, Jimmie F. Temple, dated January 5, 1995 for easement for sanitary sewer lines or mains. Deed Book 1857, Page 507, referenced to "Town of Zebulon, Sanitary Sewer Easement Plat" BM 1991, Page 1078

Book 6497, Page 63—William Craige Broome and wife, Elizabeth B. Broome, dated April 13, 1995 for easement for sanitary sewer lines or mains. Deed Book 3270, Page 609, referenced to "Town of Zebulon, Sanitary Sewer Easement Plat" BM 1995, Page 580

Book 6497, Page 65—Roger Lee Woods and wife, Pamela Poole Woods, dated April 13, 1995 for easement for sanitary sewer lines or mains. Deed Book 2878, Page 940, referenced to "Town of Zebulon, Sanitary Sewer Easement Plat" BM 1995, Page 580

Book 6821, Page 686—Narvil Ruic Gill, Sue Long Gill, Avon Privette, Jr., and Debbie Privette, dated January 3, 1996 for easement for sanitary sewer lines or mains. Referenced to "Town of Zebulon, Sanitary Sewer Easement Plat" BM 1991, Page 1078

Book 7701, Page 243—Michael Norman J. Wright, dated October 10, 1997 for easement for sanitary sewer lines. BM 1997, Page 1491

Book 7704, Page 800—Dickie Vann Bryant and wife, Linda R. Bryant, dated October 13, 1997 for easement for sanitary sewer lines. BM 1997, Page 1491

Book 7713, Page 615—Harold O. Massey and Ruth Williams Massey, dated October 18, 1997 for easement for sanitary sewer lines. BM 1997, Page 1491

Book 7790, Page 417—Wake County Board of Education, dated December 2, 1997 for sewer easement. BM 1997, Page 1492

Book 7790, Page 419—Julia H. Ingram, dated December 5, 1997 for sewer easement. BM 1997, Page 1491 (2706.17 12 0116 000)

Book 7825, Page 338—Robert C. Hardee and Susan P. Hardee, dated December 22, 1997 for sewer easement. BM 1997, Page 1491

Book 8108, Page 1954—Michael Calvin Pate and Frances K. Pate, dated July 21, 1998 for sewer easement. BM 1997, Page 1491

Book 8113, Page 1226—County of Wake, dated April 21, 1998 for sewer easement. BM 1997, Page 1493

Book 8152, Page 2363—Farner's Way, dated September 24, 1998 for water and sewer utility line easement. Deeds in Book 3391, Page 872 and Book 5384, Page 882

Book 8181, Page 173—Marion Braswell Jenkins, Darlene Jenkins Verran, and Yvonne Jenkins Mitchell and husband, Tim Mitchell, dated November 2, 1998 for utility and sewer improvements easement. BM 1998, Page 1813 (2706.17 01 1231)

Book 8478, Page 377—Ernest L. Campbell and wife, Dorothy W. Campbell, dated November 29, 1999 for sewer easement. BM 1999, Page 2014 (parcel #1)

Book 8478, Page 381—Mary Ann Eakes and Crystal Ann Eakes, dated November 17, 1999 for sewer easement. BM 1999, Page 2015 (parcel #6)

Book 8478, Page 385—Wallace E. Jenkins and Phyllis H. Jenkins, dated November 22, 1999 for sewer easement. BM 1999, Page 2014 (parcel #0)

Book 8478, Page 389— Wallace E. Jenkins and Phyllis H. Jenkins, dated November 22, 1999 for sewer easement. BM 1999, Page 2014 (parcel #4)

Book 8478, Page 393— Blair Eddins and wife, Angela R. Eddins, dated November 24, 1999 for sewer easement. BM 1999, Page 2014 (parcel #5)

Book 8478, Page 397— Douglas Y. Perry and Skyline Development Corporation, dated November 19, 1999 for sewer easement. BM 1999, Page 2014 (parcel #2)

Book 8478, Page 401— Wallace E. Jenkins and Phyllis H. Jenkins, dated November 14, 1999 for sewer easement. BM 1999, Page 2014 (parcel #3)

Book 8537, Page 1515— Mary Ann Eakes and Crystal Ann Eakes, dated March 7, 2000 for sewer easement. BM 1999, Page 2016 (parcel #7)

Book 8602, Page 2369— Glaxo Wellcome, Inc., dated June 1, 2000 for temporary sewer easement (to expire 12/31/05 or when permanent easement is ready). Plat Book 2000, Page 896

Book 9839, Page 2626— Omark Properties, Inc., dated November 25, 2002 for sewer easement. (no description of location)

Book 10901, Page 2706— Zebulon Retail Investors, LLC, dated June 7, 2004 for water and sewer utility easement. Plat in Book 2003, Page 1929 and Deeds in Book 10525, Page 1098, Book 10525, Page 1101, and Book 10525, Page 1105

Book 11143, Page 1641— Back Porch Properties, LLC, and Aimet Properties, LLC, dated November 12, 2004 for water, sewer, reclaimed water utility easement. BM 1998, Page 1846 (2715530873), and reference to BM 2004

Book 11429, Page 386— Skyline Development Corporation, dated June 6, 2005 for water, sewer easement. BM 2004, Page 1953 (1795 1156 6719), Braemar Subdivision

Book 1445, Page 347—Judgment for the Town of Zebulon, dated February 24, 1961, against Josephine Broughton, Fannie B. Rutledge, Ruby B. Land and husband, W.C. Land, Gladys B. Dees, Swannanoa B. Lassiter, Joseph Otis Broughton and wife, Maude B. Broughton for a sewer line easement. (west of hospital property along US Highway 64)

Book 2089, Page 667—Sidney C. Eddins and wife, Virginia H. Eddins, F. Leary Davis, Jr., trustee, William E. Parrish, and Eula P. Lewis, dated May 19, 1972 for sewer line easement. (look for map “Town of Zebulon, N.C., Proposed West Side Sewage Improvements Easement Maps” dated Apr 10, 1972)

Book 1311, Page 625—R.H. Bridgers and wife, Kathryn C. Bridgers, B.A. Jones, trustee, and First Federal Savings and Loan Association of Raleigh, dated March 5, 1958, for water main and sewer line easements. Deed in Book 1230, Page 569 and Book 1233, Page 233

Book 2124, Page 629—William E. Parrish and wife, Magaline H. Parrish, dated May 30, 1972, for sewer line easement. (look for map “Town of Zebulon, N.C., Proposed West Side Sewage Improvements Easement Maps” dated Apr 10, 1972)

Book 2893, Page 887—William E. Parrish and wife, Magaline H. Parrish, dated January 9, 1981, for water and sewer line easements. Deed in Book 2595, Page 387

Book 3069, Page 748—William W. Parrish and wife, Magaline H. Parrish, dated December 6, 1982, for water line easements. Deed in Book 2959, Page 653

Book 3442, Page 366-- Judgment for the Town of Zebulon, dated March 5, 1985, against Theda P. Alford and Cecil Alford for 20' sanitary sewer easement. Deed in Book 1572, Page 2 and referenced to "Sanitary Sewer Easements-Town of Zebulon" in BM 1984, Page 1521

Book 3442, Page 376-- Judgment for the Town of Zebulon, dated March 8, 1985, against Wedgwood Village of Zebulon, Inc., Ferd L. Davis, trustee, H.H. Eddins for 20' sanitary sewer easement. Deed in Book 245, Page 591 and referenced to "Sanitary Sewer Easements and Right-of-Way Acquisitions-Town of Zebulon" in BM 1984, Page 1522

Book 3404, Page 825-- Judgment for the Town of Zebulon, dated December 21, 1984 , against Theda P. Alford and Cecil Alford for 20' sanitary sewer easement. Deed in Book 1572, Page 2 and referenced to "Sanitary Sewer Easements-Town of Zebulon" in BM 1984, Page 1521

Book 3442, Page 378-- Judgment for the Town of Zebulon, dated March 8, 1985, against Robert High, for a 20' x 50' easement for sanitary sewer purposes. Deed Book 2441, Page 529 and referenced to "Sanitary Sewer Easements and Right-of-Way Acquisitions-Town of Zebulon" in BM 1984, Page 1522

Book 3479, Page 423-- Judgment for the Town of Zebulon, dated March 27, 1985, against Charles D. Vick, for a 10' permanent easement. Deed in Book 2251, Page 263 and referenced to "Sanitary Sewer Easements-Town of Zebulon" in BM 1984, Page 1521

Book 3479, Page 425-- Judgment for the Town of Zebulon, dated March 27, 1985, against James York, Queen York Baker, Shirley York McClean, Ella May York, and Howard York, for a 10' permanent easement (no purpose given). Nelson York Heirs property referenced in "Sanitary Sewer Easements-Town of Zebulon" in BM 1984, Page 1521

Book 3575, Page 449-- Judgment for the Town of Zebulon, dated October 7, 1985, against Zebulon-Wendell Baptist Temple, Inc., for a 20' permanent easement. "Sanitary Sewer Easements-Town of Zebulon" in BM 1984, Page 1521

Book 3591, Page 697-- Judgment for the Town of Zebulon, dated October 18, 1985, against Robert High, for a 20' easement for sanitary sewer purposes. Deed Book 2411, Page 529 and referenced to "Sanitary Sewer Easements and Right-of-Way Acquisitions-Town of Zebulon" in BM 1984, Page 1522

Book 3680, Page 863-- Judgment for the Town of Zebulon, dated March 12, 1986, against Wedgwood Village of Zebulon, Inc., Ferd L. Davis, trustee, H.H. Eddins for 20' sanitary sewer easement. Deed in Book 2693, Page 591 and referenced to "Sanitary Sewer Easements and Right-of-Way Acquisitions-Town of Zebulon" in BM 1984, Page 1522

Book 7319, Page 744—W. Thurston Debnam and wife, Dianne M. Debnam, dated January 30, 1997 for storm drainage easement. See "Permanent Drainage Easement Wedgwood Subdivision for the Town of Zebulon" BM 1996, Page 1610 and Deeds in Book 2929, Page 854 and Book 2950, Page 178

Book 8640, page 1326—Kevin R. and Ginger D. Broussard, dated July 6, 2000, granting easement to water line as a part of an agreement to extend water services to said customer. (location unknown)

Book 9454, Page 374—Resolution 2002-17, which closes an alley running south off of NC Highway 97, but retaining easement for utilities. SW corner of Lot 4, BM 1885, Page 68 (behind new Eckerd Drug to RBC Centura Bank)

Book 11097, Page 1560—Saintes Assisted Independent Living at Zebulon, Inc., dated June 7, 2004 for utility easement as part of an agreement to extend water and sewer services to customer's property on Pony Road.

Book 11930, Page 1027—Illinois Tool Works, Inc., dated April 19, 2006 for a temporary construction easement and a 20' permanent easement for underground sewer line. Deed Book 2000, Page 141 and plat "Sanitary Sewer Easement for Town of Zebulon, Northern Sewer Interceptor Phase I" from November 2005

Book 11951, page 1740—Maria A. Saffle, Jose A. Correa, and Abraham Jaimez, trustees of Iglesia Cristiana Resurreccion for a temporary construction easement and a 20' permanent easement for underground sewer line. Deed Book 10852, Page 1352 and plat "Sanitary Sewer Easement for Town of Zebulon, Northern Sewer Interceptor Phase I" from November 2005

Exhibit C Water, Sewer and Reclaimed Water Utility Property and Fixed Assets to be Retained by Zebulon

Property/Asset	Address
Neptune Hydrant Meter/RPZ Stand #2	Public Works Facility
Generator at PS#10 Tippett Road	Tippett Road
Public Works Facility	Horton Street
Old WTP site (PIN 2705768182)	PIN 2705768182 529 E. Horton Street Book 01417, Page 0101 8.31 acres (former Water Plant now used as yard waste recycling center facility)
Park (PIN 2705546639)	PIN 2705546639 320 E. Barbee Street Book 5911, Page 573 2.79 acres (sewer line runs across this, but is adjacent to Community Park: Zebulon to provide Raleigh an easement)
Old Water tank site behind Zebulon Council chambers (PIN 2705357125)	PIN 2705357125 0 E. Horton Street Not in Register of Deeds Books .06 acres
Old Well Site (PIN 270536077)	PIN 2705360777 113 E. Glenn Street Book 1324, Page 612 .23 acres (old well used to be on this site, now water line runs across this; Zebulon to provide Raleigh an easement)
PIN 2705262867	PIN 2705262867 106 W. Lee Street Book 05666, Page 550 .23 acres

Exhibit D Summary of System Upgrade and Improvement Projects

Project Identifier	Project Title	Estimated Fiscal Year	Total Project Cost	Project Description
	Water Distribution System			
WD01	Water Distribution System Rolling Stock/Equipment Needs	2007	$100,000	Vehicles and equipment needs for maintenance, to supplement equipment to be transferred from Zebulon. Allowance based on prior utility mergers.
WD02	AMR and Backflow Retrofit Program	2008	$200,000	Approximately 2/3 of system doesn't have backflow preventers. Based on $350 for AMR and backflow; $200 backflow only.
WD03	Water Line E. McIver 2" to 6"	2008	$95,000	Installation of approximately 1000 LF of 6-inch DIP potable water line on the 100 and 200 blocks of East McIver street, replacing an existing galvanized line and providing greater fire protection.
WD04	Valve Inserts	2008	$30,000	Installation of three 12-inch valves on the southern water transmission line in areas where the water distribution grid cannot be isolated.
WD05	Replace Galvanized Pipe with 4" PVC/Ductile Iron Pipe	2009	$200,000	Replace 3,600 ft (2% of total distribution main) of galvanized pipe with 4" PVC or ductile iron. $55/ft allowance.
WD06	Conversion of existing chemical feed station to liquid feed	2009	$0	Not required if feed station removed. Project included for reference only.
WD07	East Wake Water Transmission Improvements (Martin Pond Rd and NC 97)	2010	$1,450,000	Cost share for 24" segment from Martin Pond Road to NC97. Cost based on March 2006 East Wake Water Study report by Hazen and Sawyer.
WD08	Poole Rd 30-inch Main and Martin Pond Rd Booster PS	2010	$1,630,000	Cost share for the 30" segment from Poole Road to Martin Pond Road only. Cost based on March 2006 East Wake Water Study report by Hazen and Sawyer.
	Wastewater Collection System			
WW01	WW Collection System Rolling Stock/Equipment Needs	2007	$150,000	Vehicles and equipment needs for maintenance, to supplement equipment to be transferred from Zebulon. Allowance based on prior utility mergers.
WW02	Collection System Study	2007	$200,000	Targeted sewer system study to identify areas where projects could reduce infiltration and inflow in Zebulon system.
WW03	Collection System Rehab Projects	2008	$800,000	Allowance for manhole repairs and replacements throughout Zebulon to address deficiencies identified through inventory, field inspections and analysis conducted under project WW02.

Exhibit D Summary of System Upgrade and Improvement Projects

Project Identifier	Project Title	Estimated Fiscal Year	Total Project Cost	Project Description
WW04	WWTP and Pump Station SCADA & Telemetry Upgrade. Includes radio survey	2008	$225,000	Installation of SCADA and telemetry improvements to be consistent with Raleigh standards.
WW05	Azalea Drive Lift station Removal	2008	$80,000	Installation of approximately 500 LF of 8-inch gravity sewer to allow for the removal of the Azalea Drive Sanitary Sewer Lift Station.
WW06	Phase II Northern Interceptor Improvements	2010	$1,135,000	Installation of 3,920 LF of 12 and 18-inch sanitary sewer to provide additional capacity to the Zebulon Northern Interceptor.
	Water Treatment Plant			
WT01	Demolition of basins at old Zebulon WTP	2007	$100,000	Allowance for demolition of concrete structures (assumes demolition to 2' below ground level).
WT02	New generator for booster station	2008	$75,000	Installation of new, larger generator for water booster station, sized to operate pumps 1 and 2 of the facility.
WT03	Repaint Greenpace Road Tank	2010	$200,000	Paint and repair of a 1 million gallon elevated storage tank.
WT04	Greenpace Road Tank washout	2008	$20,000	Interior cleaning and total inspection of Green Pace Road 1 million gallon elevated storage tank.
	Wastewater Treatment Plant			
WWT01	Mixers Improvements for Aeration Basin (Outer Rings Only)	2008	$100,000	Mixer improvements to improve settling in anoxic portion of oxidation ditch.
WWT03	Generator Improvements/Replacement at Pump Stations	2008	$325,000	Replacement generator, sized to serve all equipment. Price includes a 750kW generator for the WWTP and also includes for two 60kW generators at wastewater pump stations.
WWT05	WWTP Biosolids Improvements	2008	$1,600,000	Additional digester for batching the aerobically digested biosolids and then sending to the holding tank for post digestion thickening. This would allow staff to complete a 30 day VSR test prior to sending biosolids to holding tanks where it will be blended with other batches. Cost based on a 55' diameter digester, 13' deep.

Exhibit D Summary of System Upgrade and Improvement Projects

Project Identifier	Project Title	Estimated Fiscal Year	Total Project Cost	Project Description
WWT06	WWTP Odor Control	2008	$340,000	Covers for the aerobic digester(s), sludge holding tank and influent structure and scrub the foul air so that equipment and processes can run as needed. Cost based on $30/sq ft for 2nr 55' diameter digester, 1nr holding tanks, assumed to be same size, plus 50sq ft for influent structure.
WWT07	WWTP Security Improvements	2008	$80,000	Camera system for facility for added security. Cost based on $5k per camera (10nr) and $10 for recording equipment.
WWT08	Lab/Office Renovations	2009	$50,000	Renovations to buildings.
WWT09	Surge Basin - 1 MG	2010	$1,000,000	Flow equalization for both diurnal equalization and high flow diversion.
WWT10	Bar Screen system Improvements	2010	$200,000	Existing ½" spaced vertical screen should be replaced with fine screen (3 – 5 mm) technology that will fit into the existing influent structure and work with existing hydraulics. Discharge into a new compactor to dry grit prior to discharge into dumpster
WWT11	Feasibility Study for Plant Future/expansion	2007	$100,000	Study to investigate alternative discharges from the Little Creek facility.
WWT12	Little Creek WWTP Expansion Design Process/permitting	2007 to 2009	$1,200,000	Design project leading to expansion of Little Creek WWWTP. Project includes permitting. Expansion project is in addition to the work required under the re-rating project.
WWT13	Little Creek WWTP Expansion (with Little River Discharge)	2009 to 2011	$7,000,000	Expand from re-rated 2.2 mgd MMADF to 3.6 mgd by 2016 (up to 5.7 mgd capacity needed by 2030). Cost based on $7/gallon for 1 MGD ADF
WWT14	Little Creek WWTP Re-rating	2007	$4,000,000	Re-rating of WWTP. Project includes addtional UV channel, effluent filters, de-nitfrification, and improvements to the headworks and clarifiers.
	Reuse System			
RE01	VFD/Generator Improvements-Reclaimed Water Pump Station	2008	$160,000	Installation of a standby generator, automatic transfer switch and variable frequency drives for the reclaimed water booster station at Little River WWTP.

Exhibit D Summary of System Upgrade and Improvement Projects

Project Identifier	Project Title	Estimated Fiscal Year	Total Project Cost	Project Description
RE02	Repaint Reclaimed Water Tank	2012	$125,000	Paint and repair of elevated reclaimed water tank because of age and use.
	General Utility Projects			
GEN01	Conversion of Zebulon CAD files to GIS	2007	$42,000	Add to Withers & Ravenel current project for Raleigh. Approx 36 miles of water pipe, 32 miles of gravity sewer and 5.3 miles force main. Cost estimated by W&R
GEN02	Billing Data Conversion	2007	$85,000	Conversion of Zebulon Utility customer account information and billing data by Contractor
GEN03	Consultant Services	2007	$127,000	Merger Implementation Assistance and Shares in East Wake Water/Sewer Plans
GEN04	Wake County Reimbursement	2007 to 2011	$70,845	Reimbursement for 1996 Water line to PYA
GEN05	IWOS Devices	2007	$25,000	Field laptop computers to be mounted in service vehicles, with Inventory and Work Order System computerized maintenance management system. Five field devices are anticipated.
GEN06	Customer Service Center Set-Up	2007	$10,000	Allowance for computer, software, T1 link and telephone for customer service station at Zebulon.
	Total Merger Project Cost		**$23,329,845**	
	Non-CIP Costs			
WT05	Additional Water treatment capacity from Raleigh	2007	$6,600,000	Purchase of 1.5 MGD capacity at $4.44 per gallon
WW08	Wastewater treatment capacity from Raleigh	2008	$3,800,000	Potential purchase of 1 MGD capacity at $3.80 per gallon. Capacity purchase will be required if Little Creek WWTP expansion is not feasible.
WW07	**Debt Service** for Phase I Northern Interceptor Improvements	2007 to 2012	$470,400	
	Total Non-CIP Cost		**$7,070,000**	Total excludes the potential wastewater capacity purchase

Exhibit E Schedule of Estimated Revenues and Expenses

Exhibit F WTP Property Transfer and WWTP Easement

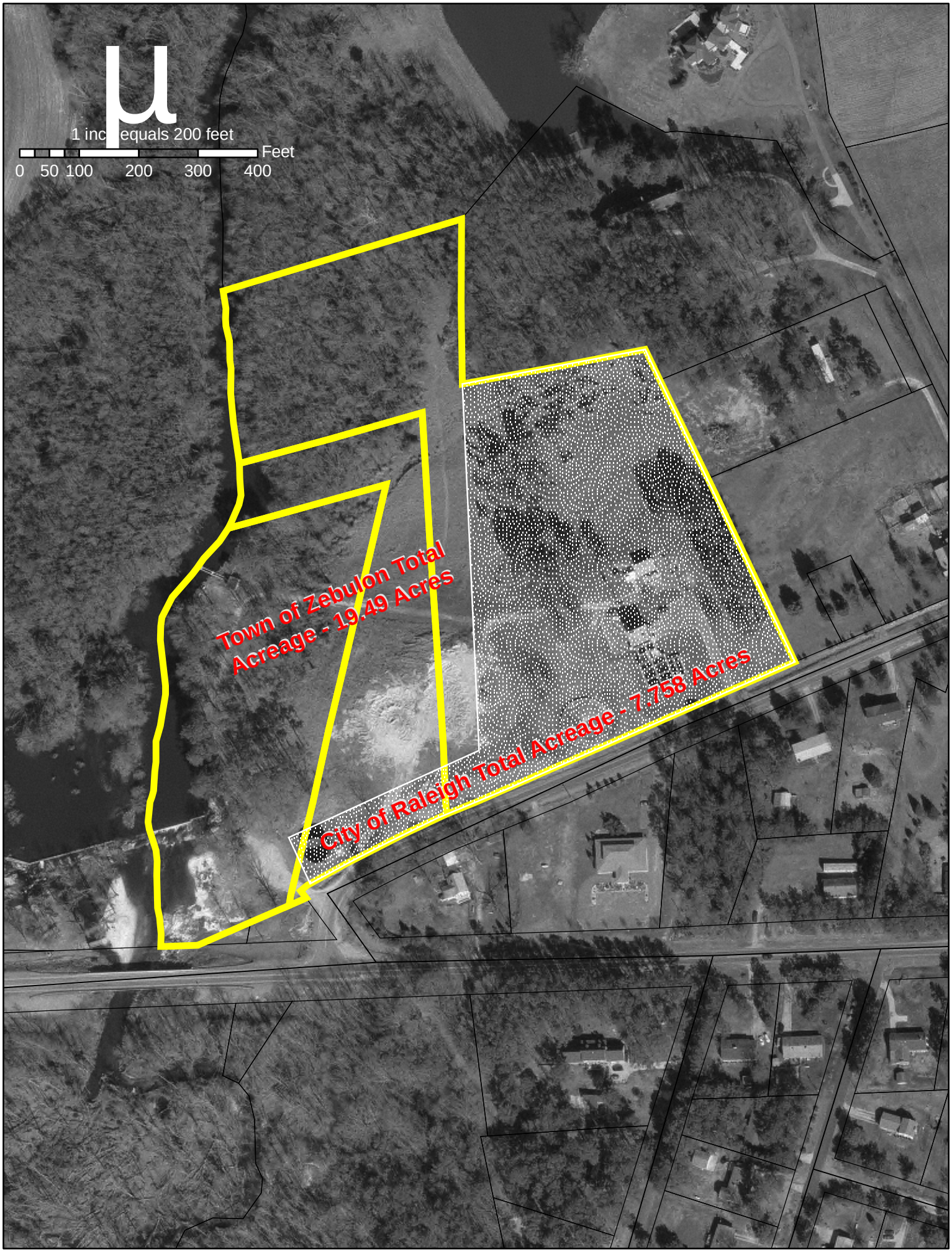
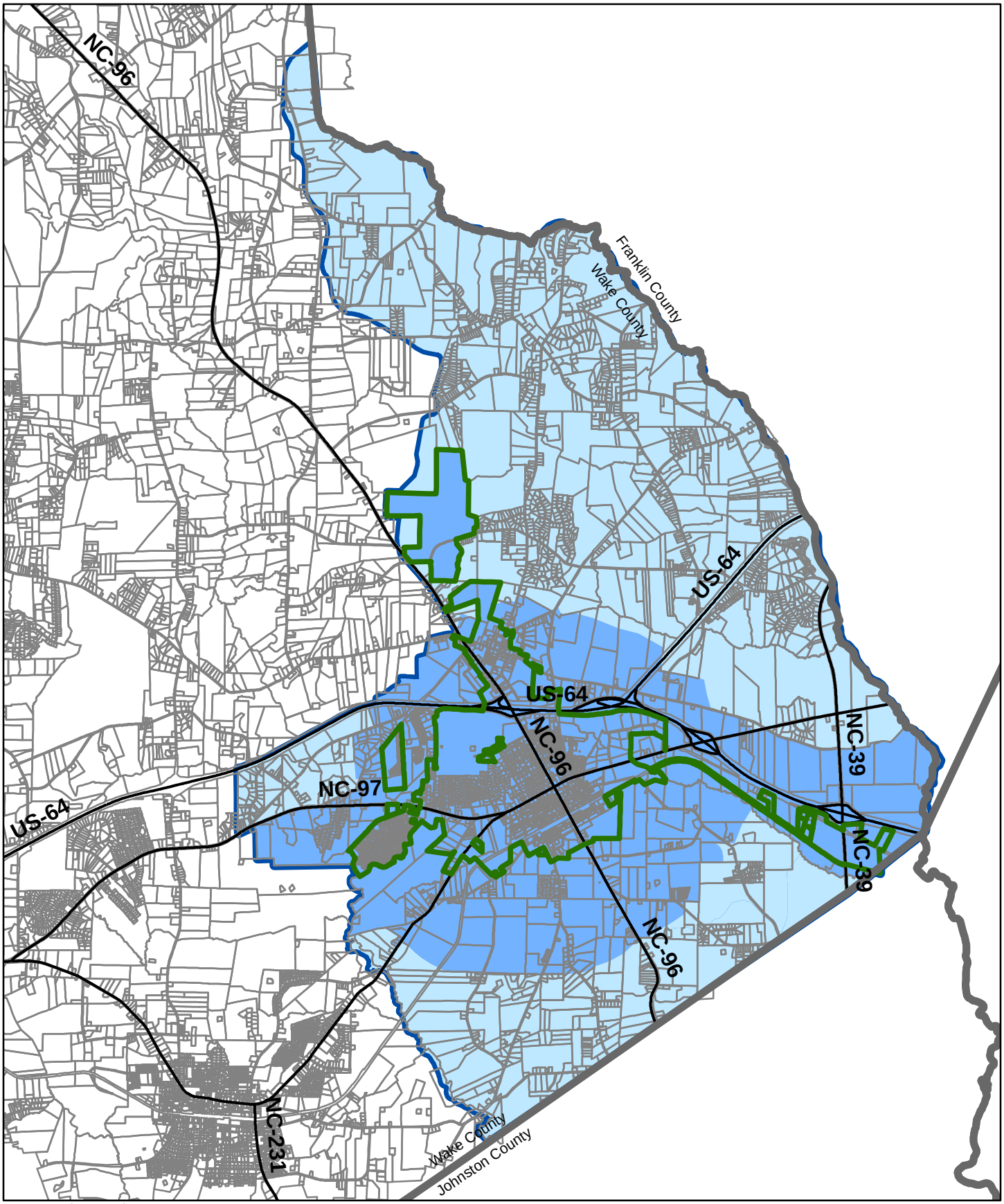

1 inch equals 200 feet
Feet
0 50 100 200 300 400
Town of Zebulon Total Acreage - 19.49 Acres
City of Raleigh Total Acreage - 7.758 Acres

Exhibit G Service Area Maps



Major Roads
Parcels
Corporate Limits
ETJ
Urban Service Area

0 1 2 Miles

1:75,000

Town of Zebulon
Urban Service Area

CH2MHILL

Exhibit H Bonded Indebtedness

Raleigh-Zebulon Utility Merger
Exhibit H - Bonded Indebtedness

Year	1981 Installment Note		1997 General Obligation Bonds		**TOTAL**		
	Principal payment	Interest payments	Principal payment	Interest payments	Principal payment	Interest payments	Total
11/01/2006		$42,983.27		$42,750.00			
5/1/2007	$290,428.00	$42,983.27	$150,000.00	$42,750.00	$440,428.00	$171,466.54	$611,894.54
11/01/2007		$37,610.35		$39,075.00			
5/1/2008	$290,428.00	$37,610.35	$150,000.00	$39,075.00	$440,428.00	$153,370.70	$593,798.70
11/01/2008		$32,237.43		$35,400.00			
5/1/2009	$290,428.00	$32,237.43	$150,000.00	$35,400.00	$440,428.00	$135,274.86	$575,702.86
11/01/2009		$26,864.52		$31,725.00			
5/1/2010	$290,428.00	$26,864.52	$150,000.00	$31,725.00	$440,428.00	$117,179.04	$557,607.04
11/01/2010		$21,491.60		$28,050.00			
5/1/2011	$290,428.00	$21,491.60	$150,000.00	$28,050.00	$440,428.00	$99,083.20	$539,511.20
11/01/2011		$16,118.68		$24,375.00			
5/1/2012	$290,428.00	$16,118.68	$150,000.00	$24,375.00	$440,428.00	$80,987.36	$521,415.36
11/01/2012		$10,745.76		$20,700.00			
5/1/2013	$290,428.00	$10,745.76	$150,000.00	$20,700.00	$440,428.00	$62,891.52	$503,319.52
11/01/2013		$5,372.84		$17,025.00			
5/1/2014	$290,428.00	$5,372.84	$150,000.00	$17,025.00	$440,428.00	$44,795.68	$485,223.68
11/01/2014				$13,350.00			
5/1/2015			$150,000.00	$13,350.00	$150,000.00	$26,700.00	$176,700.00
11/01/2015				$9,675.00			
5/1/2016			$150,000.00	$9,675.00	$150,000.00	$19,350.00	$169,350.00
11/01/2016				$6,000.00			
5/1/2017			$150,000.00	$6,000.00	$150,000.00	$12,000.00	$162,000.00
11/01/2017				$2,250.00			
5/1/2018			$90,000.00	$2,250.00	$90,000.00	$4,500.00	$94,500.00

Source: Fax from the Town of Zebulon (Emily Thomas), May 29, 2003
Updated David Green March 21, 2006 from FY 2005 CAFR, pp 47-49.

Exhibit I Extract of Agreement with Carolina Mudcats

13.1 Marketing Responsibilities. Pursuant to the Management Agreement, the Stadium Manager is responsible for the marketing and content of all advertising located on the Premises; the content to be consistent with other National Association member facilities. In the event that the agreement with the Stadium Manager for said marketing is terminated for any reason, the exclusive right to market and to determine content of said advertising shall be granted to Lessee on the same terms and conditions as stated in the Management Agreement.

13.2 Broadcast Rights. Lessee shall have exclusive rights to radio and television broadcasts of all Lessee events at the Premises.

13.3 Premises Signs. In addition to all previously described advertising rights, the Lessee or its related entity is specifically granted an exclusive license to construct and own signs on that part of the Premises located north of the Stadium more specifically described as the second tract in Book of Maps 1990 page 1375, Wake County Register. Such signs may be lighted, provided that any outdoor signs constructed pursuant to this license shall conform to all state and local government requirements. Lessor will provide any necessary electricity easement. Lessor shall not permit any third party to construct signs on this or any other part of the Premises. Lessee's right

to construct and own signs under this Section 13.3 is separate and distinct from the right to decorate the water tower with a sign as described in Section 13.4, and section 13.4 shall not be interpreted as a limitation on section 13.3, and section 13.3 shall not be interpreted as controlling section 13.4.

13.4. Water tower. Lessor and Lessee agree that Lessor may construct a water tower on that part of the Premises located north of the Stadium more specifically described as the second tract in Book of Maps 1990 page 1375, Wake County Register. Lessor and Lessee further agree that the water tower shall be painted a reasonable shade of white with such paint to be maintained at Lessor's expense. Lessor shall be entitled at its expense to place signs with the name "Town of Zebulon" and/or "Zebulon" at reasonable locations on the water tower so as to be visible from the adjacent highway, provided that such signs shall not interfere with Lessee's rights to place a sign as described in this Section 13.4. Lessee may decorate the water tower with a sign that may include some or all of the following elements: the words "Five County Stadium," the words "Home of the Mudcats," the Mudcats' logo, and stitches to resemble a baseball. Such sign and design if any shall be made, installed, and maintained at Lessee's expense, except in the event of vandalism or other damage to the sign to the extent

covered by Lessor's insurance. Such sign, as well as any installation or maintenance personnel and contractors used by Lessee to install, service, and/or maintain Lessee's sign on the water tower shall be subject to Lessor's prior approval, which approval shall not be unreasonably withheld or delayed. The shade of white for the water tower and the location of the "Zebulon" signs for Lessor other than "Zebulon" signs on the stem of the water tower shall be subject to Lessee's prior approval, which approval shall not be unreasonably withheld or delayed. Lessor agrees that it will not sell to any third party the right to put any other words or symbols on the water tower. Notwithstanding Section 13.3 or anything else in this Agreement to the contrary, Lessee acknowledges that it shall not have any other naming or signage rights to the water tower without the prior written consent and approval of Lessor, except as otherwise specifically provided in this Section 13.4. Attached hereto as Exhibit E is a property description and map depicting the location of the water tower property to which Lessor shall have all rights of access and use, notwithstanding Lessee's leasehold interest, provided that Lessee shall enjoy such rights on the water tower property as are expressly granted in Sections 13.3 and 13.4. Disputes regarding the signs on the water tower which cannot be resolved informally shall be submitted to

arbitration as provided in the Lease.

14.0 INDEMNIFICATION AND INSURANCE

14.1 Indemnification by Lessees. The Lessee agrees to indemnify and hold harmless the Lessor and its respective officers and directors from claims brought against it for personal injury, death, property damage and any other losses, damages, charges or expenses, including reasonable attorneys' fees and expenses, which are actually incurred in connection with, or by reason of any material act, omission or negligence of Lessee during Lessee's use of the Premises.

The Lessee indemnifies and holds harmless Lessor, its officers, directors, employees and agents with respect to any claim or liability for loss or theft of, or damage to, personal property of the Lessee, its employees and players, players for opposing teams, umpires, concessionaires, employees and agents of concessionaires, Stadium attendees and others, except to the extent that such loss, theft or damage results from the act of Lessor, or its employees, agents or sub-contractors.

14.2 Indemnification by Lessor. To the extent allowed by law, the Lessor agrees to indemnify and hold harmless the Lessee and its respective officers, directors, employees and agents from claims brought against it for personal injury, death, property damage and any other losses, damages, charges or

EXHIBIT E

EXHIBIT E - WATER TANK PROPERTY DESCRIPTION

Being all of that parcel of land beginning at a point on the northerly right-of-way of U.S. Highway 264 Alternate, said point of beginning having North Carolina Grid Coordinates (N.A.D. 83 N(Y) = 753,732.78, E(X) = 2,216,364.03) and being N 63 deg. 07′ 00″ W - 97.86 feet from an existing right-of-way monument located at the intersection of the northerly right-of-way of U.S. Highway 264 Alternate and the westerly right-of-way of N.C. Highway 39, thence from said point of beginning with and along the northerly right-of-way of U.S. Highway 264 Alternate N 63 deg. 04′ 08″ W - 80.00 feet to a point, cornering; thence N 26 deg. 53′ 00″ E - 80.07 feet to a point, cornering; thence S 63 deg. 01′ 16″ E - 49.64 feet to a point on the southerly right-of-way of U.S. Highway 264, thence with and along the southerly right-of-way of U.S. Highway 264 S 31 deg. 05′ 57″ E - 35.57 feet to point, thence leaving said right-of-way S 26 deg. 53′ 00″ W - 61.19 feet to the point of beginning, containing 6,119.02 square feet (0.14 acres).

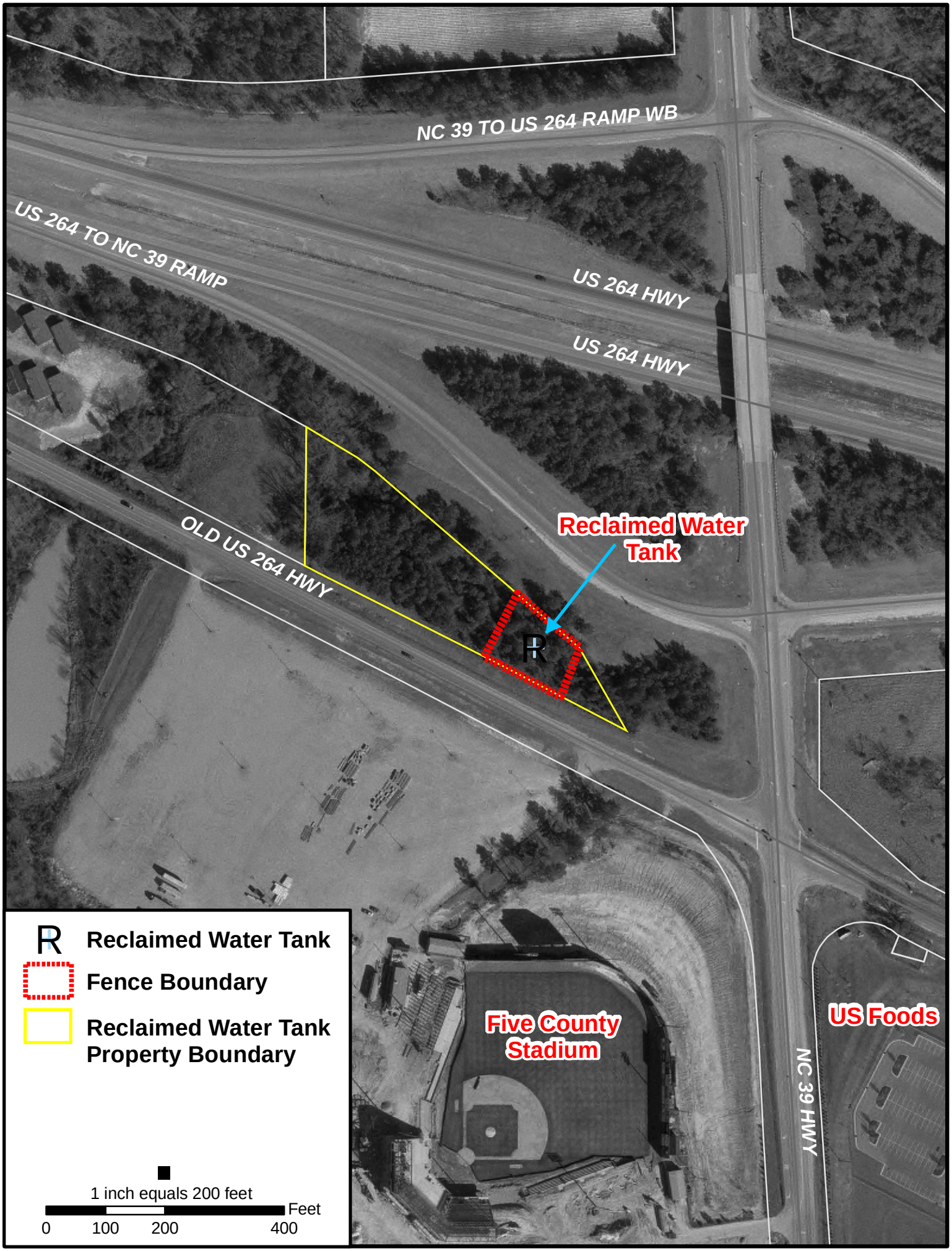

NC 39 TO US 264 RAMP WB
US 264 TO NC 39 RAMP
US 264 HWY
US 264 HWY
OLD US 264 HWY
Reclaimed Water Tank
R
Five County Stadium
US Foods
NC 39 HWY
R Reclaimed Water Tank
Fence Boundary
Reclaimed Water Tank Property Boundary
1 inch equals 200 feet
Feet
0
100
200
400

Exhibit J Agreement With Town of Middlesex

WASTEWATER TREATMENT CONTRACT

THIS CONTRACT for the treatment of wastewater is entered into as of the 16th day of August, 1995, between the TOWN OF ZEBULON, hereinafter referred to as the "Seller" and the TOWN OF MIDDLESEX, hereinafter referred to as the "Purchaser", both North Carolina municipal corporations.

WITNESSETH

WHEREAS, the Purchaser intends to apply for loans and grants from Rural Economic and Community Development for the purpose of constructing a wastewater system to satisfactorily serve all residents of the Purchaser and other users as described on plans now on file in the office of Purchaser, and

WHEREAS, to accomplish the purpose of providing wastewater services to the residents and other users, the Purchaser will require a means of wastewater treatment, and

WHEREAS, the Seller owns and operates a wastewater collection and treatment system with a capacity currently capable of serving the present customers of the Seller's system and the residents of Purchaser and other users as shown on the plans of the aforesaid system to be constructed, and

WHEREAS the Board of Commissioners of the TOWN OF ZEBULON on the 16th day of August, 1995, adopted the contract for the sale of wastewater treatment services to the Purchaser in accordance with the provisions of the contract and the execution of this contract by the Mayor and attested by the Town Clerk was duly authorized, and

WHEREAS the Purchaser adopted this contract on the 16th day of August, 1995, for the purchase of wastewater treatment services from the Seller in accordance with the terms set forth in the contract and the contract was approved and the execution of this contract by the Mayor and attested by the Town Clerk was duly authorized,

NOW, THEREFORE, in consideration of the foregoing and the mutual agreements hereinafter set forth,

A. The Seller Agrees:

JAN 15 1997

A. The Seller Agrees:

1. (Quality and Quantity) To furnish the Purchaser, at a point of reception hereinafter specified, during the term of this contract or any renewal or extensions thereof, a means of transmitting wastewater of the Purchaser through the wastewater treatment facility of the Seller, to a final discharge point within the receiving stream, with treated effluent meeting all State and Federal regulatory requirements, in such a quantity as may be required by the Purchaser not to exceed 0.19 MGD.

2. (Point of Delivery) Wastewater of the Purchaser will be received within a proposed manhole of the Seller's wastewater collection system on N.C. Highway 39 as shown on the plans of the system now on file in the office of the Purchaser and attached as Exhibit A. Emergency failures of transmission and/or treatment due to main breaks, power failure, flood, fire, earthquake or other catastrophe shall excuse the Seller from this provision for such reasonable period of time as may be necessary to restore service.

3. (Billing Procedure) To furnish the Purchaser, not later than the tenth day of each month, with an itemized statement of the amount of wastewater treated by the Seller and all applicable charges.

B. The Purchaser Agrees:

1. (Metering Equipment) To furnish and install, at its own expense, necessary metering equipment and other required devices of standard type for properly measuring the quantity of wastewater delivered to the Seller, meeting specifications approved by the Seller, within the final pumping station and to calibrate such metering equipment once every twelve (12) months unless such repair or calibration becomes necessary. A metering device registering not more than two percent (2%) above or below the test result shall be deemed to be accurate. The previous readings of any meter disclosed by test to be inaccurate shall be corrected for the three months (3) previous to such test in accordance with the percentage of inaccuracy found by such tests. If any meter fails to register for any known period, the amount of wastewater pumped during such period shall be deemed to be the amount of wastewater delivered in the corresponding period immediately prior to the failure, unless the Seller and Purchaser shall agree upon a different amount.

   The metering equipment shall be read on a monthly basis. Appropriate officials of the Seller shall at all reasonable times have access to the meter for the purpose of recording its readings.

2. (Sampling Equipment) To install a suitable wastewater sampling station for the use of the Seller, said facility shall be installed at the location of the metering facility as previously described under Item 1 above and said design is subject to approval by the Seller. The wastewater sampling station shall include a flow proportional, refrigerated, sequential sampler housed in a locked compartment. The maintenance of the sampling station shall be performed by the Purchaser.

For the purpose of determining certain portions of the treatment charges, the Seller shall collect at the point noted above, flow proportional composite samples, and shall analyze these samples for the following parameters at the frequency indicated.

Parameter	Frequency
BOD, Suspended Solids, Ammonia	Monthly
Metals (10)	Quarterly

The Seller shall provide the Purchaser, upon request, equal split portions of the samples taken for analysis by the Seller. Reports on the analysis shall be submitted by the Seller in writing to the Purchaser on a monthly basis. Discovery, by the Seller, of violations of discharge limitations for toxic substances or heavy metals, by the Purchaser, shall be reported by the Seller to the Purchaser within 24 hours of the analysis identifying such violation.

The cost of all monthly testing shall be absorbed by the Seller. The cost of all quarterly testing shall be paid for by the Purchaser.

3. (Rates, Costs and Payment Date) To pay the Seller, no later than the twentieth day of the month in which the bill was received, for wastewater treated in accordance with the rates listed below. A late charge of 1.5% per month shall be added on all unpaid balances. Purchaser agrees to pay Seller in accordance with the following schedule:

(1) (Rates and Volume Loading) In accordance with the following:

Charge	Flow
$506,194.00 Initial tap-on fee	
56.00 per day	50,000 GPD minimum (1,500,000 Gal/Mo)
1.12 per 1000 gal	50,001 - 190,000 GPD (1,500,000 - 5,700,000 Gal/Mo)
1.67 per 1000 gal	Over 5,700,000 Gal/Mo

(2) (Organic Loading) In accordance with the following:

Contaminant	In Excess of	Rate of Excess
BOD	240 mg/l	$ 0.25 per lb.
TSS.	240 mg/l	$ 0.50 per lb.
Ammonia	20 mg/l	$ 1.25 per lb.

4. Purchaser will construct all necessary sewer mains, pump stations and force mains in order to connect to the existing sewer system of Seller at the point of delivery set forth in paragraph (A)(2) hereinabove. Purchaser will be the sole owner of all sewer mains, pumping stations, force mains, flow meters and all other related equipment, wherever located, constructed or installed by it. Purchaser will be responsible for making repairs to all property owned by it.

   In the future, should the Seller desire to connect to any portion of the Purchaser's system to accommodate development within Wake County, the Seller will pay the capital cost of any upgrade of the Purchaser's system required to accommodate the additional flow generated by the Seller.

C. <u>It is further mutually agreed between the Seller and the Purchaser as follows</u>:

1. (Term of Contract) That this contract shall extend for a term of forty (40) years from the date of the initial receipt of any wastewater as shown by the first bill submitted by the Seller to the Purchaser and, thereafter may be renewed or extended for such term, or terms as may be agreed upon by the Seller and the Purchaser.

2. (Receipt of Wastewater) That thirty (30) days prior to the estimated date of completion of construction of the Purchaser's wastewater interceptor collection system, the Purchaser will notify the Seller in writing the date for the initial delivery of wastewater.

3. (Failure of Delivery) That the Seller will, at all times operate and maintain its system in an efficient manner and will take such action as may be necessary to furnish the Purchaser with the maximum capacities required by the Purchaser and stated herein. Temporary or partial failures to receive wastewater shall be remedied with all possible dispatch.

4. (Modification of Contract) That the provisions of this Contract pertaining to the schedule of rates relating to both quantity and quality to be paid by the Purchaser for wastewater received are subject to modification on July 1 of each succeeding year as determined by the Seller. Revised rates shall be based on the cost of operation and maintenance of Seller's wastewater treatment plant. Costs associated with the operation, maintenance and other budget items of Seller's sanitary sewer system shall not be included in the race.

5. (Regulatory Agencies) That this contract is subject to such rules, regulations, or laws as may be applicable to similar agreements in this State and the Seller and Purchaser will collaborate in obtaining such permits, certificates, or the like, as may be required to comply therewith.

6. (Miscellaneous) That the construction of the improvements to the wastewater system of the Purchaser is being financed by a loan made or insured by the United States of America acting through the Rural Economic and Community Development of the U. S. Department of Agriculture and the provisions hereof pertaining to the undertakings of the Purchaser are conditioned upon the approval, in writing, of the State Director of Rural Economic and Community Development.

7. (Successor to the Purchaser) That in the event of any occurrence rendering the Purchaser incapable of performing under this contract, any successor of the Purchaser, whether the result of legal process, assignment, or otherwise, shall succeed to the rights of the Purchaser hereunder.

8. (Indemnity of Seller) That it is understood and agreed by and between Seller and Purchaser that Seller shall not be liable for any failure of the wastewater system of Purchaser and that Purchaser hereby agrees to indemnify Seller against any loss, costs, expenses, causes of action and judgements in connection with said failure which may be established in favor of customers of Purchaser's system.

9. The Purchaser shall adopt and place into effect, a Sewer Use Ordinance

including an Industrial Pretreatment Program which shall be no less stringent than the Sewer Use Ordinance of the Seller. The Purchaser's Sewer Use Ordinance shall be prepared in accordance with all appropriate STATE or EPA Regulations which presently exist, or which may be in effect at the time of the adoption of said ordinance. The Purchaser's Sewer Use Ordinance shall be approved by the Seller prior to its adoption by the Purchaser. The Purchaser shall amend its Sewer Use Ordinance as required in the future to assure that it is continuously in accordance with appropriate STATE and EPA regulations, and no less stringent that the Sewer Use Ordinance of the Seller.

The Purchaser shall comply with all requirements of the Seller's Industrial Pretreatment Program. The Seller will administer the Industrial Pretreatment Program and issue all permits for the Industrial Pretreatment Program for the Purchaser. The Purchaser will reimburse the Seller its actual expense in administering this program. The administration of the Industrial Pretreatment Program will include the Purchaser receiving the industrial applications from their customers and then submitting the application material to the Seller for review and permitting. The Purchaser will approve all new and additional flow requests from its industrial customers prior to the Seller issuing any permit. The Seller will calculate the amounts for any industrial surcharges and add this to the Purchaser's monthly bill. The Purchaser will be responsible for billing and collecting the surcharges from the appropriate industries. If enforcement action is needed, the Purchaser will follow its "Enforcement Response Plan" and when necessary the Purchaser will terminate the industry's water or sewer service after notification has been given by the Seller. If the Purchaser fails to terminate the industry's water and sewer service after notification, then the Seller will have the right to terminate the industry's process discharge connection. When civil penalties are involved, the Seller shall notify the Purchaser of any penalty to be assessed, and the Seller shall then assess such civil penalty to the industrial customer.

10. Should Purchaser cause an overflow condition to occur within the Seller's sewage collection system as a result of the Purchaser's discharge of wastewater into the Seller's system, the Purchaser shall immediately take any and all necessary remedial action, including, but not limited to, a reduction in its pumping rate, in order to eliminate the overflow condition.

Furthermore, the Purchaser shall and does hereby assume, and agrees to indemnify and hold harmless the Seller, its successors and assigns, from and against all loss, costs, expenses, damage to property caused by, or in any way resulting from an overflow event caused by the Purchaser..

11. The Purchaser shall and does hereby assume to hold harmless to Seller, its successors and assigns, from and against all loss, costs, expenses, and damages caused by or in any way resulting from a biological upset of the Seller's treatment works as a result of the levels of metals or toxic contaminants contained in the wastewater being discharged by the Purchaser into the collection system of the Seller.

12. The Seller may terminate this CONTRACT and the consent for the Purchaser to discharge wastewater into the Seller's collection system, 120 days after written notification to the Purchaser by the Seller of the non-payment of fees or charges herein presented, or for breach by the Purchaser of any other condition contained herein.

13. In the future, the Purchaser will pay its proportionate share of any treatment plant upgrades which may be necessary due to new Federal or State regulations or operational requirements. In the case of treatment charges, the surcharge items may be expanded if the NPDES permit conditions are changed. The surcharge items may be modified to more equitably reflect treatment costs.

14. The Purchaser shall charge and collect sewer acreage fees not less than those charged by the Seller.

15. (Requirement of Regional System) That it is understood by the Seller and Purchaser that this contract shall be null and void should the system being constructed by the Purchaser not be completed by July 1, 1997.

16. (Pledge) This contract is hereby pledged to the United States of America, acting through the Rural Economic and Community Development as part of the security for a loan from the United States of America.

IN WITNESS WHEREOF, the parties hereto, acting under authority if their respective governing bodies, have caused this contract to be duly executed in six (6) counterparts, each of which shall constitute an original.

Seller: TOWN OF ZEBULON

BY: _____

TITLE: MAYOR

ATTEST:

_____
Town Clerk

Purchaser: TOWN OF MIDDLESEX

BY: _____

TITLE: MAYOR

ATTEST:

_____
Town Clerk

This contract is approved on behalf of the Rural Economic and Community Development this 12th day of March, 1996.

BY: _____
JAMES C. KEARNEY

TITLE: State Director

f:E95044

Sample Bulk User Agreement

(Town of Middlesex Bulk User Agreement included on CD located behind Appendix K tab)

STATE OF NORTH CAROLINA

COUNTY OF WAKE

INTERMUNICIPAL AGREEMENT

THIS AGREEMENT made and entered into this the 13 day of August, 2007, by and between the CITY OF RALEIGH, a municipal corporation existing under the Laws of the State of North Carolina (hereinafter referred to as RALEIGH), and the TOWN OF MIDDLESEX, a municipal corporation existing under the Laws of the State of North Carolina (hereinafter referred to as the TOWN).

W I T N E S S E T H:

WHEREAS, RALEIGH is the owner and operator of a wastewater collection system and the Little Creek Wastewater Treatment Plant, which has 1.85 MGD of total permitted treatment capacity, and

WHEREAS, RALEIGH acquired the Little Creek Wastewater Treatment Plant through the merger of the Public Utilities Department of the Town of Zebulon and RALEIGH, and

WHEREAS, the TOWN was a contract sewer customer of the Town of Zebulon and is now a contract sewer customer of RALEIGH as a result of the merger, and

WHEREAS, the most cost effective, environmentally sound, and best method of wastewater collection, treatment and disposal for the TOWN's is to continue to convey wastewater through an extension of the TOWN's existing sewer system to RALEIGH's wastewater collection system for treatment at RALEIGH's Little Creek Wastewater Treatment Plant, and

WHEREAS, it is mutually agreed by all parties that a new contract for wastewater transportation and treatment services is in the best interests of all parties,

NOW, THEREFORE, for and in consideration of the respective rights, powers, duties and obligations hereinafter set forth to be performed by RALEIGH and the TOWN, the parties mutually agree as follows:

1. Definitions: As used in this Interlocal Agreement, the terms listed below mean:
   A. "AGREEMENT" means this Interlocal Agreement.
   B. "CONNECTION" means (i) the sewer force main extension pipeline; (ii) the flow measurement and metering facility; and (iii) the wastewater sampling station installed, maintained and operated to effectuate the purposes of this Interlocal Agreement.
   C. "TOWN SEWER SYSTEM" means the portion of the sanitary sewer collection system owned, maintained and operated by the Town of Middlesex to effectuate the purposes of this Interlocal Agreement.
2. This AGREEMENT is made pursuant to Article 20, Part 1 of N.C. Gen. Stat. Chapter 160A. The purpose of this AGREEMENT is to establish, for each unit of local government, the terms and conditions for the sale and/or purchase of sewerage capacity by each unit of local government and for the conveyance of such sewerage by each unit of local government as an intermediary.

3. The TOWN shall be responsible for the operation and maintenance of the TOWN SEWER SYSTEM.

4. The TOWN shall also be responsible for:

(A) Operation and maintenance of the CONNECTION, which is located at 14585 U.S. Highway 264 Alternate and has the Nash County Property Identification Number (PIN) of 272500215700 and is here in identified at the beginning of the CONNECTION. The Town shall also be responsible for the twelve (12) inch force main that transports wastewater from the wastewater pumpstation identified above until it reaches a discharge point in Wake County, said discharge point into the RALEIGH sewer collection system to be herein identified at the end of the CONNECTION.

(B) The TOWN will calibrate metering equipment associated with the CONNECTION once every twelve (12) months unless such repair or calibration becomes necessary within the course of year. A metering device registering not more than five percent (5%) below and five percent (5%) above the test result shall be considered accurate. No adjustment for wastewater flows within this range will be provided or required by either party.

(C) The wastewater sampling station associated with the CONNECTION shall include a flow proportional, refrigerated, sequential sampler housed in a locked compartment. The maintenance, repair or replacement of the sampling station or equipment within shall be performed by RALEIGH. The TOWN shall reimburse RALEIGH

for the actual cost of said maintenance, repair, or replacement, which will be billed by RALEIGH in a separate bill to the TOWN after completion of the work. RALEIGH shall be able to access the sampling station at all times. Samples shall be collected and analyzed by the Raleigh staff.

5. Except as otherwise provided in 4., the TOWN shall be responsible for the operation and maintenance of the CONNECTION. The TOWN agrees that RALEIGH shall have access to the CONNECTION and the TOWN SEWER SYSTEM along with the authority to engage in any activity necessary for the performance of its responsibility to operate and maintain the sampling station.

6. RALEIGH shall accept and treat the wastewater flow from the TOWN at the flowing rates and volumes listed below: Average Daily Flow: 190,000 gallons per day (GPD), Peak Flow Rate: 330 gallons per minute (GPM). For the purposes of this contract, average daily flow shall mean the daily flow rate as averaged through the monthly billing cycle. Peak Hour flow rate shall be defined as any rate of flow greater than 660 GPM, sustained for a period of 2.0 hours or longer. Wastewater discharged to RALEIGH shall comply with the quality and constituent limitations as defined in the RALEIGH Sewer Use Ordinance (SUO) as amended.

7. RALEIGH will undertake the design and construction of an expansion at the Little Creek Wastewater Treatment Facility for the purpose of acquiring addition wastewater treatment and disposal capacity. The RALEIGH Public Utilities Director will review and approve the design of any wastewater treatment facility improvements and will formulate and recommend a budget for the construction of wastewater treatment expansion, consistent with

the established procedures with RALEIGH. As funds are available and subject to final approval by the RALEIGH City Council, RALEIGH will provide funding for the design and construction of additional treatment capacity at the Little Creek Wastewater Treatment Plant. The TOWN will participate in funding the design and construction of expanded treatment facilities at Little Creek Wastewater Treatment Plant under the following formula:

(A) On or before September 3, 2007, the TOWN will make a lump sum payment of $350,000 to RALEIGH for the purpose of reserving 50,000 gallons per day of additional wastewater treatment capacity at a cost of $7.00/gallon.

(B) The TOWN also reserves the right to purchase 30,000 gallons of further additional wastewater treatment capacity at a cost to be determined by RALEIGH upon completion of all construction, as detailed above in paragraph 7., at the Little Creek WWTP and acceptance of same by the RALEIGH Public Utilities Director. The 30,000 gallons per day of addition reserved capacity must be purchased by lump sum payment to RALEIGH within 90 days of written notification from RALEIGH that the reserved capacity is available. Failure to purchase the addition reserve capacity within the specified timeframe shall be interpreted as surrender of the additional 30,000 gallons per day in reserve capacity by the TOWN to RALEIGH. The TOWN shall not have the right to assign any reserve capacity to any third party sanitary sewer collection systems without prior written consent of RALEIGH.

(C) Upon Completion of all construction as detailed above in paragraph 7. and acceptance of same by the RALEIGH Public Utilities Director, RALEIGH shall accept and treat the wastewater flow from the TOWN at the flowing rates and volumes listed below: Average Daily Flow: 240,000 gallons per day (GPD),Peak Hour Flow Rate: 835 gallons per minute.

(D) Upon RALEIGH's receipt of the lump sum payment by the TOWN of the cost of the additional reserve 30,000 gallons per day in wastewater treatment capacity, RALEIGH shall accept and treat the wastewater flow from the TOWN at the flowing rates and volumes listed below: Average Daily Flow: 270,000 gallons per day (GPD),Peak Hour Flow Rate: 940 gallons per minute.

8. In addition to the capital reserve charge, the TOWN agrees to pay RALEIGH the monthly bill which is based on RALEIGH's cost of operation, maintenance, future debt service and overhead on RALEIGH's collection, pumping and treatment facilities attributable to the amount of total wastewater delivered by the TOWN's facilities to the Raleigh System. The monthly bill sent to the TOWN will be based upon the quality and quantity of the wastewater and its reserve treatment capacity to determine the final monthly bill amount, as shown in the formula in "Exhibit 2" sample bill. Current contract customer rates and charges are set out in "Exhibit 3" and shall be subject to periodic revision by RALEIGH. RALEIGH reviews and revises such rate structures for contract sewer service on an annual basis and when made, said revised rate structures shall be made a part of this AGREEMENT and TOWN agrees to pay RALEIGH based on revised rates adopted by RALEIGH. RALEIGH will perform billing for the sewer service on a

monthly basis. The first bill will be calculated and issued within 21 days of the end of the first month. After the initial bill is issued, all others will continue on a monthly frequency. All bills received by the TOWN for sewer service are due and payable within 15 days after receipt.

9. The monthly sewer bill submitted by RALEIGH to the TOWN shall include sewer consumptive charges for the TOWN and shall be based on the following:

(A) For the purpose of determining certain portions of the treatment charges, RALEIGH shall collect at the point noted above flow proportional composite samples, and shall analyze these samples at a frequency of not less than two times per week. Such samples shall be taken on a schedule of not less than two days of each week, four weeks per month for a minimum total of eight samples, with at least one sample representing each weekday within the month. The results of the analysis of said samples shall be utilized in determining the average BOD5 and suspended solids. RALEIGH shall provide the TOWN, upon request, equal split portions of the samples taken for analysis by the TOWN. Reports on the analysis shall be submitted by RALEIGH in writing to the TOWN on a monthly basis. Discovery by RALEIGH of violations of discharge limitations for toxic substances or heavy metals, as defined in the RALEIGH Sewer Use Ordinance (SUO), by the TOWN shall be reported by RALEIGH to the TOWN within 24 hours of the analysis identifying such violation. Repeated violations by the TOWN of the RALEIGH SUO will result in RALEIGH

interrupting or terminating the TOWN's sewer service from RALEIGH.

(B) In the case of the TOWN exceeding either its average or peak hour flow rate as stated in Section 6 in any month, the TOWN will pay a double rate for sewer service for that month.

10. Beginning on the date of the first discharges of sewage from the CONNECTION into Raleigh's POTW pursuant to this AGREEMENT, and continuing until expiration or termination of this AGREEMENT for any reason, the TOWN agrees to collect and pay to RALEIGH monthly, the total of the nutrient reduction fees ("NRF") collected from connections to the TOWN's sewer system served by RALEIGH, as defined in the schedule previously adopted by RALEIGH and shown in the attached "Exhibit 4" or as revised by the RALEIGH City Council in the future, for each new sewer service connection in the TOWN, as previously defined. RALEIGH shall invoice the TOWN for NRF, along with the monthly sewer bill.

11. The TOWN has a User Charge system, which generates sufficient revenue to provide for the adequate and proper operation, maintenance, replacement and repair of its sewerage system, including payment for sewer service rendered to the TOWN by RALEIGH. Such User Charge system shall be updated as may be necessary to maintain sufficient funding as required for proper sewer collection system operation, maintenance, repair and replacement, as defined by USEPA and NCDWQ.

12. The TOWN shall charge and collect sewer acreage or capacity impact fees not less than those charged by RALEIGH. These

fees shall be retained by the TOWN, and may be used towards payment of the monthly sewer service bill from RALEIGH.

13. The TOWN has a Sewer Use Ordinance (SUO), including an Industrial Pretreatment Program, which shall be no less stringent than the SUO of RALEIGH. The TOWN's SUO is in compliance with all current STATE or EPA Regulations. The TOWN will undertake a review of the SUO to verify compliance with this agreement. Any amendments or revisions of the TOWN's SUO needed to bring the TOWN's SUO into compliance with this AGREEMENT shall be undertaken at the earliest opportunity and any amendments shall be subject to review and approval by RALEIGH prior to adoption by the TOWN. The TOWN shall amend its SUO as required in the future to assure that it is continuously in compliance with appropriate STATE and EPA regulations, and no less stringent than the SUO of RALEIGH. The TOWN will comply with all requirements of RALEIGH's Industrial Pretreatment Program. RALEIGH will administer the Industrial Pretreatment Program within the TOWN's wastewater service area and issue all permits for the Industrial Pretreatment Program for the TOWN. The administration of the Industrial Pretreatment Program will include the receipt of industrial applications from customers utilizing the wastewater collection system of the TOWN as well as submitting the application material and an evaluation of the application to the TOWN for its review. The TOWN must approve all new and expanded flow and allocation requests before RALEIGH issues a permit. RALEIGH reserves the right to refuse a new and expanding Industrial Pretreatment Permit request if, in the opinion of the RALEIGH Public Utilities Director, that new or expanding discharge will adversely affect the treatment process at the Little Creek Wastewater Treatment Plant or will otherwise violate the RALEIGH Sewer Use Ordinance. RALEIGH will calculate the amount of any industrial surcharges and add this to the TOWN's

monthly bill. The TOWN will be responsible for billing and collecting the surcharges from the appropriate industrial permit holders. If enforcement action is needed, the TOWN will follow its "Enforcement Response Plan", said plan not to be less stringent that RALEIGH's, and when necessary the TOWN will terminate violator's water and sewer service after notification has been given by RALEIGH. If the TOWN fails to terminate the violator's water and sewer service after notification then RALEIGH will have the right to terminate the sanitary sewer discharge of the violator in question. If the TOWN fails to terminate the violating industry's water and sewer service after at least 24 hour written notification to the TOWN and the industry discharges to RALEIGH as previously described, then RALEIGH may interrupt or terminate the TOWN's sewer service from RALEIGH, until the TOWN terminates service from the violating industry. RALEIGH's authority to interrupt or terminate the TOWN's service pursuant to this paragraph is not limited by or subject to the requirements of Paragraph 19. of this AGREEMENT.

When civil penalties are assessed in the course of an Industrial Pretreatment Permit action, RALEIGH will notify the TOWN of the amount and reason behind the civil penalty, at which time the TOWN shall then assess such civil penalty to the violator.

14. Should a sewer overflow occur, or in the opinion of the RALEIGH Public Utilities Director be imminent, at the TOWN's connection point or within RALEIGH'S wastewater collection system as a result of the TOWN's discharge of wastewater into RALEIGH's sewerage collection system, regardless of the cause, the TOWN shall immediately take any and all necessary remedial action, to eliminate the overflow condition, and to mitigate the environmental harm and other damages resulting from to the

overflow condition, upon notification by RALEIGH. Furthermore, the TOWN shall and does hereby assume, and agrees to indemnify and hold harmless RALEIGH, its successors and assigns, from and against all loss, claims, damages, penalties, fines, costs, expenses including attorney's fees, damage to property caused by, or in any way resulting from an overflow event as described above. RALEIGH and the TOWN each agree to assist in the defense of any cause of actions, whether civil or administrative, arising from the overflow condition.

The TOWN shall and does hereby assume and agrees to hold harmless RALEIGH, its successors and assigns, from and against all loss, costs, claims, penalties, fines, expenses including attorney's fees, and damages caused by or in any way resulting from a biological upset of the RALEIGH Little River Wastewater Treatment Plant as a result of the levels of metals or toxic contaminants contained in the wastewater being discharged by the TOWN into the collection system of RALEIGH. The TOWN shall immediately take any and all necessary action to eliminate the discharge of such contaminants following RALEIGH notification and any additional actions identified by RALEIGH as necessary to the mitigation of the damage arising from the discharge of metals or toxic contaminants.

15. The TOWN agrees that any extensions of, or points of connection to its sewerage system where the sewer is to be discharged to RALEIGH will take place only within the TOWN's sewer service area as shown on the attached map labeled "Exhibit 1". Sewer service to areas outside of the TOWN's sewer service area not designated in "Exhibit 1" that is discharged to RALEIGH must have prior concurrence and written approval from the RALEIGH City Manager.

16. In the future, the TOWN will pay its proportionate share of any treatment plant upgrades which may be necessary to comply with new or expanding State or Federal regulation or operational requirements. In the case of treatment charges; the surcharge contaminates may be expanded if the NPDES permit conditions of the Little Creek Wastewater Treatment Plant change.

17. RALEIGH and the TOWN acknowledge that the expansion of the Little Creek Wastewater Treatment Plant will require RALEIGH to obtain specific State regulatory permits. These permits may be expected to include requirements for adoption of environmental conditions, requirements and mitigation measures, including land use regulations and restrictions, at the municipal level. In event such conditions, restrictions and mitigation measures are imposed by State regulatory authorities as a condition of permit issuance for the operation, upgrade or expansion of the Little Creek Wastewater Treatment Plant contemplated hereunder, the Town agrees to duly adopt by ordinance or otherwise, and to make effective within it corporate limits and extraterritorial jurisdiction area, applicable, such conditions, restrictions and mitigation measures.

18. The term of this AGREEMENT shall be for a period of thirty (30) years from the date of execution. This AGREEMENT shall terminate at the end of this term unless otherwise extended by mutual agreement of the TOWN and RALEIGH.

19. It is specifically agreed by both parties hereto, as part of the consideration of the signing of this document, that they, their agents, officials, employees, or servants will not discriminate in any manner on the basis of race, color, creed,

sexual orientation, or national origin with reference to the subject matter of this AGREEMENT, no matter how remote.

20. Except as otherwise provided in Paragraph 13. of this AGREEMENT, RALEIGH may terminate this AGREEMENT and the consent for the TOWN to discharge wastewater into RALEIGH's sewer collection system upon thirty days prior written notice of the TOWN's default of any covenant or term hereof, which default is not cured within thirty days after receipt of such notice of default.

21. RALEIGH hereby represents and warrants that the system of charges and fees set out in this agreement are no higher than any other similar agreements to accept wastewater by and between RALEIGH and any other entity, except as is unique to the TOWN due to its geographical location and connection to the RALEIGH system.

22. In consideration of RALEIGH'S consent to provide sewer service to the TOWN, the TOWN agrees to consider mutually benefical future partnerships with RALEIGH in the development of other agreements for such issues as emergency and permanent water and sewer system interconnections, water reuse, biosolids reuse, biosolids landfilling and raw water supply reservoir development, such as on Little River.

23. No party may transfer or assign its rights under this AGREEMENT without written approval from the governing boards of both the TOWN and RALEIGH. This AGREEMENT shall bind the parties hereto; respective successors permitted assigns and transferees.

24. This AGREEMENT shall be governed by and construed in accordance with the laws of North Carolina notwithstanding its choice of law provisions or rules. Venue for any legal action to enforce or interpret this AGREEMENT shall be in the courts of Wake County, North Carolina.

25. This AGREEMENT contains the entire agreement and understanding of the parties hereto with respect to the subject matter contained herein and all prior agreements or understandings of the parties hereto are hereby revoked. There are no AGREEMENTS, restrictions, promises, warranties, covenants or other undertakings other than those expressly set forth herein and this contract expressly supercedes the Contract for wastewater treatment services entered into the 16th day of August, 1995 between the Town of Zebulon and the TOWN.

IN TESTIMONY WHEREOF, RALEIGH and the TOWN have caused this AGREEMENT to be executed below by their respective Managers, their corporate seals affixed and attested by their respective Clerks, approved by their respective Attorneys, all by the authority of their respective Councils, as the day and year first written.

ATTEST:

DEPUTY CITY CLERK
(Attach Municipal Seal)

CITY OF RALEIGH

CITY MANAGER

APPROVED:

CITY ATTORNEY

ATTEST:

TOWN CLERK
(Attach Municipal Seal)

TOWN OF MIDDLESEX

MAYOR

APPROVED AS TO FORM:

TOWN ATTORNEY

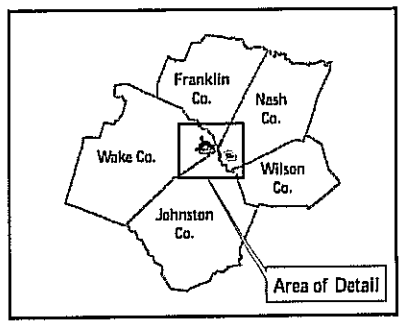
EXHIBIT A

"1"

Legend

- Middlesex and Zebulon Utility Agreement Boundary
- Middlesex Corporate Limits
- Middlesex Extra Territorial Jurisdiction
- Zebulon Corporate Limits
- Zebulon Extra Territorial Jurisdiction

This map was created by the Town of Zebulon Planning Department and is for reference only. The Town of Zebulon assumes no responsibility for errors or misuse of this map.



Towns of Middlesex and Zebulon
Utility Boundary Agreement Map

1 inch equals 0.5 miles

0 0.5 1 2 3 Miles

"EXHIBIT 2"

INTERMUNICIPAL SEWER BILL CALCULATION

Sample Bill Using Proposed FY-07 Rates

TOWN OF MIDDLESEX

Using Consumption Figures from March 2006

Operation and Maintenance

Treatment	3,358 ccf x $0.0935 =	$ 313.97
	3,977 Lbs. BOD x $0.4990 =	$ 1,984.52
	4,532 Lbs. TSS x $0.1114 =	$ 504.86
Transportation	3,358 ccf x $0.0485 =	$ 162.86

Capital Fixed Costs

Treatment	Peak 0.626 MGD x $ 50.00 =	$ 31.30
	Average 0.25 MGD x $793.60 =	$ 198.40
	Industrial Pretreatment Administration	$ 100.00
	Sample Collection and Analysis	$ 250.00
Total Sewer Bill This Month		$ 3,545.91

"EXHIBIT 3"

ORDINANCE NO. (2007) 248

AN ORDINANCE ADOPTING THE RATES, CHARGES AND RENTS FOR WATER AND SEWER UTILITY SERVICE FOR THE CITY OF RALEIGH FOR FISCAL YEAR 2007-08

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF RALEIGH, NORTH CAROLINA:

Section 1. That the following is the official schedule of rates, charges, and rents for water and sewer utility service, effective July 1, 2007. (Reference Section 2-3001, Raleigh City Code.)

I. Retail Service

A. Water

1. Bi-Monthly Service Charges

Meter Size (Inches)	Bi-Monthly Charges Inside City Limits	Bi-Monthly Charges Outside City Limits
5/8	$ 6.76	$ 11.14
3/4	7.60	12.81
1	9.27	16.15
1-1/2	13.45	24.53
2	18.52	34.67
3	31.96	61.54
4	47.10	91.82
6	85.34	168.31
8	139.49	276.59
10	198.29	394.21

2. Consumption Charges

Consumption	Unit Rate Per CCF	
(CCF/Month)	Inside City Limits	Outside City Limits
All Consumption	$1.70	$3.40

B. Sewer

	Bi-Monthly Charges Inside City Limits	Bi-Monthly Charges Outside City Limits
1. Billing Charge	$5.43/Bill	$8.48/Bill

2. Consumption Charges

Water Consumption (CCF/Month)	Unit Rate Per CCF of Water Inside City Limits	Outside City Limits
All Usage	$1.58	$3.16

3. Rates (including billing charges) for residential units without metered water (per dwelling unit)

Inside City Limits	$15.48/Mo. for services inclusive of Admin. costs.
Outside City Limits	$30.96/Mo. for services inclusive of Admin. costs.

II. Contract Service

A. Water

1. Operations and Maintenance Charges

a.	Applicable to all water used	$1.3395/CCF
b.	Surcharge applicable to water used from high level pumping system	$0.0291/CCF

2. Capital Charges – General Facilities

a.	Applicable to all water used	$0.6536/CCF
b.	Surcharge applicable to water used from high level pumping system	$0.0186/CCF

3. Capital Charges – Production Facilities applicable capacity reserved by contractual agreement, as of July 1, 1980 — $5,708/MGD/Month

4. Capital Charges – Production Facilities applicable capacity reserved by contractual agreement, as of July 1, 1984 $19,760/MGD/Month

B. Sewer

1. Operations and Maintenance Charges

a. Treatment

(1) Applicable to all flow, with no allowance for BOD or SS $0.1124/CCF of sewage

(2) Applicable to all BOD5 $0.5374/Lb of BOD

(3) Applicable to all SS $0.1370/Lb of SS

(4) Applicable to all TN $0.7213/Lb of TN

b. Transportation

(1) Applicable to all flow $0.0536/CCF of sewage

2. Capital Charges

a. Treatment

(1) Applicable to capacity reserved by contractual agreement within plant facility capacity as of 1980.

Peak reserve flow	$50.00/MGD/Month
Average reserve flow	$793.60/MGD/Month

b. Transportation

Applicable to capacity reserved by contractual agreement within Neuse River Outfall facility capacity as of 1980.
$78.95/MGD/Mile/Month

Applicable to capacity reserved by contractual agreement within Walnut Creek Outfall, from Sunnybrook Road to Neuse River Outfall facility capacity as of 1980.
$50.00/MGD/Mile/Month

Applicable to capacity reserved by contractual agreement within Crabtree Creek Outfall, from Old Crabtree Creek Pump Station, to Neuse River Outfall facility capacity as of 1980.

$65.00/MGD/Mile/Month

III. Advanced deposits are no longer required for utility system on initial connection.

Adopted: June 11, 2007
Effective: July 1, 2007

Distribution: Budget Staff: Lou Buonpane
Kirsten Larson
Joyce Munro
David Scarborough
Heather Drennan
Audits: John House
Teresa Bordeaux
Transcription: Jackie Taylor
Department Heads

"EXHIBIT 4"

ORDINANCE NO. 2007 – 250

AN ORDINANCE TO REPEAL ORDINANCE NO. 2007 – 216 AND TO AMEND THE CITY OF RALEIGH CODE OF ORDINANCES, PART 8, UTILITIES, ARTICLE C, USE OF SANITARY SEWER SYSTEM, TO ESTABLISH NUTRIENT REDUCTION WATER AND SEWER USE FEES

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF RALEIGH, NORTH CAROLINA that:

Section 1. Ordinance No. 2007-216 adopted by the City Council of the City of Raleigh on May 1, 2007 and effective July 1, 2007 is hereby repealed in its entirety.

Section 2. Section 8-2123, **USER CHARGES**, of the City of Raleigh Code of Ordinances is hereby deleted in its entirety and replaced with the following:

(a) A *user* charge *shall* be levied on all *users* including, but not limited to, *persons*, firms, corporations or governmental entities that *discharge*, cause or permit the *discharge* of sewage into the POTW or that connect to the *City*'s water distribution system.

(b) A nutrient reduction water and sewer user fee, as established below, *shall* be collected at the time of approval of connection to the *City*'s water distribution system and/or sewer collection system. This one-time fee *shall* be collected, in addition to any other water and sewer system user charges and fees required by *City* ordinances and resolutions. This fee *shall* be collected by the *City* Inspections Department at the time of issuance of a utility connection permit for water and/or sewer.

Residential

Individual water service all sizes	$	100/dwelling unit
Group housing on single water service	$	100/dwelling unit
Individual sewer service size up to 4-inch service	$	366/dwelling unit
Group housing on single service	$	244/dwelling unit

Non-Residential

All water service sizes	$	100/connection
0 to 4-inch sewer service	$	366/connection

6-inch sewer service	$ 854/connection
8-inch or greater	$ 2,016/connection

Section 3. The above fees shall become effective July 1, 2007.

Section 4. All laws and clauses of laws in conflict herewith are hereby repealed to the extent of said conflict.

Section 5. If this ordinance or application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of the ordinance which can be given separate effect and to the end the provisions of this ordinance are declared to be severable.

ADOPTED: **June 11, 2007**
EFFECTIVE: **July 1, 2007**

DISTRIBUTION:

Public Utilities:	Dale Crisp
Public Works:	Carl Dawson
City Attorney:	Donna Hester
	Connie Joyner
Transcription Svcs:	Jackie Taylor

ENCUMBERED

PROVISIONS FOR THE PAYMENT OF THE MONEYS TO FALL DUE UNDER THIS AGREEMENT HAS BEEN MADE BY AN APPROPRIATION DULY MADE, OR BY BONDS OR NOTES DULY AUTHORIZED, AS REQUIRED BY THE LOCAL GOVERNMENT ACT.

Janice Copeland	08-08-07
CITY ACCOUNTANT	DATE

CODE N/A $ N/A

ADDENDUM NO. 1

Intermunicipal Agreement among the City of Raleigh and the Town of Middlesex

WHEREAS, the City of Raleigh ("Raleigh") and the Town of Middlesex (the "Town") have entered into a Intermunicpal Agreement dated August 13, 2007 (the "Agreement"); and

WHEREAS, it is the intent of Raleigh and the Town to enter into this Addendum to the Agreement, effective August 13, 2007, and effective concurrent with the Agreement.

NOW THEREFORE, for valuable consideration, the Agreement shall be amended as follows:

(1) A new section shall be added as Section 26 to the Agreement, and shall read, in its entirety:

26. This AGREEMENT may be amended through mutual, written consent of RALEIGH and the TOWN and any such amendment shall be in writing and shall bear the signatures of the City Manager of RALEIGH and the Mayor of the TOWN or, if authorized by the legislative body of the TOWN, the Town Manager of the TOWN.

(2) A new section shall be added as Section 27 to the Agreement and shall read, in its entirety:

27. The parties hereto for themselves, their agents, officials, employees and servants agree not to discriminate in any manner on the basis of race, color, creed, national origin, gender, age, handicap, or sexual orientation with reference to the subject matter of this contract, no matter how remote. The parties further agree in all respects to conform with the provisions and intent of City of Raleigh Ordinance 1969-889, as amended. This provision is hereby incorporated into this contract for the benefit of the City of Raleigh and its residents, and may be enforced by action for specific performance, injunctive relief, or other remedy as by law provided. This provision shall be binding on the successors and assigns of the parties with reference to the subject matter of this contract.

[The next page is the signature page.]

IN TESTIMONY WHEREOF, RALEIGH and the TOWN have caused this AGREEMENT to be executed below by their respective Manager and Mayor, their corporate seals affixed and attested by their respective Clerks, approved by their respective Attorneys, all by the authority of their respective Councils, as of the day and year first written.

CITY OF RALEIGH

City Manager

ATTEST: City Clerk

(Affix Municipal Seal)

Approved as to form: City Attorney

TOWN OF MIDDLESEX

Mayor

ATTEST: Town Clerk

(Affix Municipal Seal)

Approved as to form: Town Attorney

City of Raleigh NPDES and Spray Irrigation Permits

(Permits included on CD located behind Appendix K tab)

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

July 14, 2008

Mr. H. Dale Crisp
City of Raleigh Public Utilities Director
P.O. Box 590
Raleigh, North Carolina 27602

Subject: Issuance of Renewal NPDES Permit
Issuance of Modified NPDES Permit
NPDES Permit **NC0029033**
Neuse River WWTP
Wake County

Dear Mr. Crisp:

Division personnel have reviewed and approved your application for renewal and modification of the subject permit. Accordingly, we are forwarding the attached NPDES discharge permit. This permit is issued pursuant to the requirements of North Carolina General Statute 143-215.1 and the Memorandum of Agreement between North Carolina and the U.S. Environmental Protection Agency dated October 15, 2007 (or as subsequently amended).

This final permit includes no major changes from the last draft permit send to you on May 7, 2008.

If any parts, measurement frequencies or sampling requirements contained in this permit are unacceptable to you, you have the right to an adjudicatory hearing upon written request within thirty (30) days following receipt of this letter. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings (6714 Mail Service Center, Raleigh, North Carolina 27699-6714). Unless such demand is made, this decision shall be final and binding.

Please note that this permit is not transferable except after notice to the Division. The Division may require modification or revocation and reissuance of the permit. This permit does not affect the legal requirements to obtain other permits which may be required by the Division of Water Quality or permits required by the Division of Land Resources, the Coastal Area Management Act or any other Federal or Local governmental permit that may be required.

If you have any questions concerning this permit, please contact Ron Berry at telephone number (919) 807-6403 or email ron.berry@ncmail.net.

Sincerely,

for: Coleen H. Sullins

Attachments
Cc: Raleigh Regional Office/Surface Water Protection Section
Marshall Hyatt/EPA Region IV
Central Files
NPDES Unit

RECD BY CENTRAL FILES

JUL 22 08

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER QUALITY

PERMIT

TO DISCHARGE WASTEWATER UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended, the

City of Raleigh

is hereby authorized to discharge wastewater from a facility located at the

Neuse River WWTP
End of NCSR 2552
Southeast of Raleigh
Wake County

to receiving waters designated as the Neuse River in the Neuse River Basin

in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, and IV hereof.

The permit shall become effective August 1, 2008.

This permit and the authorization to discharge shall expire at midnight on **February 28, 2013**

Signed this day July 14, 2008.

for: Coleen H. Sullins, Director
Division of Water Quality
By Authority of the Environmental Management Commission

SUPPLEMENT TO PERMIT COVER SHEET

All previous NPDES Permits issued to this facility, whether for operation or discharge are hereby revoked, and as of this issuance, any previously issued permit bearing this number is no longer effective. Therefore, the exclusive authority to operate and discharge from this facility arises under the permit conditions, requirements, terms, and provisions included herein.

The City of Raleigh

is hereby authorized to:

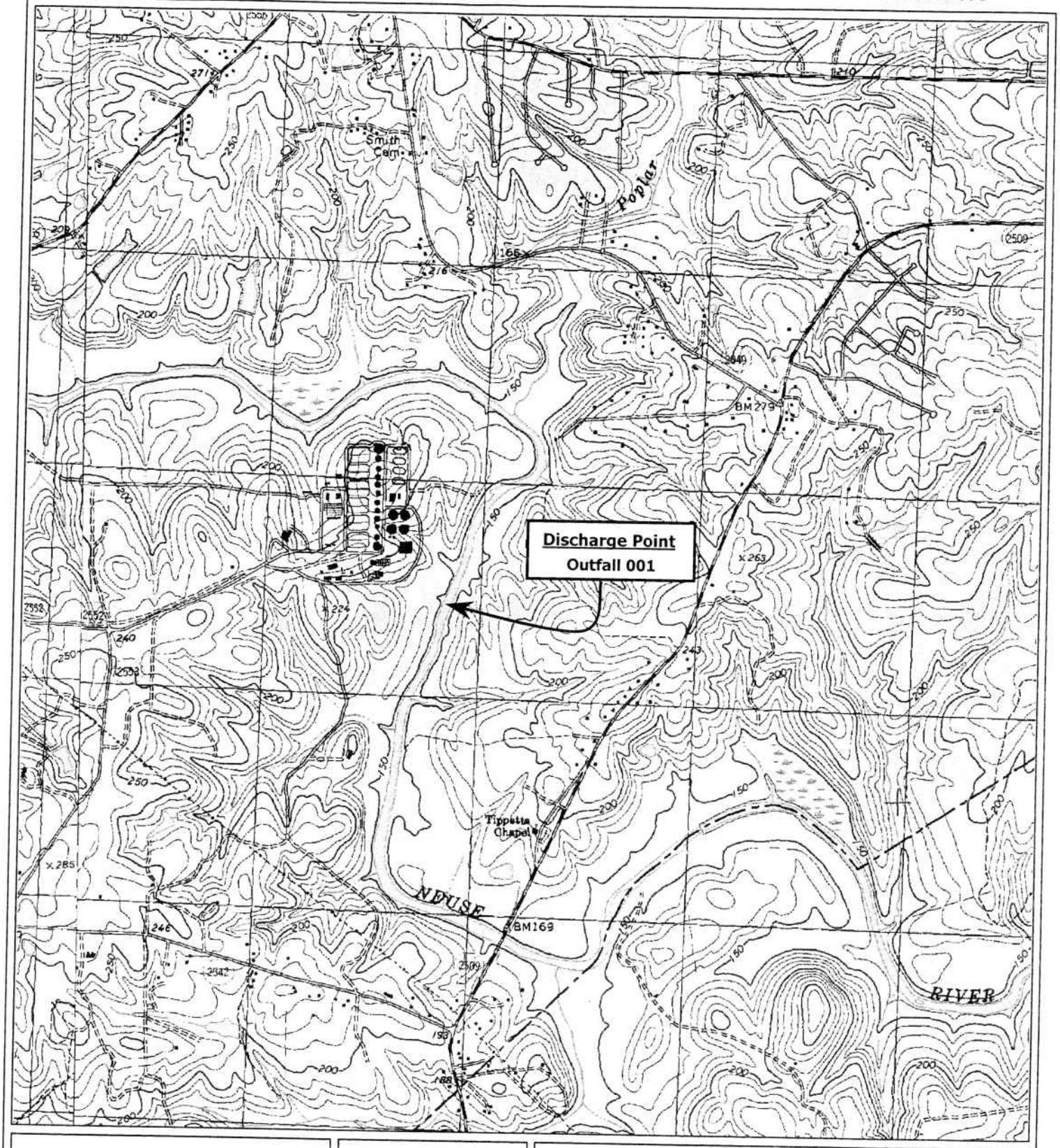
1. Continue operation of the Neuse River Water Reclamation Facility, a 60.0 MGD advanced wastewater treatment facility consisting of
   - eight (8) influent pumps (five (5) screws, three (3) variable-speed vertical turbines),
   - one (1) 32 MG flow equalization basin with two (2) vertical turbine drain/ influent pumps,
   - five (5) mechanical bar screens,
   - two (2) Detritor grit removal units,
   - five (5) primary sedimentation basins with oil/grease and scum removal,
   - six (6) fine-bubble aeration basins with biological nitrification and denitrification zones,
   - twelve (12) secondary clarifiers,
   - four (4) aerobic digesters,
   - three (3) gravity belt thickeners,
   - three (3) belt filter presses,
   - four (4) aerated sludge holding tanks,
   - twelve (12) single-media tertiary filters with methanol addition for final denitrification,
   - ultraviolet disinfection and flow measurement;

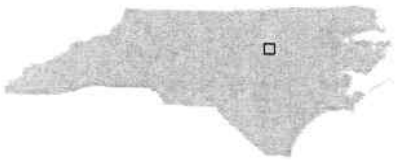
   and located at the end of NCSR 2552, southeast of Raleigh in Wake County.

2. After receiving an Authorization to Construct and submitting an engineer certification to the Division, construct and operate a 75 MGD wastewater treatment facility.

3. Continue to operate a water reclamation and distribution system to provide beneficial reuse of treated effluent from the Neuse River WWTP as provided in Non-Discharge Permit WQ0016222.

4. Discharge from said treatment works into the Neuse River, classified as C-NSW waters in the Neuse River Basin, at the location specified on the attached map.





USGS Quad #: E25NW, Clayton, NC

N

SCALE
1:24,000
(1" = 2000')

City of Raleigh **NC0029033**

Neuse River WWTP

Receiving Streams:	Neuse River
Stream Classification:	C-NSW
River Basin:	Neuse
Sub-Basin #:	03-04-02

A.(1.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Beginning on the effective date of this permit and lasting until expansion above 60 MGD or permit expiration, the Permittee is authorized to discharge treated wastewater from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

PARAMETER	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow (MGD)	60.0			Continuous	Recording	Influent or Effluent
Total Monthly Flow (MG)	Monitor and Report			Monthly	Recorded or Calculated	Influent or Effluent
BOD_5 (Summer) [1,2]	5.0 mg/L	7.5 mg/L		Daily	Composite	Influent and Effluent
BOD_5 (Winter) [1,2]	10.0 mg/L	15.0 mg/L		Daily	Composite	Influent and Effluent
Total Suspended Solids [2]	30.0 mg/L	45.0 mg/L		Daily	Composite	Influent and Effluent
NH_3-N (Summer) [1]	2.0 mg/L	6.0 mg/L		Daily	Composite	Effluent
NH_3-N (Winter) [1]	4.0 mg/L	12.0 mg/L		Daily	Composite	Effluent
Dissolved Oxygen [3]				Daily	Grab	Effluent
Fecal Coliform (geometric mean)	200/100 mL	400/100 mL		Daily	Grab	Effluent
Temperature				Daily	Grab	Effluent
pH [4]				Daily	Grab	Effluent
TKN (mg/L) [5]	Monitor and Report			Weekly	Composite	Effluent
NO_3-N + NO_2-N (mg/L) [5]	Monitor and Report			Weekly	Composite	Effluent
TN (mg/L) [5]	Monitor and Report			Weekly	Composite	Effluent
TN $Load_{WWTP}$ [6]	Monitor and Report (lb/mo) Monitor and Report (lb/yr)			Monthly Annually	Composite Calculated	Effluent
TN $Load_{Total}$ [6]	682,483 lb/year [6]			Annually	Calculated	Effluent
Total Phosphorus	2.0 mg/L (quarterly average) [7]			Weekly	Composite	Effluent
Total Copper				Weekly	Composite	Effluent
Total Silver				Monthly	Composite	Effluent
Total Zinc				Weekly	Composite	Effluent
Chronic Toxicity [8]	See Note 8			Quarterly	Composite	Effluent

Footnotes:

1. Sample Locations: I – Influent, E – Effluent; summer shall be defined as April 1 – October 31 and winter defined as the balance of the year. See Condition A.(3.) of this permit for instream monitoring requirements.
2. The monthly average effluent BOD5 and TSS concentrations shall not exceed 15% of the respective influent value (85% removal).
3. The daily average dissolved oxygen concentration in the effluent shall not be less than 5.0 mg/L.
4. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.
5. For a given wastewater sample, TN = TKN + NO_3-N + NO_2-N, where TN is Total Nitrogen, TKN is Total Kjeldahl Nitrogen, and NO_3-N and NO_2-N are Nitrate and Nitrite Nitrogen, respectively.
6. TN Loads shall be calculated as prescribed in Condition A.(4.) and A.(6.) of this permit, and compliance with the TN limit shall be determined according to Conditions A.(5.) and (6.).
7. The quarterly average for total phosphorus shall be the average of composite samples collected weekly during the calendar quarter (January-March, April-June, July-September, October-December).
8. Chronic Toxicity (*Ceriodaphnia*) P/F @ 49%, February, May, August, November; see condition A.(8.) of this permit.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

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JUL 22 08

A.(2.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Beginning upon expansion above 60 MGD and lasting until permit expiration, the Permittee is authorized to discharge treated wastewater from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

PARAMETER	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow (MGD)	75.0			Continuous	Recording	Influent or Effluent
Total Monthly Flow (MG)	Monitor and Report			Monthly	Recorded or Calculated	Influent or Effluent
BOD_5 (Summer) [1,2]	5.0 mg/L	7.5 mg/L		Daily	Composite	Influent and Effluent
BOD_5 (Winter) [1,2]	10.0 mg/L	15.0 mg/L		Daily	Composite	Influent and Effluent
Total Suspended Solids [2]	30.0 mg/L	45.0 mg/L		Daily	Composite	Influent and Effluent
NH_3-N (Summer) [1]	2.0 mg/L	6.0 mg/L		Daily	Composite	Effluent
NH_3-N (Winter) [1]	4.0 mg/L	12.0 mg/L		Daily	Composite	Effluent
Dissolved Oxygen [3]				Daily	Grab	Effluent
Fecal Coliform (geometric mean)	200/100 mL	400/100 mL		Daily	Grab	Effluent
Temperature				Daily	Grab	Effluent
pH [4]				Daily	Grab	Effluent
TKN (mg/L) [5]	Monitor and Report			Weekly	Composite	Effluent
NO_3-N + NO_2-N (mg/L) [5]	Monitor and Report			Weekly	Composite	Effluent
TN (mg/L) [5]	Monitor and Report			Weekly	Composite	Effluent
TN $Load_{WWTP}$ [6]	Monitor and Report (lb/mo) Monitor and Report (lb/yr)			Monthly Annually	Composite Calculated	Effluent
TN $Load_{Total}$ [6]	682,483 lb/year [6]			Annually	Calculated	Effluent
Total Phosphorus	2.0 mg/L (quarterly average) [7]			Weekly	Composite	Effluent
Total Copper				Weekly	Composite	Effluent
Total Silver				Monthly	Composite	Effluent
Total Zinc				Weekly	Composite	Effluent
Chronic Toxicity [8]	See Note 8			Quarterly	Composite	Effluent

Footnotes:

9. Sample Locations: I – Influent, E – Effluent; summer shall be defined as April 1 – October 31 and winter defined as the balance of the year. See Condition A.(3.) of this permit for instream monitoring requirements.
10. The monthly average effluent BOD5 and TSS concentrations shall not exceed 15% of the respective influent value (85% removal).
11. The daily average dissolved oxygen concentration in the effluent shall not be less than 5.0 mg/L.
12. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.
13. For a given wastewater sample, TN = TKN + NO_3-N + NO_2-N, where TN is Total Nitrogen, TKN is Total Kjeldahl Nitrogen, and NO_3-N and NO_2-N are Nitrate and Nitrite Nitrogen, respectively.
14. TN Loads shall be calculated as prescribed in Condition A.(4.) and A.(6.) of this permit, and compliance with the TN limit shall be determined according to Conditions A.(5.) and (6.).
15. The quarterly average for total phosphorus shall be the average of composite samples collected weekly during the calendar quarter (January-March, April-June, July-September, October-December).
16. Chronic Toxicity (*Ceriodaphnia*) P/F @ 54%, February, May, August, November; see condition A.(9.) of this permit.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

A.(3.) INSTREAM MONITORING REQUIREMENTS

Instream monitoring is required for the following parameters at the locations specified:

PARAMETER	SAMPLE TYPE	LOCATION[1]
Dissolved Oxygen	Grab	U, D1, D2
Temperature	Grab	U, D1, D2
pH	Grab	U, D1, D2

Footnote:

1. Sample Locations: U - Upstream at NCSR 2555, D1 - Downstream at NCSR 1700, D2 - Downstream at NCSR 1908. Stream samples shall be collected three times per week during the months of June, July, August, and September and weekly during the remainder of the year. These instream monitoring requirements are waived so long as the Permittee maintains full and active member ship in the Lower Neuse Basin Association, Inc. (LNBA) for the subject facility. Upon termination or cessation of its membership in the LNBA, these instream monitoring requirements are reinstated immediately, and the Permittee must notify the Division within five (5) business days.

A.(4.) CALCULATION OF TOTAL NITROGEN DISCHARGE LOADS

a. The Permittee shall calculate the monthly and annual discharge TN loads from the WWTP as follows:

Monthly TN Load$_{WWTP}$ (lb/month) = TN$_{Mo}$ x Flow$_{Mo}$ x 8.34

where:

TN_{Mo} = the average total nitrogen concentration (mg/L) of the composite samples collected during the calendar month

$Flow_{Mo}$ = the Total Monthly Flow of wastewater discharged during the month (MG/month)

8.34 = conversion factor, from (mg/L x MG) to pounds

Annual TN Load$_{WWTP}$ (lb/yr) = Sum of Monthly TN Loads$_{WWTP}$ (12) for the calendar year

b. The Permittee shall report monthly Total Nitrogen results (mg/L and lb/mo) in the appropriate discharge monitoring report for each month and shall report each year's results (lb/yr) with the December report of that year.

A.(5.) ANNUAL LIMITS FOR TOTAL NITROGEN

Total Nitrogen (TN) allocations and TN Load limits for NPDES dischargers in the Neuse River basin are annual limits and are applied for the calendar year.

For any given calendar year, the Permittee shall be in compliance with the annual TN Load limit in this Permit if:

the Permittee's annual TN Load is less than or equal to said limit, or

the Permittee is a Co-Permittee Member of a compliance association.

The TN Load limit in this Permit (if any) may be modified as the result of allowable changes in the Permittee's TN allocation.

Allowable changes include those resulting from purchase of TN allocation from the Wetlands Restoration Fund; purchase, sale, trade, or lease of allocation between the Permittee and other dischargers; regionalization; and other transactions approved by the Division.

The Permittee may request a modification of the TN Load limit in this Permit to reflect allowable changes in its TN allocation. Upon receipt of timely and proper application, the Division will modify the permit as appropriate and in accordance with state and federal program requirements.

Changes in TN limits become effective on January 1 of the year following permit modification. The Division must receive application no later than August 31 for changes proposed for the following calendar year.

Application shall be sent to:

NCDWQ / NPDES Unit
Attn: Neuse River Basin Coordinator
1617 Mail Service Center
Raleigh, NC 27699-1617

If the Permittee is a member and Co-Permittee of an approved compliance association, its TN discharge is governed by that association's group NPDES permit and the TN limits therein.

The Permittee shall be considered a Co-Permittee Member for any given calendar year in which it is identified as such in Appendix A of the association's group NPDES permit.

Association roster(s) and members' TN allocations will be updated annually and in accordance with state and federal program requirements.

If the Permittee intends to join or leave a compliance association, the Division must be notified of the proposed action in accordance with the procedures defined in the association's NPDES permit.

Upon receipt of timely and proper notification, the Division will modify the permit as appropriate and in accordance with state and federal program requirements.

Membership changes in a compliance association become effective on January 1 of the year following modification of the association's permit.

The TN monitoring and reporting requirements in this individual Permit remain in effect until expiration of this Permit and are not affected by the Permittee's membership in a compliance association.

A.(6.) SPECIAL PROVISIONS REGARDING TOTAL NITROGEN

For the purpose of determining compliance with individual TN limits in this permit and in the group NPDES permit NCC000001, the annual TN Load for the Neuse River WWTP shall be the sum of the facility's TN Load and the stipulated TN contribution from its biosolids application fields.

$$\textbf{TN Load}_{\text{Total}}\ \textbf{(lb/yr)} = \textbf{TN Load}_{\text{WWTP}}\ \textbf{(lb/yr)} + \textbf{TN Load}_{\text{Fields}}\ \textbf{(lb/yr)} \leq \textbf{TN Load limit}$$

The basis for the stipulated TN contribution from the biosolids application fields (TN $\text{Load}_{\text{Fields}}$) shall change on January 1 following Environmental Management Commission (EMC) approval of the Permittee's request for a variance from 15A NCAC 02L .0106(k) corrective action requirements for the fields.

Prior to that January 1, the stipulated TN contribution shall be zero.

Beginning on that January 1, the stipulated discharge TN contribution from the biosolids application fields shall be 100% of the gross annual nitrate-N load as projected in the Eagle Resources Transport Model Report, Appendix G of the City of Raleigh Supplemental Site Assessment Report, prepared by ENSR Consulting and Engineering (NC), Inc.; as revised September 2006. The projected contributions for the upcoming 2008 and 2013 cycles are as follows:

Permit Cycle	Calendar Year	Stipulated Discharge TN $\text{Load}_{\text{Fields}}$ (lb/yr)
2008	2008	120,058
	2009	117,183
	2010	114,246
	2011	110,370
	2012	106,196
2013	2013	102,022
	2014	97,549
	2015	93,276
	2016	89,002
	2017	84,828

- (end of Special Condition A.(6.)) -

REC'D CENTRAL FILES

JUL 22 08

A.(7.) TOTAL NITROGEN ALLOCATIONS

The following table lists the Total Nitrogen (TN) allocations assigned to, acquired by, or transferred to the Permittee in accordance with the Neuse River nutrient management rule (T15A NCAC 02B .0234) and the status of each as of permit issuance. For compliance purposes, this table does not supercede any TN limit(s) established elsewhere in this permit or in the NPDES permit of a compliance association of which the Permittee is a Co-Permittee Member.

ALLOCATION TYPE	SOURCE	DATE	ALLOCATION AMOUNT [1]		STATUS
			Estuary (lb/yr)	Discharge (lb/yr)	
Base	Assigned by Rule (T15A NCAC 02B .0234)		337,895	675,790	Active
Supplemental	Connection of Bobby L. Murray Plantation Inn WWTP NC0027570		253	506	Active
Supplemental	Connection of Falls Village WWTP NC0046230		61	121	Active
Supplemental	Connection of Neuse Crossing WWTP NC0064408	1/14/2008	3,033	6,066	Active
		TOTAL	**341,242**	**682,483**	

Footnote:

[1] Transport Factor = 50%

Any addition, deletion, or modification of the listed allocations (other than typographical errors) or any change in status of any of the listed allocations shall be considered a major modification of this permit and shall be subject to the public review process afforded such modifications under state and federal rules.

A.(8.) CHRONIC TOXICITY TESTING REQUIREMENT - 60.0 MGD

The effluent discharge shall at no time exhibit observable inhibition of reproduction or significant mortality to *Ceriodaphnia dubia* at an effluent concentration of **49%.**

The permit holder shall perform at a minimum, quarterly monitoring using test procedures outlined in the "North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure," Revised February 1998, or subsequent versions or "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions. The tests will be performed during the months of **February**, **May**, **August**, and **November**. Effluent sampling for this testing shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

If the test procedure performed as the first test of any single quarter results in a failure or ChV below the permit limit, then multiple-concentration testing shall be performed at a minimum, in each of the two following months as described in "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

The chronic value for multiple concentration tests will be determined using the geometric mean of the highest concentration having no detectable impairment of reproduction or survival and the lowest concentration that does have a detectable impairment of reproduction or survival. The definition of "detectable impairment," collection methods, exposure regimes, and further statistical methods are

specified in the "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the months in which tests were performed, using the parameter code **TGP3B** for the pass/fail results and **THP3B** for the Chronic Value. Additionally, DWQ Form AT-3 (original) is to be sent to the following address:

Attention: Environmental Sciences Section
North Carolina Division of Water Quality
1621 Mail Service Center
Raleigh, North Carolina 27699-1621

Completed Aquatic Toxicity Test Forms shall be filed with the Environmental Sciences Section no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete, accurate, include all supporting chemical/physical measurements and all concentration/response data, and be certified by laboratory supervisor and ORC or approved designate signature. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Environmental Sciences Section at the address cited above.

Should the permittee fail to monitor during a month in which toxicity monitoring is required, monitoring will be required during the following month.
Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Quality indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

If the Permittee monitors any pollutant more frequently then required by this permit, the results of such monitoring shall be included in the calculation & reporting of the data submitted on the DMR & all AT Forms submitted.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an invalid test and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

A.(9.) CHRONIC TOXICITY TESTING REQUIREMENT - 75.0 MGD

The effluent discharge shall at no time exhibit observable inhibition of reproduction or significant mortality to *Ceriodaphnia dubia* at an effluent concentration of 54 %.

The permit holder shall perform at a minimum, quarterly monitoring using test procedures outlined in the "North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure," Revised February 1998, or subsequent versions or "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions. The tests will be performed during the months of **February**, **May**, **August**, and **November**. Effluent sampling for this testing shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

If the test procedure performed as the first test of any single quarter results in a failure or ChV below the permit limit, then multiple-concentration testing shall be performed at a minimum, in each of the two following months as described in "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

The chronic value for multiple concentration tests will be determined using the geometric mean of the highest concentration having no detectable impairment of reproduction or survival and the lowest concentration that does have a detectable impairment of reproduction or survival. The definition of "detectable impairment," collection methods, exposure regimes, and further statistical methods are specified in the "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the months in which tests were performed, using the parameter code **TGP3B** for the pass/fail results and **THP3B** for the Chronic Value. Additionally, DWQ Form AT-3 (original) is to be sent to the following address:

Attention: Environmental Sciences Section
North Carolina Division of Water Quality
1621 Mail Service Center
Raleigh, North Carolina 27699-1621

Completed Aquatic Toxicity Test Forms shall be filed with the Environmental Sciences Section no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete, accurate, include all supporting chemical/physical measurements and all concentration/response data, and be certified by laboratory supervisor and ORC or approved designate signature. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Environmental Sciences Section at the address cited above.

Should the permittee fail to monitor during a month in which toxicity monitoring is required, monitoring will be required during the following month.
Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Quality indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

If the Permittee monitors any pollutant more frequently then required by this permit, the results of such monitoring shall be included in the calculation & reporting of the data submitted on the DMR & all AT Forms submitted.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an invalid test and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

A.(10.) EFFLUENT POLLUTANT SCAN

The Permittee shall perform an annual Effluent Pollutant Scan for the following parameters. Samples shall represent seasonal variations over the permit term and shall be analyzed in accordance with 40 CFR Part 136. Unless otherwise indicated, metals shall be analyzed as "total recoverable."

Ammonia (as N)	Trans-1,2-dichloroethylene	Bis (2-chloroethyl) ether
Chlorine (total residual, TRC)	1,1-dichloroethylene	Bis (2-chloroisopropyl) ether
Dissolved oxygen	1,2-dichloropropane	Bis (2-ethylhexyl) phthalate
Nitrate/Nitrite	1,3-dichloropropylene	4-bromophenyl phenyl ether
Kjeldahl nitrogen	Ethylbenzene	Butyl benzyl phthalate
Oil and grease	Methyl bromide	2-chloronaphthalene
Phosphorus	Methyl chloride	4-chlorophenyl phenyl ether
Total dissolved solids	Methylene chloride	Chrysene
Hardness	1,1,2,2-tetrachloroethane	Di-n-butyl phthalate
Antimony	Tetrachloroethylene	Di-n-octyl phthalate
Arsenic	Toluene	Dibenzo(a,h)anthracene
Beryllium	1,1,1-trichloroethane	1,2-dichlorobenzene
Cadmium	1,1,2-trichloroethane	1,3-dichlorobenzene
Chromium	Trichloroethylene	1,4-dichlorobenzene
Copper	Vinyl chloride	3,3-dichlorobenzidine
Lead	***Acid-extractable compounds:***	Diethyl phthalate
Mercury	P-chloro-m-cresol	Dimethyl phthalate
Nickel	2-chlorophenol	2,4-dinitrotoluene
Selenium	2,4-dichlorophenol	2,6-dinitrotoluene
Silver	2,4-dimethylphenol	1,2-diphenylhydrazine
Thallium	4,6-dinitro-o-cresol	Fluoranthene
Zinc	2,4-dinitrophenol	Fluorene
Cyanide	2-nitrophenol	Hexachlorobenzene
Total phenolic compounds	4-nitrophenol	Hexachlorobutadiene
Volatile organic compounds:	Pentachlorophenol	Hexachlorocyclo-pentadiene
Acrolein	Phenol	Hexachloroethane
Acrylonitrile	2,4,6-trichlorophenol	Indeno(1,2,3-cd)pyrene
Benzene	***Base-neutral compounds:***	Isophorone
Bromoform	Acenaphthene	Naphthalene
Carbon tetrachloride	Acenaphthylene	Nitrobenzene
Chlorobenzene	Anthracene	N-nitrosodi-n-propylamine
Chlorodibromomethane	Benzidine	N-nitrosodimethylamine
Chloroethane	Benzo(a)anthracene	N-nitrosodiphenylamine
2-chloroethylvinyl ether	Benzo(a)pyrene	Phenanthrene
Chloroform	3,4 benzofluoranthene	Pyrene
Dichlorobromomethane	Benzo(ghi)perylene	1,2,4-trichlorobenzene
1,1-dichloroethane	Benzo(k)fluoranthene	
1,2-dichloroethane	Bis (2-chloroethoxy) methane	

Test results shall be reported to the Division within 90 days of sampling in DWQ Form- A MR-PPA1 or in a form approved by the Director. The report shall be submitted to the following address:

North Carolina Division of Water Quality
Water Quality Section, Central Files
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

PART II
STANDARD CONDITIONS FOR NPDES PERMITS

Section A. Definitions

2/Month
Samples are collected twice per month with at least ten calendar days between sampling events.

3/Week
Samples are collected three times per week on three separate calendar days.

Act or "the Act"
The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 USC 1251, et. seq.

Annual Average
The arithmetic mean of all "daily discharges" of a pollutant measured during the calendar year. In the case of fecal coliform, the geometric mean of such discharges.

Arithmetic Mean
The summation of the individual values divided by the number of individual values.

Bypass
The known diversion of waste streams from any portion of a treatment facility including the collection system, which is not a designed or established or operating mode for the facility.

Calendar Day
The period from midnight of one day until midnight of the next day. However, for purposes of this permit, any consecutive 24-hour period that reasonably represents the calendar day may be used for sampling.

Calendar Quarter
One of the following distinct periods: January through March, April through June, July through September, and October through December.

Composite Sample
A sample collected over a 24-hour period by continuous sampling or combining grab samples of at least 100 ml in such a manner as to result in a total sample representative of the wastewater discharge during the sample period. The Director may designate the most appropriate method (specific number and size of aliquots necessary, the time interval between grab samples, etc.) on a case-by-case basis. Samples may be collected manually or automatically. Composite samples may be obtained by the following methods:

(1) Continuous: a single, continuous sample collected over a 24-hour period proportional to the rate of flow.
(2) Constant time/variable volume: a series of grab samples collected at equal time intervals over a 24 hour period of discharge and combined proportional to the rate of flow measured at the time of individual sample collection, or
(3) Variable time/constant volume: a series of grab samples of equal volume collected over a 24 hour period with the time intervals between samples determined by a preset number of gallons passing the sampling point. Flow measurement between sample intervals shall be determined by use of a flow recorder and totalizer, and the preset gallon interval between sample collection fixed at no greater than 1/24 of the expected total daily flow at the treatment system, or
(4) Constant time/constant volume: a series of grab samples of equal volume collected over a 24-hour period at a constant time interval. **Use of this method requires prior approval by the Director. This method may only be used in situations where effluent flow rates vary less than 15 percent.** The following restrictions also apply:
   - Influent and effluent grab samples shall be of equal size and of no less than 100 milliliters

- Influent samples shall not be collected more than once per hour.
- Permittees with wastewater treatment systems whose detention time $\leq$ 24 hours shall collect effluent grab samples at intervals of no greater than 20 minutes apart during any 24-hour period.
- Permittees with wastewater treatment systems whose detention time exceeds 24 hours shall collect effluent grab samples at least every X hours [X = days detention time] over a 24-hour period. Effluent samples shall be collected at least every six hours; there must be a minimum of four samples during a 24-hour sampling period.

Continuous flow measurement
Flow monitoring that occurs without interruption throughout the operating hours of the facility. Flow shall be monitored continually except for the infrequent times when there may be no flow or for infrequent maintenance activities on the flow device.

Daily Discharge
The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants measured in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. The "daily discharge" concentration comprises the mean concentration for a 24-hour sampling period as either a composite sample concentration or the arithmetic mean of all grab samples collected during that period. (40 CFR 122.2)

Daily Maximum
The highest "daily discharge" for conventional and other non-toxicant parameters. NOTE: Permittees may not submit a "daily average" calculation [for determining compliance with permit limits] for toxicants. See the relevant Federal effluent guideline[s] for the appropriate calculation interval.

Daily Sampling
Parameters requiring daily sampling shall be sampled 5 out of every 7 days per week unless otherwise specified in the permit. The Division expects that sampling shall be conducted on weekdays except where holidays or other disruptions of normal operations prevent weekday sampling. If sampling is required for all seven days of the week for any permit parameter(s), that requirement will be so noted on the Effluent Limitations and Monitoring Page(s).

DWQ or "the Division"
The Division of Water Quality, Department of Environment and Natural Resources.

EMC
The North Carolina Environmental Management Commission.

Facility Closure
The cessation of wastewater treatment at a permitted facility, or the cessation of all activities that require coverage under the NPDES. Completion of facility closure will allow this permit to be rescinded.

Geometric Mean
The Nth root of the product of the individual values where N = the number of individual values. For purposes of calculating the geometric mean, values of "0" (or "< [detection level]") shall be considered = 1.

Grab Sample
Individual samples of at least 100 ml collected over a period of time not exceeding 15 minutes. Grab samples can be collected manually. Grab samples must be representative of the discharge (or the receiving stream, for instream samples).

Hazardous Substance
Any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act.

Instantaneous flow measurement
A measure of flow taken at the time of sampling, when both the sample and flow will be representative of the total discharge.

Monthly Average (concentration limit)
The arithmetic mean of all "daily discharges" of a pollutant measured during the calendar month. In the case of fecal coliform, the geometric mean of such discharges.

Permit Issuing Authority
The Director of the Division of Water Quality.

Quarterly Average (concentration limit)
The average of all samples taken over a calendar quarter.

Severe property damage
Substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage excludes economic loss caused by delays in production.

Toxic Pollutant:
Any pollutant listed as toxic under Section 307(a)(l) of the Clean Water Act.

Upset
An incident beyond the reasonable control of the Permittee causing unintentional and temporary noncompliance with permit effluent limitations and/or monitoring requirements. An upset does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Weekly Average (concentration limit)
The arithmetic mean of all "daily discharges" of a pollutant measured during the calendar week. In the case of fecal coliform, the geometric mean of such discharges.

Section B. General Conditions

1. Duty to Comply
   The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application [40 CFR 122.41].

   a. The Permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

   b. The Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. [40 CFR 122.41 (a)(2)]

   c. The Clean Water Act provides that any person who *negligently* violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under

section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both. [40 CFR 122.41 (a) (2)]

d. Any person who *knowingly* violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both. [40 CFR 122.41 (a) (2)]

e. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions. [40 CFR 122.41 (a) (2)]

f. Under state law, a civil penalty of not more than $25,000 per violation may be assessed against any person who violates or fails to act in accordance with the terms, conditions, or requirements of a permit. [North Carolina General Statutes § 143-215.6A]

g. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000. [40 CFR 122.41 (a) (3)]

2. Duty to Mitigate
The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit with a reasonable likelihood of adversely affecting human health or the environment [40 CFR 122.41 (d)].

3. Civil and Criminal Liability
Except as provided in permit conditions on "Bypassing" (Part II. C. 4), "Upsets" (Part II. C. 5) and "Power Failures" (Part II. C. 7), nothing in this permit shall be construed to relieve the Permittee from any responsibilities, liabilities, or penalties for noncompliance pursuant to NCGS 143-215.3, 143-215.6 or Section 309 of the Federal Act, 33 USC 1319. Furthermore, the Permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.

4. Oil and Hazardous Substance Liability
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject to under NCGS 143-215.75 et seq. or Section 311 of the Federal Act, 33 USG 1321. Furthermore, the Permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.

5. Property Rights
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations [40 CFR 122.41 (g)].

6. Onshore or Offshore Construction
This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

7. Severability
The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby [NCGS 150B-23].

8. Duty to Provide Information
The Permittee shall furnish to the Permit Issuing Authority, within a reasonable time, any information which the Permit Issuing Authority may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also furnish to the Permit Issuing Authority upon request, copies of records required by this permit [40 CFR 122.41 (h)].

9. Duty to Reapply
If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit [40 CFR 122.41 (b)].

10. Expiration of Permit
The Permittee is not authorized to discharge after the expiration date. In order to receive automatic authorization to discharge beyond the expiration date, the Permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date. Any Permittee that has not requested renewal at least 180 days prior to expiration, or any Permittee that does not have a permit after the expiration and has not requested renewal at least 180 days prior to expiration, will subject the Permittee to enforcement procedures as provided in NCGS 143-215.6 and 33 USC 1251 et. seq.

11. Signatory Requirements
All applications, reports, or information submitted to the Permit Issuing Authority shall be signed and certified [40 CFR 122.41 (k)].

a. **All permit applications shall be signed as follows:**
   (1) For a corporation: by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means: (a) a president, secretary, treasurer or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or (b) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures .
   (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
   (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official [40 CFR 122.22].

b. All reports required by the permit and other information requested by the Permit Issuing Authority shall be signed by a person described in paragraph a. above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
   1. The authorization is made in writing by a person described above;
   2. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or well field, superintendent, a position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
   3. The written authorization is submitted to the Permit Issuing Authority [40 CFR 122.22]

c. Changes to authorization: If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative [40 CFR 122.22]

d. Certification. Any person signing a document under paragraphs a. or b. of this section shall make the following certification [40 CFR 122.22]:
"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

12. Permit Actions
This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition [40 CFR 122.41 (f)].

13. Permit Modification, Revocation and Reissuance, or Termination
The issuance of this permit does not prohibit the permit issuing authority from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit as allowed by the laws, rules, and regulations contained in Title 40, Code of Federal Regulations, Parts 122 and 123; Title 15A of the North Carolina Administrative Code, Subchapter 2H .0100; and North Carolina General Statute 143-215.1 et. al.

14. Annual Administering and Compliance Monitoring Fee Requirements
The Permittee must pay the annual administering and compliance monitoring fee within thirty days after being billed by the Division. Failure to pay the fee in a timely manner in accordance with 15A NCAC 2H.0105 (b) (2) may cause this Division to initiate action to revoke the permit.

Section C. Operation and Maintenance of Pollution Controls

1. Certified Operator
Upon classification of the permitted facility by the Certification Commission, the Permittee shall employ a certified water pollution control treatment system operator in responsible charge (ORC) of the water pollution control treatment system. Such operator must hold a certification of the grade equivalent to or greater than the classification assigned to the water pollution control treatment system by the Certification Commission. The Permittee must also employ one or more certified Back-up ORCs who possess a currently valid certificate of the type of the system. Back-up ORCs must possess a grade equal to (or no more than one grade less than) the grade of the system [15A NCAC 8G.0201].

The ORC of each Class I facility must:

- Visit the facility at least weekly
- Comply with all other conditions of 15A NCAC 8G.0204.

The ORC of each Class II, III and IV facility must:

- Visit the facility at least five days per week, excluding holidays
- Properly manage and document daily operation and maintenance of the facility
- Comply with all other conditions of 15A NCAC 8G.0204.

Once the facility is classified, the Permittee shall submit a letter to the Certification Commission designating the operator in responsible charge:

a. Within 60 calendar days prior to wastewater being introduced into a new system
b. Within 120 calendar days of:
    - Receiving notification of a change in the classification of the system requiring the designation of a new ORC and back-up ORC
    - A vacancy in the position of ORC or back-up ORC.

2. Proper Operation and Maintenance

The Permittee shall at all times provide the operation and maintenance resources necessary to operate the existing facilities at optimum efficiency. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the Permittee to install and operate backup or auxiliary facilities only when necessary to achieve compliance with the conditions of the permit [40 CFR 122.41 (e)].

3. Need to Halt or Reduce not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the condition of this permit [40 CFR 122.41 (c)].

4. Bypassing of Treatment Facilities

a. Bypass not exceeding limitations [40 CFR 122.41 (m) (2)]

The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Paragraphs b. and c. of this section.

b. Notice [40 CFR 122.41 (m) (3)]

(1) Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass; including an evaluation of the anticipated quality and effect of the bypass.

(2) Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required in Part II. E. 6. (24-hour notice).

c. Prohibition of Bypass

(1) Bypass from the treatment facility is prohibited and the Permit Issuing Authority may take enforcement action against a Permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury or severe property damage;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(C) The Permittee submitted notices as required under Paragraph b. of this section.

(2) Bypass from the collection system is prohibited and the Permit Issuing Authority may take enforcement action against a Permittee for a bypass as provided in any current or future system-wide collection system permit associated with the treatment facility.

(3) The Permit Issuing Authority may approve an anticipated bypass, after considering its adverse effects, if the Permit Issuing Authority determines that it will meet the three conditions listed above in Paragraph c. (l) of this section.

5. Upsets

a. Effect of an upset [40 CFR 122.41 (n) (2)]: An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph b. of this condition are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

b. Conditions necessary for a demonstration of upset: A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
(1) An upset occurred and that the Permittee can identify the cause(s) of the upset;
(2) The Permittee facility was at the time being properly operated; and
(3) The Permittee submitted notice of the upset as required in Part II. E. 6. (b) of this permit.
(4) The Permittee complied with any remedial measures required under Part II. B. 2. of this permit.

c. Burden of proof [40 CFR 122.41 (n) (4)]: The Permittee seeking to establish the occurrence of an upset has the burden of proof in any enforcement proceeding.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be utilized/disposed of in accordance with NCGS 143-215.1 and in a manner such as to prevent any pollutant from such materials from entering waters of the State or navigable waters of the United States. The Permittee shall comply with all existing Federal regulations governing the disposal of sewage sludge. Upon promulgation of 40 CFR Part 503, any permit issued by the Permit Issuing Authority for the utilization/disposal of sludge may be reopened and modified, or revoked and reissued, to incorporate applicable requirements at 40 CFR 503. The Permittee shall comply with applicable 40 CFR 503 Standards for the Use and Disposal of Sewage Sludge (when promulgated) within the time provided in the regulation, even if the permit is not modified to incorporate the requirement. The Permittee shall notify the Permit Issuing Authority of any significant change in its sludge use or disposal practices.

7. Power Failures

The Permittee is responsible for maintaining adequate safeguards (as required by 15A NCAC 2H.0124 – Reliability) to prevent the discharge of untreated or inadequately treated wastes during electrical power failures either by means of alternate power sources, standby generators or retention of inadequately treated effluent.

Section D. Monitoring and Records

1. Representative Sampling

Samples collected and measurements taken, as required herein, shall be characteristic of the volume and nature of the permitted discharge. Samples collected at a frequency less than daily shall be taken on a day and time that is characteristic of the discharge over the entire period the sample represents. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Permit Issuing Authority [40 CFR 122.41 (j)].

2. Reporting
Monitoring results obtained during the previous month(s) shall be summarized for each month and reported on a monthly Discharge Monitoring Report (DMR) Form (MR 1, 1.1, 2, 3) or alternative forms approved by the Director, postmarked no later than the last calendar day of the month following the completed reporting period.

The first DMR is due on the last day of the month following the issuance of the permit or in the case of a new facility, on the last day of the month following the commencement of discharge. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the following address:

NC DENR / Division of Water Quality / Water Quality Section
ATTENTION: Central Files
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

3. Flow Measurements
Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from the true discharge rates throughout the range of expected discharge volumes. Flow measurement devices shall be accurately calibrated at a minimum of once per year and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. The Director shall approve the flow measurement device and monitoring location prior to installation.

Once-through condenser cooling water flow monitored by pump logs, or pump hour meters as specified in Part I of this permit and based on the manufacturer's pump curves shall not be subject to this requirement.

4. Test Procedures
Test procedures for the analysis of pollutants shall conform to the EMC regulations (published pursuant to NCGS 143-215.63 et. seq.), the Water and Air Quality Reporting Acts, and to regulations published pursuant to Section 304(g), 33 USC 1314, of the Federal Water Pollution Control Act (as Amended), and 40 CFR 136; or in the case of sludge use or disposal, approved under 40 CFR 136, unless otherwise specified in 40 CFR 503, unless other test procedures have been specified in this permit [40 CFR 122.41].

To meet the intent of the monitoring required by this permit, all test procedures must produce minimum detection and reporting levels that are below the permit discharge requirements and all data generated must be reported down to the minimum detection or lower reporting level of the procedure. If no approved methods are determined capable of achieving minimum detection and reporting levels below permit discharge requirements, then the most sensitive (method with the lowest possible detection and reporting level) approved method must be used.

5. Penalties for Tampering
The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both [40 CFR 122.41].

6. Records Retention
Except for records of monitoring information required by this permit related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR 503), the Permittee shall retain records of all monitoring information, including:
- all calibration and maintenance records
- all original strip chart recordings for continuous monitoring instrumentation

- copies of all reports required by this permit
- copies of all data used to complete the application for this permit

These records or copies shall be maintained for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time [40 CFR 122.41].

7. Recording Results

For each measurement or sample taken pursuant to the requirements of this permit, the Permittee shall record the following information [40 CFR 122.41]:

a. The date, exact place, and time of sampling or measurements;
b. The individual(s) who performed the sampling or measurements;
c. The date(s) analyses were performed;
d. The individual(s) who performed the analyses;
e. The analytical techniques or methods used; and
f. The results of such analyses.

8. Inspection and Entry

The Permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Director), upon the presentation of credentials and other documents as may be required by law, to;

a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location [40 CFR 122.41 (i)].

Section E Reporting Requirements

1. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.

2. Planned Changes

The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility [40 CFR 122.41 (l)]. Notice is required only when:

a. The alteration or addition to a permitted facility may meet one of the criteria for new sources at 40 CFR 122.29 (b); or
b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42 (a) (1).
c. The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

3. Anticipated Noncompliance

The Permittee shall give advance notice to the Director of any planned changes to the permitted facility or other activities that might result in noncompliance with the permit [40 CFR 122.41 (l) (2)].

4. Transfers
This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to document the change of ownership. Any such action may incorporate other requirements as may be necessary under the Clean Water Act [40 CFR 122.41 (l) (3)].

5. Monitoring Reports
Monitoring results shall be reported at the intervals specified elsewhere in this permit [40 CFR 122.41 (l) (4)].

   a. Monitoring results must be reported on a Discharge Monitoring Report (DMR) (See Part II. D. 2) or forms provided by the Director for reporting results of monitoring of sludge use or disposal practices.
   b. If the Permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included in the calculation and reporting of the data submitted on the DMR.

6. Twenty-four Hour Reporting
   a. The Permittee shall report to the Director or the appropriate Regional Office any noncompliance that potentially threatens public health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee became aware of the circumstances. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance, and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [40 CFR 122.41 (l) (6)].

   b. The Director may waive the written report on a case-by-case basis for reports under this section if the oral report has been received within 24 hours.

   c. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

7. Other Noncompliance
The Permittee shall report all instances of noncompliance not reported under Part II. E. 5 and 6. of this permit at the time monitoring reports are submitted. The reports shall contain the information listed in Part II. E. 6. of this permit [40 CFR 122.41 (l) (7)].

8. Other Information
Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information [40 CFR 122.41 (l) (8)].

9. Noncompliance Notification
The Permittee shall report by telephone to either the central office or the appropriate regional office of the Division as soon as possible, but in no case more than 24 hours or on the next working day following the occurrence or first knowledge of the occurrence of any of the following:

   a. Any occurrence at the water pollution control facility which results in the discharge of significant amounts of wastes which are abnormal in quantity or characteristic, such as the dumping of the contents of a sludge digester; the known passage of a slug of hazardous substance through the facility; or any other unusual circumstances.
   b. Any process unit failure, due to known or unknown reasons, that render the facility incapable of adequate wastewater treatment such as mechanical or electrical failures of pumps, aerators, compressors, etc.
   c. Any failure of a pumping station, sewer line, or treatment facility resulting in a by-pass directly to receiving waters without treatment of all or any portion of the influent to such station or facility.

Persons reporting such occurrences by telephone shall also file a written report within 5 days following first knowledge of the occurrence.

10. Availability of Reports
Except for data determined to be confidential under NCGS 143-215.3 (a)(2) or Section 308 of the Federal Act, 33 USC 1318, all reports prepared in accordance with the terms shall be available for public inspection at the offices of the Division. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NCGS 143-215.1 (b)(2) or in Section 309 of the Federal Act.

11. Penalties for Falsification of Reports
The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $25,000 per violation, or by imprisonment for not more than two years per violation, or by both [40 CFR 122.41].

12. Annual Performance Reports
Permittees who own or operate facilities that collect or treat municipal or domestic waste shall provide an annual report to the Permit Issuing Authority and to the users/customers served by the Permittee (NCGS 143-215.1C). The report shall summarize the performance of the collection or treatment system, as well as the extent to which the facility was compliant with applicable Federal or State laws, regulations and rules pertaining to water quality. The report shall be provided no later than sixty days after the end of the calendar or fiscal year, depending upon which annual period is used for evaluation.

PART III
OTHER REQUIREMENTS

Section A. Construction

The Permittee shall not commence construction of wastewater treatment facilities, nor add to the plant's treatment capacity, nor change the treatment process(es) utilized at the treatment plant unless the Division has issued an Authorization to Construct (AtC) permit. Issuance of an AtC will not occur until Final Plans and Specifications for the proposed construction have been submitted by the Permittee and approved by the Division.

Section B. Groundwater Monitoring

The Permittee shall, upon written notice from the Director, conduct groundwater monitoring as may be required to determine the compliance of this NPDES permitted facility with the current groundwater standards.

Section C. Changes in Discharges of Toxic Substances

The Permittee shall notify the Permit Issuing Authority as soon as it knows or has reason to believe (40 CFR 122.42):

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels";
   (1) One hundred micrograms per liter (100 μg/L);
   (2) Two hundred micrograms per liter (200 μg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 μg/L) for 2.4-dinitrophenol and for 2-methyl-4.6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
   (3) Five times the maximum concentration value reported for that pollutant in the permit application.

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels";

(1) Five hundred micrograms per liter (500 μg/L);
(2) One milligram per liter (1 mg/L) for antimony;
(3) Ten times the maximum concentration value reported for that pollutant in the permit application.

Section D. Evaluation of Wastewater Discharge Alternatives

The Permittee shall evaluate all wastewater disposal alternatives and pursue the most environmentally sound alternative of the reasonably cost effective alternatives. If the facility is in substantial non-compliance with the terms and conditions of the NPDES permit or governing rules, regulations or laws, the Permittee shall submit a report in such form and detail as required by the Division evaluating these alternatives and a plan of action within 60 days of notification by the Division.

Section E. Facility Closure Requirements

The Permittee must notify the Division at least 90 days prior to the closure of any wastewater treatment system covered by this permit. The Division may require specific measures during deactivation of the system to prevent adverse impacts to waters of the State. This permit cannot be rescinded while any activities requiring this permit continue at the permitted facility.

PART IV
SPECIAL CONDITIONS FOR MUNICIPAL FACILITIES

Section A. Publicly Owned Treatment Works (POTWs)

All POTWs must provide adequate notice to the Director of the following:

1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; and
2. Any substantial change in the volume or character of pollutants being introduced by an indirect discharger as influent to that POTW at the time of issuance of the permit.
3. For purposes of this paragraph, adequate notice shall include information on (1) the quality and quantity of effluent introduced into the POTW, and (2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

Section B. Municipal Control of Pollutants from Industrial Users.

1. Effluent limitations are listed in Part I of this permit. Other pollutants attributable to inputs from industries using the municipal system may be present in the Permittee's discharge. At such time as sufficient information becomes available to establish limitations for such pollutants, this permit may be revised to specify effluent limitations for any or all of such other pollutants in accordance with best practicable technology or water quality standards.

2. Under no circumstances shall the Permittee allow introduction of the following wastes in the waste treatment system:
   a. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
   b. Pollutants which will cause corrosive structural damage to the POTW, but in no case Discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such Discharges;
   c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in Interference;
   d. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a Discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
   e. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40°C (104°F) unless the Division, upon request of the POTW, approves alternate temperature limits;

f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

3. With regard to the effluent requirements listed in Part I of this permit, it may be necessary for the Permittee to supplement the requirements of the Federal Pretreatment Standards (40 CFR, Part 403) to ensure compliance by the Permittee with all applicable effluent limitations. Such actions by the Permittee may be necessary regarding some or all of the industries discharging to the municipal system.

4. The Permittee shall require any industrial discharges sending influent to the permitted system to meet Federal Pretreatment Standards promulgated in response to Section 307(b) of the Act. Prior to accepting wastewater from any significant industrial user, the Permittee shall either develop and submit to the Division a Pretreatment Program for approval per 15A NCAC 2H .0907(a) or modify an existing Pretreatment Program per 15A NCAC 2H .0907(b).

5. This permit shall be modified, or alternatively, revoked and reissued, to incorporate or modify an approved POTW Pretreatment Program or to include a compliance schedule for the development of a POTW Pretreatment Program as required under Section 402(b)(8) of the Clean Water Act and implementing regulations or by the requirements of the approved State pretreatment program, as appropriate.

Section C. Pretreatment Programs

Under authority of sections 307(b) and (c) and 402(b)(8) of the Clean Water Act and implementing regulations 40 CFR Part 403, North Carolina General Statute 143-215.3 (14) and implementing regulations 15A NCAC 2H .0900, and in accordance with the approved pretreatment program, all provisions and regulations contained and referenced in the Pretreatment Program Submittal are an enforceable part of this permit.

The Permittee shall operate its approved pretreatment program in accordance with Section 402(b)(8) of the Clean Water Act, the Federal Pretreatment Regulations 40 CFR Part 403, the State Pretreatment Regulations 15A NCAC 2H .0900, and the legal authorities, policies, procedures, and financial provisions contained in its pretreatment program submission and Division approved modifications there of. Such operation shall include but is not limited to the implementation of the following conditions and requirements:

1. Sewer Use Ordinance (SUO)
The Permittee shall maintain adequate legal authority to implement its approved pretreatment program.

2. Industrial Waste Survey (IWS)
The Permittee shall update its Industrial Waste Survey (IWS) to include all users of the sewer collection system at least once every five years.

3. Monitoring Plan
The Permittee shall implement a Division-approved Monitoring Plan for the collection of facility specific data to be used in a wastewater treatment plant Headworks Analysis (HWA) for the development of specific pretreatment local limits. Effluent data from the Plan shall be reported on the DMRs (as required by Part II, Section D, and Section E.5.).

4. Headworks Analysis (HWA) and Local Limits
The Permittee shall obtain Division approval of a Headworks Analysis (HWA) at least once every five years, and as required by the Division. Within 180 days of the effective date of this permit (or any subsequent permit modification) the Permittee shall submit to the Division a written technical evaluation of the need to revise local limits (i.e., an updated HWA or documentation of why one is not needed) [40 CFR 122.44]. The Permittee shall develop, in accordance with 40 CFR 403.5(c) and 15A NCAC 2H .0909, specific Local Limits to implement the prohibitions listed in 40 CFR 403.5(a) and (b) and 15A NCAC 2H .0909.

5. Industrial User Pretreatment Permits (IUP) & Allocation Tables
In accordance with NCGS 143-215.1, the Permittee shall issue to all significant industrial users, permits for operation of pretreatment equipment and discharge to the Permittee's treatment works. These permits shall contain limitations, sampling protocols, reporting requirements, appropriate standard and special conditions, and compliance schedules as necessary for the installation of treatment and control technologies to assure that their wastewater discharge will meet all applicable pretreatment standards and requirements. The Permittee shall maintain a current Allocation Table (AT) which summarizes the results of the Headworks Analysis (HWA) and the limits from all Industrial User Pretreatment Permits (IUP). Permitted IUP loadings for each parameter cannot exceed the treatment capacity of the POTW as determined by the HWA.

6. Authorization to Construct (AtC)
The Permittee shall ensure that an Authorization to Construct permit (AtC) is issued to all applicable industrial users for the construction or modification of any pretreatment facility. Prior to the issuance of an AtC, the proposed pretreatment facility and treatment process must be evaluated for its capacity to comply with all Industrial User Pretreatment Permit (IUP) limitations.

7. POTW Inspection & Monitoring of their SIUs
The Permittee shall conduct inspection, surveillance, and monitoring activities as described in its Division approved pretreatment program in order to determine, independent of information supplied by industrial users, compliance with applicable pretreatment standards. The Permittee must:
   a. Inspect all Significant Industrial Users (SIUs) at least once per calendar year; and
   b. Sample all Significant Industrial Users (SIUs) at least twice per calendar year for all permit-limited pollutants, once during the period from January 1 through June 30 and once during the period from July 1 through December 31, except for organic compounds which shall be sampled once per calendar year;

8. SIU Self Monitoring and Reporting
The Permittee shall require all industrial users to comply with the applicable monitoring and reporting requirements outlined in the Division-approved pretreatment program, the industry's pretreatment permit, or in 15A NCAC 2H .0908.

9. Enforcement Response Plan (ERP)
The Permittee shall enforce and obtain appropriate remedies for violations of all pretreatment standards promulgated pursuant to section 307(b) and (c) of the Clean Water Act (40 CFR 405 et. seq.), prohibitive discharge standards as set forth in 40 CFR 403.5 and 15A NCAC 2H .0909, and specific local limitations. All enforcement actions shall be consistent with the Enforcement Response Plan (ERP) approved by the Division.

10. Pretreatment Annual Reports (PAR)
The Permittee shall report to the Division in accordance with 15A NCAC 2H .0908. In lieu of submitting annual reports, Modified Pretreatment Programs developed under 15A NCAC 2H .0904 (b) may be required to meet with Division personnel periodically to discuss enforcement of pretreatment requirements and other pretreatment implementation issues.

For all other active pretreatment programs, the Permittee shall submit two copies of a Pretreatment Annual Report (PAR) describing its pretreatment activities over the previous twelve months to the Division at the following address:

NC DENR / DWQ / Pretreatment Unit
1617 Mail Service Center
Raleigh, NC 27699-1617

These reports shall be submitted according to a schedule established by the Director and shall contain the following:

a.) Narrative
A brief discussion of reasons for, status of, and actions taken for all Significant Industrial Users (SIUs) in Significant Non-Compliance (SNC);

b.) Pretreatment Program Summary (PPS)
A pretreatment program summary (PPS) on specific forms approved by the Division;

c.) Significant Non-Compliance Report (SNCR)
The nature of the violations and the actions taken or proposed to correct the violations on specific forms approved by the Division;

d.) Industrial Data Summary Forms (IDSF)
Monitoring data from samples collected by both the POTW and the Significant Industrial User (SIU). These analytical results must be reported on Industrial Data Summary Forms (IDSF) or other specific format approved by the Division;

e.) Other Information
Copies of the POTW's allocation table, new or modified enforcement compliance schedules, public notice of SIUs in SNC, and any other information, upon request, which in the opinion of the Director is needed to determine compliance with the pretreatment implementation requirements of this permit;

11. Public Notice
The Permittee shall publish annually a list of Significant Industrial Users (SIUs) that were in Significant Non-Compliance (SNC) as defined in the Permittee's Division-approved Sewer Use Ordinance with applicable pretreatment requirements and standards during the previous twelve month period. This list shall be published within four months of the applicable twelve-month period.

12. Record Keeping
The Permittee shall retain for a minimum of three years records of monitoring activities and results, along with support information including general records, water quality records, and records of industrial impact on the POTW.

13. Funding and Financial Report
The Permittee shall maintain adequate funding and staffing levels to accomplish the objectives of its approved pretreatment program.

14. Modification to Pretreatment Programs
Modifications to the approved pretreatment program including but not limited to local limits modifications, POTW monitoring of their Significant Industrial Users (SIUs), and Monitoring Plan modifications, shall be considered a permit modification and shall be governed by 15 NCAC 2H .0114 and 15A NCAC 2H .0907.

JUL 22 08

RECD BY CENTRAL FILES

The City of Raleigh has applied for modification of the NPDES discharge permit (NC0029033) for its Neuse River Wastewater Treatment Plant located on NCSR 2552 southeast of Raleigh. The modification is for the expansion of flow from 60 MGD to 75 MGD and includes allocations gained from connection of rescinded permitted facilities. This facilitity discharges to the Neuse River, a class C-NSW water in the Neuse River Basin. Currently, BOD, pH, dissolved oxygen, ammonia, total nitrogen, and total phosphorus are water quality limited. This discharge may affect future allocations in this portion of the Neuse River Basin.

NC0062715, Aqua North Carolina, Inc. (Crooked Creek Subdivision) has applied for a permit renewal of its facility located in Wake County discharging treated wastewater into Middle Creek in the Neuse River Basin. Currently Ammonia as N, Dissolved Oxygen, Total Residual Chlorine and Total Phosphorus are water quality limited. This discharge may affect future allocations in this portion of the receiving stream.

Alcatel USA Sourcing, LP (2301 Sugar Bush Road, Raleigh, NC 27612) has applied for renewal of NPDES permit NC0086126 for the Alcatel Facility in Wake County. This permitted facility discharges 0.08 MGD treated wastewater to Crabtree Creek in the Neuse River Basin. This discharge may affect future allocations in this portion of the Neuse River Basin.

The City of Raleigh (PO Box 590, Raleigh, NC 27602) has applied for renewal of NPDES permit NC0007528 for the G.G. Hill WTP in Wake County. This permitted facility discharges 0.07 MGD filter backwash wastewater to Smith Creek in the Neuse River Basin. Currently, total residual chlorine is water quality limited. This discharge may affect future allocations in this portion of the Neuse River Basin.

Carolina Water Service, Inc. of North Carolina (PO Box 240908, Charlotte, NC 28224) has applied for renewal of NPDES permit NC0086266 for the Woodtrace WTP in Wake County. This permitted facility discharges 0.003 MGD filter backwash water to an unnamed tributary to Little River in the Neuse River Basin. Currently, total residual chlorine is water quality limited. This discharge may affect future allocations in this portion of the Neuse River Basin.

Michael F. Easley, Governor
State of North Carolina

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

Coleen H. Sullins, Director
Division of Water Quality

Wednesday, May 07, 2008

To: **News And Observer**
Fax#: **919-829-4824**
Legal Advertisements Desk
Billing Department

From: Dina Sprinkle
(919) 733-5083, extension 363

Subject: Publication of Legal Advertisement (3 pages including this cover sheet)

North Carolina General Statute 143.215.1 and Administrative Code 15A NCAC 05H.0109 require the Division to provide public notice of permitting actions through local newspapers.

Please publish the attached public notice as a line advertisement in the legal section of your paper ONE TIME as soon as possible and fax a proof to (919) 733-0719 for final approval prior to publication. If you do not receive a response regarding the proof, no changes are needed.

BILLING INFORMATION

Please send the invoice and the original affidavit to: NCDENR/DWQ/NPDES
ATTN: Dina Sprinkle
1617 Mail Service Center
Raleigh, NC 27699-1617

Please call (919) 733-5083 extension 363 as soon as possible if other arrangements need to be made before publication.

Thank you for your assistance.

** Transmit Conf. Report **

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Michael F. Easley, Governor
State of North Carolina

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Raleigh, NC 27699-1617

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Thank you for your assistance.

Subject: Public Notice 07/08/08
From: "Dina.Sprinkle" <Dina.Sprinkle@NCMail.net>
Date: Thu, 08 May 2008 09:14:46 -0400
To: Pam Oleniczak <pamo@newsobserver.com>

Thanks Pam and I hope you have a great day.

Dina

--
Dina Sprinkle
NCDENR/DWQ/Point Source Branch
1617 Mail Service Center
Raleigh, NC 27699-1617
Office - (919) 733-5083, Ext. 363
Fax - (919) 733-0719
dina.sprinkle@ncmail.net

Public Notice-News and Observer.doc	**Content-Type:**	application/msword
	Content-Encoding:	base64

PUBLIC NOTICE
STATE OF NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION/NPDES UNIT
1617 MAIL SERVICE CENTER
RALEIGH, NC 27699-1617
NOTIFICATION OF INTENT TO ISSUE A NPDES WASTEWATER PERMIT

On the basis of thorough staff review and application of NC General Statute 143.215.1 and 15A NCAC 02H.0109 and other lawful standards and regulations, the North Carolina Environmental Management Commission proposes to issue a National Pollutant Discharge Elimination System (NPDES) wastewater discharge permit to the person(s) listed below effective 45 days from the publish date of this notice.

Written comments regarding the proposed permit will be accepted until 30 days after the publish date of this notice. All comments received prior to that date are considered in the final determinations regarding the proposed permit. The Director of the NC Division of Water Quality may decide to hold a public meeting for the proposed permit, should the Division receive a significant degree of public interest.

Copies of the draft permit and other supporting information on file used to determine conditions present in the draft permit are available upon request and payment of the costs of reproduction. Mail comments and/or requests for information to the NC Division of Water Quality at the above address or call Dina Sprinkle (919) 733-5083, extension 363 at the Point Source Branch. Please include the NPDES permit number (below) in any communication. Interested persons may also visit the Division of Water Quality at 512 N. Salisbury Street, Raleigh, NC 27604-1148 between the hours of 8:00 a.m. and 5:00 p.m. to review information on file.

The City of Raleigh has applied for modification of the NPDES discharge permit (NC0029033) for its Neuse River Wastewater Treatment Plant located on NCSR 2552 southeast of Raleigh. The modification is for the expansion of flow from 60 MGD to 75 MGD and includes allocations gained from connection of rescinded permitted facilities. This facility discharges to the Neuse River, a class C-NSW water in the Neuse River Basin. Currently, BOD, pH, dissolved oxygen, ammonia, total nitrogen, and total phosphorus are water quality limited. This discharge may affect future allocations in this portion of the Neuse River Basin.

NC0062715, Aqua North Carolina, Inc. (Crooked Creek Subdivision) has applied for a permit renewal of its facility located in Wake County discharging treated

wastewater into Middle Creek in the Neuse River Basin. Currently Ammonia as N, Dissolved Oxygen, Total Residual Chlorine and Total Phosphorus are water quality limited. This discharge may affect future allocations in this portion of the receiving stream.

Alcatel USA Sourcing, LP (2301 Sugar Bush Road, Raleigh, NC 27612) has applied for renewal of NPDES permit NC0086126 for the Alcatel Facility in Wake County. This permitted facility discharges 0.08 MGD treated wastewater to Crabtree Creek in the Neuse River Basin. This discharge may affect future allocations in this portion of the Neuse River Basin.

The City of Raleigh (PO Box 590, Raleigh, NC 27602) has applied for renewal of NPDES permit NC0007528 for the G.G. Hill WTP in Wake County. This permitted facility discharges 0.07 MGD filter backwash wastewater to Smith Creek in the Neuse River Basin. Currently, total residual chlorine is water quality limited. This discharge may affect future allocations in this portion of the Neuse River Basin.

Carolina Water Service, Inc. of North Carolina (PO Box 240908, Charlotte, NC 28224) has applied for renewal of NPDES permit NC0086266 for the Woodtrace WTP in Wake County. This permitted facility discharges 0.003 MGD filter backwash water to an unnamed tributary to Little River in the Neuse River Basin. Currently, total residual chlorine is water quality limited. This discharge may affect future allocations in this portion of the Neuse River Basin.

Subject: RE: Public Notice 07/08/08
From: "Pam Oleniczak" <pamo@newsobserver.com>
Date: Thu, 8 May 2008 11:23:57 -0400
To: "Dina.Sprinkle" <Dina.Sprinkle@NCMail.net>

no problem. I have already scheduled it for tomorrow. . we had time yet to get in in.
Thanks, Pam

-----Original Message-----
From: Dina.Sprinkle [mailto:Dina.Sprinkle@NCMail.net]
Sent: Thursday, May 08, 2008 11:16 AM
To: Pam Oleniczak
Subject: Re: Public Notice 07/08/08

Pam,

Tomorrow would be great, but if you need to hold it for a later day, that would be no problem.

Thanks,

Dina

Pam Oleniczak wrote:

JUL 22 08

MEDD BY CRIMINAL FILES

Thanks Dina - gotta love email (cut n paste). . I have received the ad for pub, do you want tomorrow (Friday)?
Let me know. Pam (*_*)

-----Original Message-----
From: Dina.Sprinkle [mailto:Dina.Sprinkle@NCMail.net]
Sent: Thursday, May 08, 2008 9:15 AM
To: Pam Oleniczak
Subject: Public Notice 07/08/08

Thanks Pam and I hope you have a great day.

Dina

--
Dina Sprinkle
NCDENR/DWQ/Point Source Branch
1617 Mail Service Center
Raleigh, NC 27699-1617
Office - (919) 733-5083, Ext. 363
Fax - (919) 733-0719
dina.sprinkle@ncmail.net

Michael F. Easley, Governor
State of North Carolina

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

Coleen H. Sullins, Director
Division of Water Quality

May 7, 2008.

Mr. H. Dale Crisp
City of Raleigh Public Utilities Director
P.O. Box 590
Raleigh, North Carolina 27602

Subject: Public Notice for Permit Modification
NPDES Permit **NC0029033**
Neuse River WWTP
Wake County

Dear Mr. Crisp:

It has been determined by the Division that the published notice for the DRAFT permit renewal issued April 9, 2008 did not contain language describing the expansion modification from 60 MGD to 75 MGD. As a result a second published notice is being issued to correct this discrepancy.

The April 9, 2008 letter and renewal draft did properly identify the expansion and requirements for the expansion so no amended letters to other concerns are needed. There have been no changes to the renewal draft permit.

Please provide any comments you have regarding the April 9, 2008 draft permit to this office no later than 30 days after receiving this document. At this time, the Division is also publishing a notice in the newspapers of general circulation in Wake County, inviting public comment on the modification draft permit. Following the 30-day comment period, we will review all pertinent comments received and take appropriate action on the permit renewal.

If you have any questions concerning the draft permit or the other requirements for your facility, please call me at (919) 733-5083, extension 531.

Sincerely,

Ron Berry

Ron Berry
NPDES Unit

Cc: NPDES Files
Raleigh Regional Office – Surface Water Protection

1617 Mail Service Center, Raleigh, North Carolina 27699-1617 Telephone (919) 733-5083 FAX (919) 733-0719
An Equal Opportunity Affirmative Action Employer Visit us on the INTERNET @ www.enr.state.nc.us

Michael F. Easley, Governor
State of North Carolina

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

Coleen H. Sullins, Director
Division of Water Quality

May 2, 2008

Mr. Marshall Hyatt
U.S. EPA Region IV
61 Forsyth Street
Atlanta, GA 30303

Subject: Additional Paperwork – Renewal Draft Permit
NPDES Permit NC0029033
Neuse River WWTP
Wake County

Dear Mr. Hyatt:

Enclosed are the two documents previously omitted from the Neuse River WWTP renewal application submitted to the U. S. EPA Region IV in April 2008. This letter is in response to your inquiry about the missing documents. These documents are:

1) The third metal test conducted in November 2005.
2) The fourth toxicity test conducted in August 2007.

If you have any questions contact Ron Berry at (919) 733-5083 x. 531 or ron.berry@ncmail.net.

Sincerely,

Ron Berry

Ron Berry

Enclosed:

Pace Analytical Toxicity Results for August 22, 2007 – 3 pages
TriTest Priority Pollutants Results for November 17, 2005 - 4 pages

Cc: Central File (No attachments)
NPDES File (No attachments)

PUBLIC NOTICE
STATE OF NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION/NPDES UNIT
1617 MAIL SERVICE CENTER
RALEIGH, NC 27699-1617
NOTIFICATION OF INTENT TO ISSUE A NPDES WASTEWATER PERMIT

On the basis of thorough staff review and application of NC General Statute 143.215.1 and 15A NCAC 02H.0109 and other lawful standards and regulations, the North Carolina Environmental Management Commission proposes to issue a National Pollutant Discharge Elimination System (NPDES) wastewater discharge permit to the person(s) listed below effective 45 days from the publish date of this notice.

Written comments regarding the proposed permit will be accepted until 30 days after the publish date of this notice. All comments received prior to that date are considered in the final determinations regarding the proposed permit. The Director of the NC Division of Water Quality may decide to hold a public meeting for the proposed permit, should the Division receive a significant degree of public interest.

Copies of the draft permit and other supporting information on file used to determine conditions present in the draft permit are available upon request and payment of the costs of reproduction. Mail comments and/or requests for information to the NC Division of Water Quality at the above address or call Dina Sprinkle (919) 733-5083, extension 363 at the Point Source Branch. Please include the NPDES permit number (below) in any communication. Interested persons may also visit the Division of Water Quality at 512 N. Salisbury Street, Raleigh, NC 27604-1148 between the hours of 8:00 a.m. and 5:00 p.m. to review information on file.

Town of Hookerton, NC0025712, has applied to renew its NPDES permit discharging to Contentnea Creek in the Neuse River Basin. Total Residual chlorine (TRC) and fecal coliform are water-quality limited. This discharge may affect future wasteload allocations to the receiving.

BP Products North America (7401 Old Mt. Holly Road, Charlotte, North Carolina 28214) has applied for renewal of NPDES permit NC0036145 for the Selma Terminal at 3707 Buffalo Road in Selma, North Carolina. This permitted facility discharges wastewater to an unnamed tributary to Mill Creek in the Neuse River Basin. Currently, total suspended solids and phenol are water quality limited. This discharge may affect future allocations in this portion of Mill Creek.

Jerry G. Williams & Sons, Inc. (P.O. Box 2430, Smithfield, NC 27577) has applied for renewal of permit NC0085936 for the company's Wet Deck Log Storage site in Johnston-

County. This permitted facility discharges stormwater and wet-decking runoff to an unnamed tributary to the Neuse River in the Neuse River Basin. Currently, no parameters are water-quality limited. This discharge may affect future allocations in this portion of the Neuse River.

The Town of Smithfield has applied for renewal of NPDES permit numberNC0083348 for its WTP. This permitted facility discharges filter-backwash wastewater to Buffalo Creek in the Neuse River Basin. Currently total residual chlorine is water quality limited. This discharge may affect future allocations in this portion of Buffalo Creek.

The City of Raleigh has applied for renewal of the NPDES discharge permit (NC0029033) for its Neuse River Wastewater Treatment Plant located on NCSR 2552 southeast of Raleigh. This facility discharges to the Neuse River, a class C-NSW water in the Neuse River Basin. Currently, BOD, pH, dissolved oxygen, ammonia, total nitrogen, and total phosphorus are water quality limited.

Aqua North Carolina, Inc. has applied for renewal and a modification to NPDES Permit Number NC0058505, Mallard Crossing Subdivision WWTP on NCSR 2217 north of Knigthdale in Wake County. This facility discharges treated wastewater into an unnamed tributary to Hodges Mill Creek in the Neuse River Basin. Currently, ammonia, fecal coliform, temperature, dissolved oxygen, pH, total residual chlorine, and various radiological components based on drinking water standards are water quality limited. This discharge may affect future allocations in this portion of the receiving stream.

Aqua North Carolina, Inc. has applied for renewal of NPDES permit number NC0073679, Oak Hollow WTP located off NC 42 near Mount Pleasant in Wake County. This permitted facility discharges filter wastewater to an unnamed tributary to Middle Creek in the Neuse River Basin. Currently total residual chlorine and pH are water quality limited. This discharge may affect future allocations in this portion of Middle Creek.

The City of Raleigh (P.O. Box 590, Raleigh, NC 27602) has applied for renewal of NPDES permit number NC0082376 for the E.M. Johnson WTP in Wake County. This permitted facility discharges filter-backwash wastewater to the Neuse River or to a UT to Honeycutt Creek arm of Falls Lake in the Neuse River Basin. Currently Suspended Solids, total residual chlorine, Phosphorus, and Manganese are water quality limited. This discharge may affect future allocations in this portion of the Neuse River Basin.

Aqua North Carolina, Inc. has applied for renewal of NPDES permit NC0082996 for the Hollybrook WTP located on Kildare Farm Road southeast of Cary in Wake County. This permitted facility discharges sand filter wastewater to an unnamed tributary to Middle Creek in the Neuse River Basin. Currently total residual chlorine and pH are water quality limited. This discharge may affect future allocations in this portion of Middle Creek.

Aqua North Carolina, Inc. has applied for renewal of NPDES permit NC0086690 for the Stansted Well #2 WTP located on Stansted Drive north of Fuquay-Varina in Wake County. This permitted facility discharges sand filter wastewater to an unnamed tributary to Basal Creek in the Neuse River Basin. Currently total residual chlorine and pH are water quality limited. This discharge may affect future allocations in this portion of Basal Creek.

AFFIDAVIT OF PUBLICATION

NORTH CAROLINA.
Wake County.) Ss.

PUBLIC NOTICE
STATE OF NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT
COMMISSION/NPDES UNIT
1617 MAIL SERVICE CENTER
RALEIGH, NC 27699-1617
NOTIFICATION OF INTENT TO ISSUE
A NPDES WASTEWATER PERMIT

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Before the undersigned, a Notary Public of Chatham County North Carolina, duly commissioned and authorized to administer oaths, affirmations, etc., personally appeared Debra Peebles, who, being duly sworn or affirmed, according to law, doth depose and say that she is Billing Manager-Legal Advertising of The News and Observer a corporation organized and doing business under the Laws of the State of North Carolina, and publishing a newspaper known as The News and Observer, in the City of Raleigh , Wake County and State aforesaid, the said newspaper in which such notice, paper, document, or legal advertisement was published was, at the time of each and every such publication, a newspaper meeting all of the requirements and qualifications of Section 1-597 of the General Statutes of North Carolina and was a qualified newspaper within the meaning of Section 1-597 of the General Statutes of North Carolina, and that as such she makes this affidavit; that she is familiar with the books, files and business of said corporation and by reference to the files of said publication the attached advertisement for NC DIVISION OF WATER QUALITY was inserted in the aforesaid newspaper on dates as follows: 04/11/08

Account Number: 73350833

The above is correctly copied from the books and files of the aforesaid Corporation and publication.

Janet Scroggs Notary Public Chatham County, NC

Debra Peebles, Billing Manager-Legal Advertising
Wake County, North Carolina

Sworn or affirmed to, and subscribed before me, this 14 day of APRIL , 2008 AD ,by Debra Peebles.

In Testimony Whereof, I have hereunto set my hand and affixed my official seal, the day and year aforesaid.

Janet Scroggs, Notary Public

My commission expires 14th of March 2009.

The Town of Smithfield has applied for renewal of NPDES permit numberNC0083348 for its WTP. This permitted facility discharges filter-backwash wastewater to Buffalo Creek in the Neuse River Basin. Currently total residual chlorine is water quality limited. This discharge may affect future allocations in this portion of Buffalo Creek.

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N&O: April 11, 2008

Subject: RE: Public Notice 040908
From: "Pam Oleniczak" <pamo@newsobserver.com>
Date: Wed, 9 Apr 2008 14:34:10 -0400
To: "Dina.Sprinkle" <Dina.Sprinkle@NCMail.net>

Hi, Dina

I am going to get this in on friday, 4/11.

Leslie for Pam, Legals.

-----Original Message-----
From: Dina.Sprinkle [mailto:Dina.Sprinkle@NCMail.net]
Sent: Wednesday, April 09, 2008 11:19 AM
To: pamo@newsobserver.com
Subject: Public Notice 040908

Pam,

Please publish the attached public notice as a line advertisement in the legal section of your paper ONE TIME as soon as possible. Any questions, please give me a call.

Thanks,

Dina

--
Dina Sprinkle
NCDENR/DWQ/Point Source Branch
1617 Mail Service Center
Raleigh, NC 27699-1617
Office - (919) 733-5083, Ext. 363
Fax - (919) 733-0719
dina.sprinkle@ncmail.net

RECD BY ORIGINAL FILES

JUL 22 03

Michael F. Easley, Governor
State of North Carolina

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

Coleen H. Sullins, Director
Division of Water Quality

April 9, 2008.

Mr. H. Dale Crisp
City of Raleigh Public Utilities Director
P.O. Box 590
Raleigh, North Carolina 27602

Subject: Draft of Renewal Permit
NPDES Permit **NC0029033**
Neuse River WWTP
Wake County

Dear Mr. Crisp:

Please find enclosed the DRAFT permit for the subject wastewater treatment plant for your review and comment. The draft permit includes the following changes form your last permit:

- Limits and Monitoring Requirements for the expanded flow of 75 MGD are included in the draft permit.
- Monitoring for silver was reduced from weekly to monthly. Data shows that there is no reasonable potential to exceed the water quality standard.
- TN allocation increased by 6,066 lb/yr for connecting to Neuse Crossing once the Neuse Crossing permit was rescinded.
- Special Condition A. (7) was added to summarize TN allocations in terms of TN values for the Discharge and for the Estuary using the applicable Transport Factor.

Please provide any comments you have regarding the draft permit to this office no later than 30 days after receiving this document. At this time, the Division is also publishing a notice in the newspapers of general circulation in Wake County, inviting public comment on the draft permit. Following the 30-day comment period, we will review all pertinent comments received and take appropriate action on the permit renewal.

If you have any questions concerning the draft permit or the other requirements for your facility, please call me at (919) 733-5083, extension 540.

Sincerely,

Gil Vinzani
NPDES Unit

Cc: NPDES Files
Raleigh Regional Office – Surface Water Protection
U.S. EPA Region 4
Aquatic Toxicology Unit
Neuse River Basin Association
Neuse River Foundation

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER QUALITY

PERMIT

TO DISCHARGE WASTEWATER UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended, the

City of Raleigh

is hereby authorized to discharge wastewater from a facility located at the

Neuse River WWTP
End of NCSR 2552
Southeast of Raleigh
Wake County

to receiving waters designated as the Neuse River in the Neuse River Basin

in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, and IV hereof.

The permit shall become effective

This permit and the authorization to discharge shall expire at midnight on **February 28, 2013**

Signed this day

DRAFT

Coleen H. Sullins, Director
Division of Water Quality
By Authority of the Environmental Management Commission

SUPPLEMENT TO PERMIT COVER SHEET

All previous NPDES Permits issued to this facility, whether for operation or discharge are hereby revoked, and as of this issuance, any previously issued permit bearing this number is no longer effective. Therefore, the exclusive authority to operate and discharge from this facility arises under the permit conditions, requirements, terms, and provisions included herein.

The City of Raleigh

is hereby authorized to:

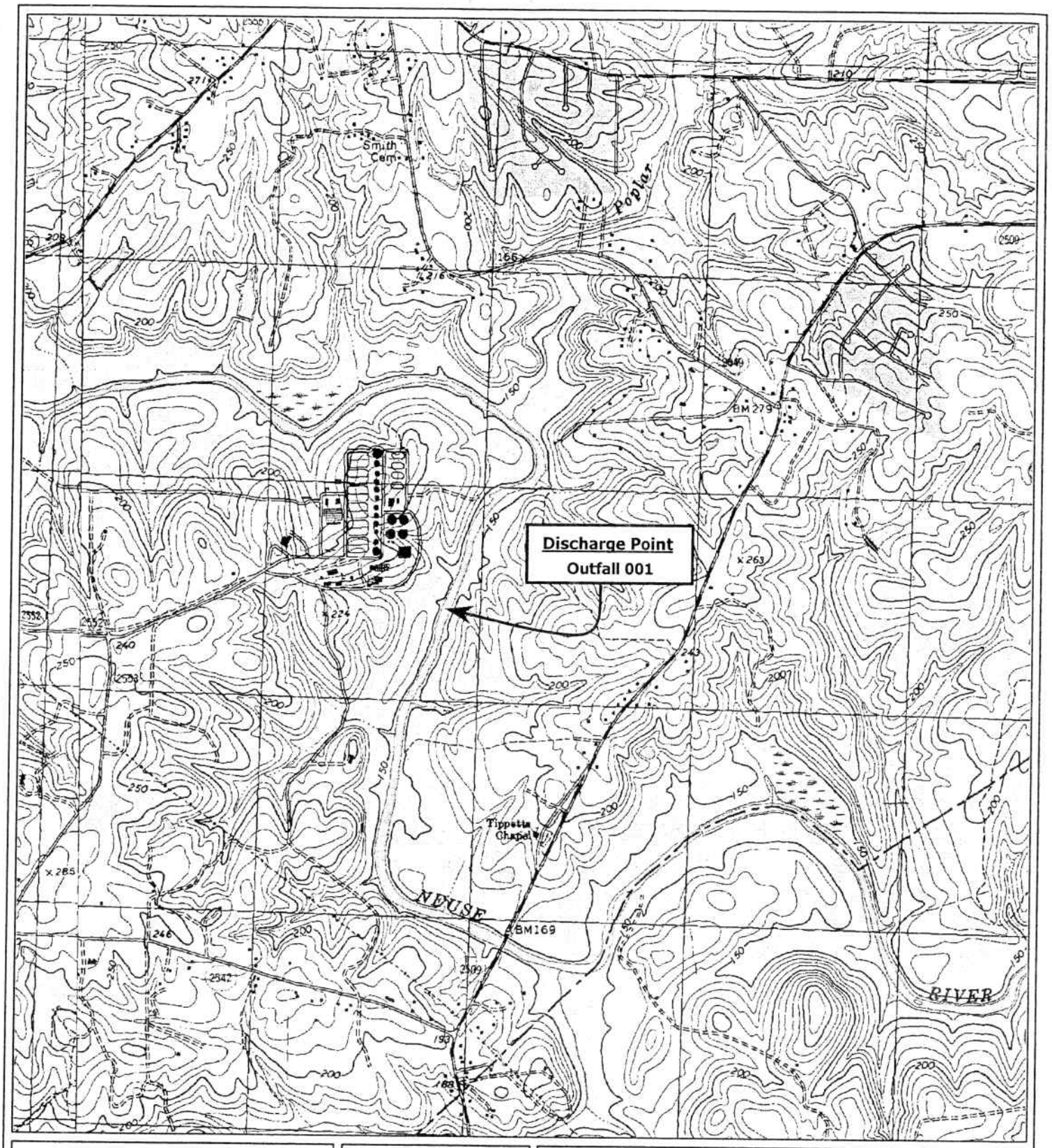
1. Continue operation of the Neuse River Water Reclamation Facility, a 60.0 MGD advanced wastewater treatment facility consisting of
   - eight (8) influent pumps (five (5) screws, three (3) variable-speed vertical turbines),
   - one (1) 32 MG flow equalization basin with two (2) vertical turbine drain/ influent pumps,
   - five (5) mechanical bar screens,
   - two (2) Detritor grit removal units,
   - five (5) primary sedimentation basins with oil/grease and scum removal,
   - six (6) fine-bubble aeration basins with biological nitrification and denitrification zones,
   - twelve (12) secondary clarifiers,
   - four (4) aerobic digesters,
   - three (3) gravity belt thickeners,
   - three (3) belt filter presses,
   - four (4) aerated sludge holding tanks,
   - twelve (12) single-media tertiary filters with methanol addition for final denitrification,
   - ultraviolet disinfection and flow measurement;

   and located at the end of NCSR 2552, southeast of Raleigh in Wake County.

2. After receiving an Authorization to Construct and submitting an engineer certification to the Division, construct and operate a 75 MGD wastewater treatment facility.

3. Continue to operate a water reclamation and distribution system to provide beneficial reuse of treated effluent from the Neuse River WWTP as provided in Non-Discharge Permit WQ0016222.

4. Discharge from said treatment works into the Neuse River, classified as C-NSW waters in the Neuse River Basin, at the location specified on the attached map.



USGS Quad #: E25NW, Clayton, NC

N

SCALE
1:24,000
(1" = 2000')

City of Raleigh **NC0029033**

Neuse River WWTP

Receiving Streams:	Neuse River
Stream Classification:	C-NSW
River Basin:	Neuse
Sub-Basin #:	03-04-02

A.(1.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

a. Beginning on the effective date of this permit and lasting until expansion above 60 MGD or permit expiration, the Permittee is authorized to discharge treated wastewater from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

PARAMETER	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow (MGD)	60.0			Continuous	Recording	Influent or Effluent
Total Monthly Flow (MG)	Monitor and Report			Monthly	Recorded or Calculated	Influent or Effluent
BOD_5 (Summer) [1,2]	5.0 mg/L	7.5 mg/L		Daily	Composite	Influent and Effluent
BOD_5 (Winter) [1,2]	10.0 mg/L	15.0 mg/L		Daily	Composite	Influent and Effluent
Total Suspended Solids [2]	30.0 mg/L	45.0 mg/L		Daily	Composite	Influent and Effluent
NH_3-N (Summer) [1]	2.0 mg/L	6.0 mg/L		Daily	Composite	Effluent
NH_3-N (Winter) [1]	4.0 mg/L	12.0 mg/L		Daily	Composite	Effluent
Dissolved Oxygen [3]				Daily	Grab	Effluent
Fecal Coliform (geometric mean)	200/100 mL	400/100 mL		Daily	Grab	Effluent
Temperature				Daily	Grab	Effluent
pH [4]				Daily	Grab	Effluent
TKN (mg/L) [5]	Monitor and Report			Weekly	Composite	Effluent
NO_3-N + NO_2-N (mg/L) [5]	Monitor and Report			Weekly	Composite	Effluent
TN (mg/L) [5]	Monitor and Report			Weekly	Composite	Effluent
TN $Load_{WWTP}$ [6]	Monitor and Report (lb/mo) Monitor and Report (lb/yr)			Monthly Annually	Composite Calculated	Effluent
TN $Load_{Total}$ [6]	682,483 lb/year [6]			Annually	Calculated	Effluent
Total Phosphorus	2.0 mg/L (quarterly average) [7]			Weekly	Composite	Effluent
Total Copper				Weekly	Composite	Effluent
Total Silver				Monthly	Composite	Effluent
Total Zinc				Weekly	Composite	Effluent
Chronic Toxicity [8]	See Note 8			Quarterly	Composite	Effluent

Footnotes:

1. Sample Locations: I – Influent, E – Effluent; summer shall be defined as April 1 – October 31 and winter defined as the balance of the year. See Condition A.(3.) of this permit for instream monitoring requirements.
2. The monthly average effluent BOD5 and TSS concentrations shall not exceed 15% of the respective influent value (85% removal).
3. The daily average dissolved oxygen concentration in the effluent shall not be less than 5.0 mg/L.
4. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.
5. For a given wastewater sample, TN = TKN + NO_3-N + NO_2-N, where TN is Total Nitrogen, TKN is Total Kjeldahl Nitrogen, and NO_3-N and NO_2-N are Nitrate and Nitrite Nitrogen, respectively.
6. TN Loads shall be calculated as prescribed in Condition A.(4.) and A.(6.) of this permit, and compliance with the TN limit shall be determined according to Conditions A.(5.) and (6.).
7. The quarterly average for total phosphorus shall be the average of composite samples collected weekly during the calendar quarter (January-March, April-June, July-September, October-December).
8. Chronic Toxicity (*Ceriodaphnia*) P/F @ 49%, February, May, August, November; see condition A.(8.) of this permit.

b. There shall be no discharge of floating solids or visible foam in other than trace amounts.

RECD BY CENTRAL FILES

JUL 22 03

A.(2.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

a. Beginning upon expansion above 60 MGD and lasting until permit expiration, the Permittee is authorized to discharge treated wastewater from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

PARAMETER	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow (MGD)	75.0			Continuous	Recording	Influent or Effluent
Total Monthly Flow (MG)	Monitor and Report			Monthly	Recorded or Calculated	Influent or Effluent
BOD_5 (Summer) [1,2]	5.0 mg/L	7.5 mg/L		Daily	Composite	Influent and Effluent
BOD_5 (Winter) [1,2]	10.0 mg/L	15.0 mg/L		Daily	Composite	Influent and Effluent
Total Suspended Solids [2]	30.0 mg/L	45.0 mg/L		Daily	Composite	Influent and Effluent
NH_3-N (Summer) [1]	2.0 mg/L	6.0 mg/L		Daily	Composite	Effluent
NH_3-N (Winter) [1]	4.0 mg/L	12.0 mg/L		Daily	Composite	Effluent
Dissolved Oxygen [3]				Daily	Grab	Effluent
Fecal Coliform (geometric mean)	200/100 mL	400/100 mL		Daily	Grab	Effluent
Temperature				Daily	Grab	Effluent
pH [4]				Daily	Grab	Effluent
TKN (mg/L) [5]	Monitor and Report			Weekly	Composite	Effluent
NO_3-N + NO_2-N (mg/L) [5]	Monitor and Report			Weekly	Composite	Effluent
TN (mg/L) [5]	Monitor and Report			Weekly	Composite	Effluent
TN $Load_{WWTP}$ [6]	Monitor and Report (lb/mo) Monitor and Report (lb/yr)			Monthly Annually	Composite Calculated	Effluent
TN $Load_{Total}$ [6]	682,483 lb/year [6]			Annually	Calculated	Effluent
Total Phosphorus	2.0 mg/L (quarterly average) [7]			Weekly	Composite	Effluent
Total Copper				Weekly	Composite	Effluent
Total Silver				Monthly	Composite	Effluent
Total Zinc				Weekly	Composite	Effluent
Chronic Toxicity [8]	See Note 8			Quarterly	Composite	Effluent

Footnotes:

1. Sample Locations: I – Influent, E – Effluent; summer shall be defined as April 1 – October 31 and winter defined as the balance of the year. See Condition A.(3.) of this permit for instream monitoring requirements.
2. The monthly average effluent BOD5 and TSS concentrations shall not exceed 15% of the respective influent value (85% removal).
3. The daily average dissolved oxygen concentration in the effluent shall not be less than 5.0 mg/L.
4. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.
5. For a given wastewater sample, TN = TKN + NO_3-N + NO_2-N, where TN is Total Nitrogen, TKN is Total Kjeldahl Nitrogen, and NO_3-N and NO_2-N are Nitrate and Nitrite Nitrogen, respectively.
6. TN Loads shall be calculated as prescribed in Condition A.(4.) and A.(6.) of this permit, and compliance with the TN limit shall be determined according to Conditions A.(5.) and (6.).
7. The quarterly average for total phosphorus shall be the average of composite samples collected weekly during the calendar quarter (January-March, April-June, July-September, October-December).
8. Chronic Toxicity (*Ceriodaphnia*) P/F @ 54%, February, May, August, November; see condition A.(9.) of this permit.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

A.(3.) INSTREAM MONITORING REQUIREMENTS

Instream monitoring is required for the following parameters at the locations specified:

PARAMETER	SAMPLE TYPE	LOCATION[1]
Dissolved Oxygen	Grab	U, D1, D2
Temperature	Grab	U, D1, D2
pH	Grab	U, D1, D2

Footnote:

1. Sample Locations: U – Upstream at NCSR 2555, D1 – Downstream at NCSR 1700, D2 – Downstream at NCSR 1908. Stream samples shall be collected three times per week during the months of June, July, August, and September and weekly during the remainder of the year. These instream monitoring requirements are waived so long as the Permittee maintains full and active member ship in the Lower Neuse Basin Association, Inc. (LNBA) for the subject facility. Upon termination or cessation of its membership in the LNBA, these instream monitoring requirements are reinstated immediately, and the Permittee must notify the Division within five (5) business days.

A.(4.) CALCULATION OF TOTAL NITROGEN DISCHARGE LOADS

a. The Permittee shall calculate the monthly and annual discharge TN loads from the WWTP as follows:

i. **Monthly TN Load$_{WWTP}$ (lb/month) = TN$_{Mo}$ x Flow$_{Mo}$ x 8.34**

where:

TN_{Mo} = the average total nitrogen concentration (mg/L) of the composite samples collected during the calendar month

$Flow_{Mo}$ = the Total Monthly Flow of wastewater discharged during the month (MG/month)

8.34 = conversion factor, from (mg/L x MG) to pounds

ii. **Annual TN Load$_{WWTP}$ (lb/yr) = Sum of Monthly TN Loads$_{WWTP}$ (12) for the calendar year**

b. The Permittee shall report monthly Total Nitrogen results (mg/L and lb/mo) in the appropriate discharge monitoring report for each month and shall report each year's results (lb/yr) with the December report of that year.

A.(5.) ANNUAL LIMITS FOR TOTAL NITROGEN

a. Total Nitrogen (TN) allocations and TN Load limits for NPDES dischargers in the Neuse River basin are annual limits and are applied for the calendar year.

b. For any given calendar year, the Permittee shall be in compliance with the annual TN Load limit in this Permit if:

   i. the Permittee's annual TN Load is less than or equal to said limit, or

   ii. the Permittee is a Co-Permittee Member of a compliance association.

c. The TN Load limit in this Permit (if any) may be modified as the result of allowable changes in the Permittee's TN allocation.

   i. Allowable changes include those resulting from purchase of TN allocation from the Wetlands Restoration Fund; purchase, sale, trade, or lease of allocation between the Permittee and other dischargers; regionalization; and other transactions approved by the Division.

   ii. The Permittee may request a modification of the TN Load limit in this Permit to reflect allowable changes in its TN allocation. Upon receipt of timely and proper application, the Division will modify the permit as appropriate and in accordance with state and federal program requirements.

   iii. Changes in TN limits become effective on January 1 of the year following permit modification. The Division must receive application no later than August 31 for changes proposed for the following calendar year.

   iv. Application shall be sent to:

   NCDWQ / NPDES Unit
   Attn: Neuse River Basin Coordinator
   1617 Mail Service Center
   Raleigh, NC 27699-1617

d. If the Permittee is a member and Co-Permittee of an approved compliance association, its TN discharge is governed by that association's group NPDES permit and the TN limits therein.

   i. The Permittee shall be considered a Co-Permittee Member for any given calendar year in which it is identified as such in Appendix A of the association's group NPDES permit.

   ii. Association roster(s) and members' TN allocations will be updated annually and in accordance with state and federal program requirements.

   iii. If the Permittee intends to join or leave a compliance association, the Division must be notified of the proposed action in accordance with the procedures defined in the association's NPDES permit.

      (1) Upon receipt of timely and proper notification, the Division will modify the permit as appropriate and in accordance with state and federal program requirements.

      (2) Membership changes in a compliance association become effective on January 1 of the year following modification of the association's permit.

e. The TN monitoring and reporting requirements in this individual Permit remain in effect until expiration of this Permit and are not affected by the Permittee's membership in a compliance association.

A.(6.) SPECIAL PROVISIONS REGARDING TOTAL NITROGEN

a. For the purpose of determining compliance with individual TN limits in this permit and in the group NPDES permit NCC000001, the annual TN Load for the Neuse River WWTP shall be the sum of the facility's TN Load and the stipulated TN contribution from its biosolids application fields.

$$\textbf{TN Load}_{\text{Total}}\ \textbf{(lb/yr)} = \textbf{TN Load}_{\text{WWTP}}\ \textbf{(lb/yr)} + \textbf{TN Load}_{\text{Fields}}\ \textbf{(lb/yr)} \leq \textbf{TN Load limit}$$

b. The basis for the stipulated TN contribution from the biosolids application fields (TN $\text{Load}_{\text{Fields}}$) shall change on January 1 following Environmental Management Commission (EMC) approval of the Permittee's request for a variance from 15A NCAC 02L .0106(k) corrective action requirements for the fields.

   i. Prior to that January 1, the stipulated TN contribution shall be zero.

   ii. Beginning on that January 1, the stipulated discharge TN contribution from the biosolids application fields shall be 100% of the gross annual nitrate-N load as projected in the Eagle Resources Transport Model Report, Appendix G of the City of Raleigh Supplemental Site Assessment Report, prepared by ENSR Consulting and Engineering (NC), Inc.; as revised September 2006. The projected contributions for the upcoming 2008 and 2013 cycles are as follows:

Permit Cycle	Calendar Year	Stipulated Discharge TN $\text{Load}_{\text{Fields}}$ (lb/yr)
2008	2008	120,058
	2009	117,183
	2010	114,246
	2011	110,370
	2012	106,196
2013	2013	102,022
	2014	97,549
	2015	93,276
	2016	89,002
	2017	84,828

- (end of Special Condition A.(6.)) -

A.(7.) TOTAL NITROGEN ALLOCATIONS

a. The following table lists the Total Nitrogen (TN) allocations assigned to, acquired by, or transferred to the Permittee in accordance with the Neuse River nutrient management rule (T15A NCAC 02B .0234) and the status of each as of permit issuance. For compliance purposes, this table does not supercede any TN limit(s) established elsewhere in this permit or in the NPDES permit of a compliance association of which the Permittee is a Co-Permittee Member.

ALLOCATION TYPE	SOURCE	DATE	ALLOCATION AMOUNT [1]		STATUS
			Estuary (lb/yr)	Discharge (lb/yr)	
Base	Assigned by Rule (T15A NCAC 02B .0234)		337,895	675,790	Active
Supplemental	Connection of Bobby L. Murray Plantation Inn WWTP NC0027570		253	506	Active
Supplemental	Connection of Falls Village WWTP NC0046230		61	121	Active
Supplemental	Connection of Neuse Crossing WWTP NC0064408	1/14/2008	3,033	6,066	Active
		TOTAL	**341,242**	**682,483**	

Footnote:

[1] Transport Factor = 50%

b. Any addition, deletion, or modification of the listed allocations (other than typographical errors) or any change in status of any of the listed allocations shall be considered a major modification of this permit and shall be subject to the public review process afforded such modifications under state and federal rules.

A.(8.) CHRONIC TOXICITY TESTING REQUIREMENT - 60.0 MGD

The effluent discharge shall at no time exhibit observable inhibition of reproduction or significant mortality to *Ceriodaphnia dubia* at an effluent concentration of **49%**.

The permit holder shall perform at a minimum, quarterly monitoring using test procedures outlined in the "North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure," Revised February 1998, or subsequent versions or "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions. The tests will be performed during the months of **February, May, August,** and **November**. Effluent sampling for this testing shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

If the test procedure performed as the first test of any single quarter results in a failure or ChV below the permit limit, then multiple-concentration testing shall be performed at a minimum, in each of the two following months as described in "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

The chronic value for multiple concentration tests will be determined using the geometric mean of the highest concentration having no detectable impairment of reproduction or survival and the lowest concentration that does have a detectable impairment of reproduction or survival. The definition of "detectable impairment," collection methods, exposure regimes, and further statistical methods are

specified in the "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the months in which tests were performed, using the parameter code **TGP3B** for the pass/fail results and **THP3B** for the Chronic Value. Additionally, DWQ Form AT-3 (original) is to be sent to the following address:

Attention: Environmental Sciences Section
North Carolina Division of Water Quality
1621 Mail Service Center
Raleigh, North Carolina 27699-1621

Completed Aquatic Toxicity Test Forms shall be filed with the Environmental Sciences Section no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete, accurate, include all supporting chemical/physical measurements and all concentration/response data, and be certified by laboratory supervisor and ORC or approved designate signature. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Environmental Sciences Section at the address cited above.

Should the permittee fail to monitor during a month in which toxicity monitoring is required, monitoring will be required during the following month.
Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Quality indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

If the Permittee monitors any pollutant more frequently then required by this permit, the results of such monitoring shall be included in the calculation & reporting of the data submitted on the DMR & all AT Forms submitted.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an invalid test and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

A.(9.) CHRONIC TOXICITY TESTING REQUIREMENT - 75.0 MGD

The effluent discharge shall at no time exhibit observable inhibition of reproduction or significant mortality to *Ceriodaphnia dubia* at an effluent concentration of 54 %.

The permit holder shall perform at a minimum, quarterly monitoring using test procedures outlined in the "North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure," Revised February 1998, or subsequent versions or "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions. The tests will be performed during the months of **February, May, August,** and **November.** Effluent sampling for this testing shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

If the test procedure performed as the first test of any single quarter results in a failure or ChV below the permit limit, then multiple-concentration testing shall be performed at a minimum, in each of the two following months as described in "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

The chronic value for multiple concentration tests will be determined using the geometric mean of the highest concentration having no detectable impairment of reproduction or survival and the lowest concentration that does have a detectable impairment of reproduction or survival. The definition of "detectable impairment," collection methods, exposure regimes, and further statistical methods are specified in the "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the months in which tests were performed, using the parameter code **TGP3B** for the pass/fail results and **THP3B** for the Chronic Value. Additionally, DWQ Form AT-3 (original) is to be sent to the following address:

Attention: Environmental Sciences Section
North Carolina Division of Water Quality
1621 Mail Service Center
Raleigh, North Carolina 27699-1621

Completed Aquatic Toxicity Test Forms shall be filed with the Environmental Sciences Section no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete, accurate, include all supporting chemical/physical measurements and all concentration/response data, and be certified by laboratory supervisor and ORC or approved designate signature. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Environmental Sciences Section at the address cited above.

Should the permittee fail to monitor during a month in which toxicity monitoring is required, monitoring will be required during the following month.
Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Quality indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

If the Permittee monitors any pollutant more frequently then required by this permit, the results of such monitoring shall be included in the calculation & reporting of the data submitted on the DMR & all AT Forms submitted.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an invalid test and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

A.(10.) EFFLUENT POLLUTANT SCAN

The Permittee shall perform an annual Effluent Pollutant Scan for the following parameters. Samples shall represent seasonal variations over the permit term and shall be analyzed in accordance with 40 CFR Part 136. Unless otherwise indicated, metals shall be analyzed as "total recoverable."

Ammonia (as N)	Trans-1,2-dichloroethylene	Bis (2-chloroethyl) ether
Chlorine (total residual, TRC)	1,1-dichloroethylene	Bis (2-chloroisopropyl) ether
Dissolved oxygen	1,2-dichloropropane	Bis (2-ethylhexyl) phthalate
Nitrate/Nitrite	1,3-dichloropropylene	4-bromophenyl phenyl ether
Kjeldahl nitrogen	Ethylbenzene	Butyl benzyl phthalate
Oil and grease	Methyl bromide	2-chloronaphthalene
Phosphorus	Methyl chloride	4-chlorophenyl phenyl ether
Total dissolved solids	Methylene chloride	Chrysene
Hardness	1,1,2,2-tetrachloroethane	Di-n-butyl phthalate
Antimony	Tetrachloroethylene	Di-n-octyl phthalate
Arsenic	Toluene	Dibenzo(a,h)anthracene
Beryllium	1,1,1-trichloroethane	1,2-dichlorobenzene
Cadmium	1,1,2-trichloroethane	1,3-dichlorobenzene
Chromium	Trichloroethylene	1,4-dichlorobenzene
Copper	Vinyl chloride	3,3-dichlorobenzidine
Lead	***Acid-extractable compounds:***	Diethyl phthalate
Mercury	P-chloro-m-cresol	Dimethyl phthalate
Nickel	2-chlorophenol	2,4-dinitrotoluene
Selenium	2,4-dichlorophenol	2,6-dinitrotoluene
Silver	2,4-dimethylphenol	1,2-diphenylhydrazine
Thallium	4,6-dinitro-o-cresol	Fluoranthene
Zinc	2,4-dinitrophenol	Fluorene
Cyanide	2-nitrophenol	Hexachlorobenzene
Total phenolic compounds	4-nitrophenol	Hexachlorobutadiene
Volatile organic compounds:	Pentachlorophenol	Hexachlorocyclo-pentadiene
Acrolein	Phenol	Hexachloroethane
Acrylonitrile	2,4,6-trichlorophenol	Indeno(1,2,3-cd)pyrene
Benzene	***Base-neutral compounds:***	Isophorone
Bromoform	Acenaphthene	Naphthalene
Carbon tetrachloride	Acenaphthylene	Nitrobenzene
Chlorobenzene	Anthracene	N-nitrosodi-n-propylamine
Chlorodibromomethane	Benzidine	N-nitrosodimethylamine
Chloroethane	Benzo(a)anthracene	N-nitrosodiphenylamine
2-chloroethylvinyl ether	Benzo(a)pyrene	Phenanthrene
Chloroform	3,4 benzofluoranthene	Pyrene
Dichlorobromomethane	Benzo(ghi)perylene	1,2,4-trichlorobenzene
1,1-dichloroethane	Benzo(k)fluoranthene	
1,2-dichloroethane	Bis (2-chloroethoxy) methane	

a. Test results shall be reported to the Division within 90 days of sampling in DWQ Form- A MR-PPA1 or in a form approved by the Director. The report shall be submitted to the following address:

North Carolina Division of Water Quality
Water Quality Section, Central Files
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

RECEIVED BY CENTRAL FILES

JUL 22 08

City of Raleigh
North Carolina

RECEIVED
SEP 18 2007
DENR - WATER QUALITY
POINT SOURCE BRANCH

September 13, 2007

Mrs. Frances Candelaria
N.C. DENR – DWQ – Point Source Branch
1617 Mail Service Center
Raleigh, NC 27699-1617

Subject: City of Raleigh NPDES Permit # NC0029033 and NC0030759 Renewals

Dear Mrs. Candelaria:

Please find enclosed copies of the primary and second species aquatic toxicity test results for August 2007 from the Neuse River WWTP (NC0029033) and the Smith Creek WWTP (NC0030759). These test results are outstanding as they were not submitted with the original permit renewal application packets since the August toxicity results were not yet available at the time of application submittal. If you have any questions, please do not hesitate to call me at 857-4540 or T.J. Lynch at 662-5700.

Thank you,

H. Dale Crisp, P.E.
Public Utilities Director
City of Raleigh

Cc: Robert Massengill, Asst. PU Director
T.J. Lynch, WWTP Superintendent
John Gibson, SCWWTP Facility Manager
Bob Berndt, Hazen and Sawyer

Effluent Aquatic Toxicity Report Form/Phase II Chronic *Ceriodaphnia*

Facility Raleigh - Neuse River NPDES#: NC 0029033 Pipe# 001 County Wake

Laboratory Performing Test Meritech, Inc.

x Theodore J. Lynch — Signature of O.R.C.

x M Reed — Signature of Lab Supervisor

Comments

Sample Information	Sample 1	Sample 2	Control
Collection Start Date	8/20/07	8/23/07	
Grab			
Composite (Duration)	24	24	
Hardness(mg/l)			44
Spec.Cond.(µmhos/cm)	638	675	166
Chlorine(mg/l)	<0.1	<0.1	
Sample temp. at receipt	0.6 °C	0.7 °C	

Test Information*	Start Date			End Date			Start Time			End Time		
	8/20/07			8/24/07			1:00 pm			9:45 am		
	Start	Renew1	Renew2	Start	Renew1	Renew2						
Treatment	100 %	100 %	100 %	Control	Control	Control						
pH Initial	7.58	7.80	7.55	8.03	8.00	7.95						
pH Final	8.15	8.03	8.10	7.91	7.76	7.98						
D.O. Initial	7.63	7.71	8.10	7.65	7.56	7.64						
D.O. Final	7.43	7.22	7.55	7.37	7.14	7.59						
Temp. Initial	25.0	24.8	25.2	25.2	25.1	25.1						
Temp. Final	24.7	24.7	24.8	24.7	24.7	24.8						

Organism#

		1	2	3	4	5	6	7	8	9	10	11	12	Mean
Control	# Young	19	21	22	20	24	18	22	21	20	23			21.0
	Adult (L)ive (D)ead	L	L	L	L	L	L	L	L	L	L			
Effluent% 12.25	# Young	21	22	23	22	21	21	23	23	18	23			21.7
	Adult (L)ive (D)ead	L	L	L	L	L	L	L	L	L	L			% Red† 3.33
Effluent% 24.5	# Young	22	25	22	21	24	25	25	23	16	24			22.7
	Adult (L)ive (D)ead	L	L	L	L	L	L	L	L	L	L			% Red 5.1
Effluent% 49	# Young	24	23	20	26	22	24	21	23	22	22			22.7
	Adult (L)ive (D)ead	L	L	L	L	L	L	L	L	L	L			% Red 8.1
Effluent% 75	# Young	18	23	21	22	19	19	20	25	24	22			21.3
	Adult (L)ive (D)ead	L	L	L	L	L	L	L	L	L	L			% Red 7.4
Effluent% 100	# Young	22	20	21	21	17	21	22	23	23	20			21.0
	Adult (L)ive (D)ead	L	L	L	L	L	L	L	L	L	L			% Red 0

Chronic Test Results

Final Control Mortality % 0

% Control 3rd Brood 100

Control Repro CV 8.7

48 Hour Mortality

Control	IWC
0 of 10	0 of 10

Significant? Y (N)

Final Mortality Significant @ ____ % or (No Conc.)

Reproduction Analysis:

Repro. LOEC= >100 %; NOEC= 100 %

Method: Dunnett's Test

Normal Distrib? Yes Method Kolmogorov

Statistic: 0.8101 Critical: 1.035

Equal Variances? Yes Method Bartlett

Statistic: 4.24 Critical: 15.1

Non-Parametric Analysis (if applicable):

Method: ____

Effluent %	Rank Sum	Critical Sum

Overall Analysis:

Result = PASS/FAIL or

Test LOEC= >100 %; NOEC= 100 %

Chronic Value= >100 %

MAIL TO: ATT: Environmental Sciences Branch
Div. of Water Quality
N.C. DENR
1621 Mail Service Center
Raleigh, N.C. 27699-1621

*Should use highest test concentration or highest concentration with D.O. >5.0 mg/l

†% Reduction from Control Reproduction Mean

Effluent Toxicity Report Form-Chronic Fathead Minnow Multi-Concentration Test

Date: 8/30/2007

Facility: City of Raleigh - Neuse River | NPDES # NC0029033 | Pipe #: 001 | County: Wake

Laboratory: Meritech, Inc.

Comments:

x Theodore J. Lynch

Signature of Operator in Responsible Charge

x M Rad

Signature of Laboratory Supervisor

MAIL ORIGINAL TO:

Environmental Sciences Branch
Division of Water Quality
NC DENR
1621 Mail Service Center
Raleigh, NC 27699-1621

Test Initiation Date/Time: 8/21/2007 / 2:30 PM

Avg Wt/Surv. Control: 0.554

Test Organisms

- [ ] Cultured In-House
- [x] Outside Supplier

Hatch Date: 8/20/07

Hatch Time: 3 pm CT

% Eff.	Repl.	1	2	3	4		
Control	Surviving #	10	10	10	10	% Survival	100.0
	Original #	10	10	10	10		
	Wt/original (mg)	0.578	0.563	0.573	0.502	Avg Wt (mg)	0.554
12.25	Surviving #	10	10	10	10	% Survival	100.0
	Original #	10	10	10	10		
	Wt/original (mg)	0.537	0.431	0.554	0.590	Avg Wt (mg)	0.528
24.5	Surviving #	10	10	10	10	% Survival	100.0
	Original #	10	10	10	10		
	Wt/original (mg)	0.631	0.502	0.522	0.524	Avg Wt (mg)	0.545
49	Surviving #	10	10	10	10	% Survival	100.0
	Original #	10	10	10	10		
	Wt/original (mg)	0.548	0.481	0.621	0.531	Avg Wt (mg)	0.545
75	Surviving #	10	10	10	10	% Survival	100.0
	Original #	10	10	10	10		
	Wt/original (mg)	0.524	0.527	0.679	0.560	Avg Wt (mg)	0.573
100	Surviving #	10	10	10	10	% Survival	100.0
	Original #	10	10	10	10		
	Wt/original (mg)	0.550	0.515	0.610	0.570	Avg Wt (mg)	0.561

Water Quality Data

Control	Day 0	1	2	3	4	5	6
pH (SU) Init/Fin	8.22 / 8.02	8.15 / 7.96	8.16 / 7.84	8.14 / 7.85	8.13 / 7.87	8.10 / 7.84	8.07 / 7.82
DO (mg/L) Init/Fin	7.68 / 7.27	7.60 / 7.22	7.65 / 7.09	7.43 / 7.19	7.61 / 7.18	7.55 / 7.19	7.37 / 7.05
Temp (C) Init/Fin	25.1 / 25.0	25.0 / 24.9	25.2 / 25.0	25.2 / 25.1	25.4 / 25.0	25.3 / 25.0	25.3 / 25.0

High Concentration	0	1	2	3	4	5	6
pH (SU) Init/Fin	7.58 / 7.90	7.62 / 7.78	7.70 / 7.86	7.59 / 7.84	7.48 / 7.87	7.46 / 7.76	7.54 / 7.78
DO (mg/L) Init/Fin	7.90 / 7.27	7.80 / 7.33	7.79 / 7.11	7.88 / 7.29	7.03 / 7.21	7.99 / 7.17	8.10 / 7.37
Temp (C) Init/Fin	25.1 / 25.0	25.0 / 24.9	25.0 / 25.0	24.9 / 25.1	25.2 / 25.0	25.4 / 25.0	24.9 / 25.0

Sample	1	2	3
Collection Start Date	8/20/2007	8/21/2007	8/23/2007
Grab			
Composite (Duration)	24.00	24.00	24.00
Hardness (mg/L)	54.00	58.00	54.00
Alkalinity (mg/L)	73.00	68.00	66.00
Conductivity (umhos/cm)	639	663	671
Chlorine(mg/L)	<0.1	<0.1	<0.1
Temp. at Receipt (°C)	0.6	2.1	0.7

Dilution H2O Batch	171	172	173
Hardness (mg/L)	42.00	42	42
Alkalinity (mg/L)	58.00	60	62
Conductivity (umhos/cm)	224	202	221

	Survival	Growth
Normal	[ ]	[x]
Hom. Var.	[ ]	[x]
NOEC	100	100
LOEC	>100	>100
ChV	>100	>100
Method	Steel's	Dunnett's

Overall Result

ChV >100

Stats	Survival		Growth	
Conc.	Critical	Calculated	Critical	Calculated
12.25	10	18	2.41	0.6441
24.5	10	18	2.41	0.2291
49	10	18	2.41	0.2168
75	10	18	2.41	-0.4583
100	10	18	2.41	-0.1796

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2225 Riverside Drive
Asheville, NC 28804
Phone: 828.254.7176
Fax: 828.252.4618

August 17, 2006

Mr. Burrell Brock
City of Raleigh
P.O. Box 590
Raleigh, NC 27602

RE: Lab Project Number: 92124669
Client Project ID: Analysis 8/1,7/28

Dear Mr. Brock:

Enclosed are the analytical results for sample(s) received by the laboratory on August 3, 2006. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals Analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Charlotte laboratory unless otherwise footnoted.

If you have any questions concerning this report please feel free to contact me.

Sincerely,

Bonnie McKee

Bonnie McKee
bonnie.mckee@pacelabs.com
(704) 875-9092 ext. 234
Project Manager

Enclosures

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2225 Riverside Drive
Asheville, NC 28804
Phone: 828.254.7176
Fax: 828.252.4618

Lab Project Number: 92124669
Client Project ID: Analysis 8/1,7/28

Lab Sample No: 927270678
Client Sample ID: NRE COMP

Project Sample Number: 92124669-002
Matrix: Water

Date Collected: **08/01/06** 00:00
Date Received: 08/03/06 14:55

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Semivolatiles								
Extractables in Water by 625	Prep/Method: EPA 625 SF / EPA 625							
Acenaphthene	ND	ug/l	5.4	08/04/06 20:47	BET	83-32-9		
Acenaphthylene	ND	ug/l	5.4	08/04/06 20:47	BET	208-96-8		
Aniline	ND	ug/l	5.4	08/04/06 20:47	BET	62-53-3		
Anthracene	ND	ug/l	5.4	08/04/06 20:47	BET	120-12-7		
Benzidine	ND	ug/l	54.	08/04/06 20:47	BET	92-87-5		
Benzo(k)fluoranthene	ND	ug/l	5.4	08/04/06 20:47	BET	207-08-9		
Benzo(b)fluoranthene	ND	ug/l	5.4	08/04/06 20:47	BET	205-99-2		
Benzo(a)anthracene	ND	ug/l	5.4	08/04/06 20:47	BET	56-55-3		
Benzo(g,h,i)perylene	ND	ug/l	5.4	08/04/06 20:47	BET	191-24-2		
Benzo(a)pyrene	ND	ug/l	5.4	08/04/06 20:47	BET	50-32-8		
4-Bromophenylphenyl ether	ND	ug/l	5.4	08/04/06 20:47	BET	101-55-3		
Butylbenzylphthalate	ND	ug/l	5.4	08/04/06 20:47	BET	85-68-7		
4-Chloro-3-methylphenol	ND	ug/l	5.4	08/04/06 20:47	BET	59-50-7		
bis(2-Chloroethoxy)methane	ND	ug/l	5.4	08/04/06 20:47	BET	111-91-1		
bis(2-Chloroethyl) ether	ND	ug/l	5.4	08/04/06 20:47	BET	111-44-4		
bis(2-Chloroisopropyl) ether	ND	ug/l	5.4	08/04/06 20:47	BET	39638-32-9		
2-Chloronaphthalene	ND	ug/l	5.4	08/04/06 20:47	BET	91-58-7		
2-Chlorophenol	ND	ug/l	5.4	08/04/06 20:47	BET	95-57-8		
4-Chlorophenylphenyl ether	ND	ug/l	5.4	08/04/06 20:47	BET	7005-72-3		
Chrysene	ND	ug/l	5.4	08/04/06 20:47	BET	218-01-9		
Dibenz(a,h)anthracene	ND	ug/l	5.4	08/04/06 20:47	BET	53-70-3		
1,2-Dichlorobenzene	ND	ug/l	5.4	08/04/06 20:47	BET	95-50-1		
1,3-Dichlorobenzene	ND	ug/l	5.4	08/04/06 20:47	BET	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	5.4	08/04/06 20:47	BET	106-46-7		
3,3'-Dichlorobenzidine	ND	ug/l	11.	08/04/06 20:47	BET	91-94-1		
2,4-Dichlorophenol	ND	ug/l	5.4	08/04/06 20:47	BET	120-83-2		
Diethylphthalate	ND	ug/l	5.4	08/04/06 20:47	BET	84-66-2		
2,4-Dimethylphenol	ND	ug/l	5.4	08/04/06 20:47	BET	105-67-9		
Dimethylphthalate	ND	ug/l	5.4	08/04/06 20:47	BET	131-11-3		
Di-n-butylphthalate	ND	ug/l	5.4	08/04/06 20:47	BET	84-74-2		
4,6-Dinitro-2-methylphenol	ND	ug/l	27.	08/04/06 20:47	BET	534-52-1		
2,4-Dinitrophenol	ND	ug/l	27.	08/04/06 20:47	BET	51-28-5		
2,4-Dinitrotoluene	ND	ug/l	5.4	08/04/06 20:47	BET	121-14-2		
2,6-Dinitrotoluene	ND	ug/l	5.4	08/04/06 20:47	BET	606-20-2		
Di-n-octylphthalate	ND	ug/l	5.4	08/04/06 20:47	BET	117-84-0		
bis(2-Ethylhexyl)phthalate	ND	ug/l	5.4	08/04/06 20:47	BET	117-81-7		
Fluoranthene	ND	ug/l	5.4	08/04/06 20:47	BET	206-44-0		

Date: 08/17/06

Asheville Certification IDs
NC Wastewater 40
NC Drinking Water 37712
SC 99030
FL NELAP E87648

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2225 Riverside Drive
Asheville, NC 28804
Phone: 828.254.7176
Fax: 828.252.4618

Lab Project Number: 92124669
Client Project ID: Analysis 8/1,7/28

Lab Sample No: 927270678 | Project Sample Number: 92124669-002 | Date Collected: **08/01/06** 00:00
Client Sample ID: NRE COMP | Matrix: Water | Date Received: 08/03/06 14:55

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Fluorene	ND	ug/l	5.4	08/04/06 20:47	BET	86-73-7		
Hexachloro-1,3-butadiene	ND	ug/l	5.4	08/04/06 20:47	BET	87-68-3		
Hexachlorobenzene	ND	ug/l	5.4	08/04/06 20:47	BET	118-74-1		
Hexachlorocyclopentadiene	ND	ug/l	11.	08/04/06 20:47	BET	77-47-4		
Hexachloroethane	ND	ug/l	5.4	08/04/06 20:47	BET	67-72-1		
Indeno(1,2,3-cd)pyrene	ND	ug/l	5.4	08/04/06 20:47	BET	193-39-5		
Isophorone	ND	ug/l	5.4	08/04/06 20:47	BET	78-59-1		
Naphthalene	ND	ug/l	5.4	08/04/06 20:47	BET	91-20-3		
Nitrobenzene	ND	ug/l	5.4	08/04/06 20:47	BET	98-95-3		
2-Nitrophenol	ND	ug/l	5.4	08/04/06 20:47	BET	88-75-5		
4-Nitrophenol	ND	ug/l	27.	08/04/06 20:47	BET	100-02-7		
N-Nitrosodimethylamine	ND	ug/l	5.4	08/04/06 20:47	BET	62-75-9		
N-Nitroso-di-n-propylamine	ND	ug/l	5.4	08/04/06 20:47	BET	621-64-7		
N-Nitrosodiphenylamine	ND	ug/l	5.4	08/04/06 20:47	BET	86-30-6		
Pentachlorophenol	ND	ug/l	27.	08/04/06 20:47	BET	87-86-5		
Phenanthrene	ND	ug/l	5.4	08/04/06 20:47	BET	85-01-8		
Phenol	ND	ug/l	5.4	08/04/06 20:47	BET	108-95-2		
Pyrene	ND	ug/l	5.4	08/04/06 20:47	BET	129-00-0		
1,2,4-Trichlorobenzene	ND	ug/l	5.4	08/04/06 20:47	BET	120-82-1		
2,4,6-Trichlorophenol	ND	ug/l	5.4	08/04/06 20:47	BET	88-06-2		
Nitrobenzene-d5 (S)	52	%		08/04/06 20:47	BET	4165-60-0		
2-Fluorobiphenyl (S)	55	%		08/04/06 20:47	BET	321-60-8		
Terphenyl-d14 (S)	77	%		08/04/06 20:47	BET	1718-51-0		
Phenol-d5 (S)	28	%		08/04/06 20:47	BET	4165-62-2		
2-Fluorophenol (S)	33	%		08/04/06 20:47	BET	367-12-4		
2,4,6-Tribromophenol (S)	78	%		08/04/06 20:47	BET	118-79-6		
Date Extracted	08/04/06			08/04/06				

GC Semivolatiles

Pesticides in Water by 608	Prep/Method: EPA 608 SF / EPA 608							
Aldrin	ND	ug/l	0.050	08/09/06 05:16	JEM	309-00-2		
alpha-BHC	ND	ug/l	0.050	08/09/06 05:16	JEM	319-84-6		
beta-BHC	ND	ug/l	0.050	08/09/06 05:16	JEM	319-85-7		
delta-BHC	ND	ug/l	0.10	08/09/06 05:16	JEM	319-86-8		
gamma-BHC (Lindane)	ND	ug/l	0.050	08/09/06 05:16	JEM	58-89-9		
Chlordane	ND	ug/l	0.10	08/09/06 05:16	JEM	57-74-9		
4,4'-DDD	ND	ug/l	0.10	08/09/06 05:16	JEM	72-54-8		
4,4'-DDE	ND	ug/l	0.10	08/09/06 05:16	JEM	72-55-9		
4,4'-DDT	ND	ug/l	0.10	08/09/06 05:16	JEM	50-29-3		

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Phone: 828.254.7176
Fax: 828.252.4618

Lab Project Number: 92124669
Client Project ID: Analysis 8/1,7/28

Lab Sample No: 927270678 | Project Sample Number: 92124669-002 | Date Collected: 08/01/06 00:00
Client Sample ID: NRE COMP | Matrix: Water | Date Received: 08/03/06 14:55

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Dieldrin	ND	ug/l	0.10	08/09/06 05:16	JEM	60-57-1		
Endosulfan I	ND	ug/l	0.10	08/09/06 05:16	JEM	959-98-8		
Endosulfan II	ND	ug/l	0.10	08/09/06 05:16	JEM	33213-65-9		
Endosulfan sulfate	ND	ug/l	0.10	08/09/06 05:16	JEM	1031-07-8		
Endrin	ND	ug/l	0.060	08/09/06 05:16	JEM	72-20-8		
Endrin aldehyde	ND	ug/l	0.10	08/09/06 05:16	JEM	7421-93-4		
Heptachlor	ND	ug/l	0.050	08/09/06 05:16	JEM	76-44-8		
Heptachlor epoxide	ND	ug/l	0.80	08/09/06 05:16	JEM	1024-57-3		
Methoxychlor	ND	ug/l	0.50	08/09/06 05:16	JEM	72-43-5		
Mirex	ND	ug/l	0.50	08/09/06 05:16	JEM	2385-85-5		
PCB-1016 (Aroclor 1016)	ND	ug/l	1.0	08/09/06 05:16	JEM	12674-11-2		
PCB-1221 (Aroclor 1221)	ND	ug/l	1.0	08/09/06 05:16	JEM	11104-28-2		
PCB-1232 (Aroclor 1232)	ND	ug/l	1.0	08/09/06 05:16	JEM	11141-16-5		
PCB-1242 (Aroclor 1242)	ND	ug/l	1.0	08/09/06 05:16	JEM	53469-21-9		
PCB-1248 (Aroclor 1248)	ND	ug/l	1.0	08/09/06 05:16	JEM	12672-29-6		
PCB-1254 (Aroclor 1254)	ND	ug/l	1.0	08/09/06 05:16	JEM	11097-69-1		
PCB-1260 (Aroclor 1260)	ND	ug/l	1.0	08/09/06 05:16	JEM	11096-82-5		
Toxaphene	ND	ug/l	2.0	08/09/06 05:16	JEM	8001-35-2		
Tetrachloro-m-xylene (S)	56	%		08/09/06 05:16	JEM	877-09-8		
Decachlorobiphenyl (S)	48	%		08/09/06 05:16	JEM	2051-24-3		
Date Extracted	08/04/06			08/04/06				

JUL 22 08

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NC Wastewater	40
NC Drinking Water	37712
SC	99030
FL NELAP	E87648

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Fax: 828.252.4618

September 06, 2006

Mr. Burrell Brock
City of Raleigh
P.O. Box 590
Raleigh, NC 27602

RE: Lab Project Number: 92126261
Client Project ID: NRE/VISAAY01

Dear Mr. Brock:

Enclosed are the analytical results for sample(s) received by the laboratory on August 25, 2006. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals Analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Charlotte laboratory unless otherwise footnoted.

If you have any questions concerning this report please feel free to contact me.

Sincerely,

Bonnie McKee

Bonnie McKee
bonnie.mckee@pacelabs.com
(704) 875-9092 ext. 234
Project Manager

Enclosures

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2225 Riverside Drive
Asheville, NC 28804
Phone: 828.254.7176
Fax: 828.252.4618

Lab Project Number: 92126261
Client Project ID: NRE/VISAAY01

Lab Sample No: 927358820 | Project Sample Number: 92126261-001 | Date Collected: 08/24/06 11:05
Client Sample ID: NRE | Matrix: Water | Date Received: 08/25/06 15:45

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
GC/MS Volatiles								
Volatile GC/MS by 624	Method: EPA 624							
Acetone	ND	ug/l	10.	09/01/06 23:06	DLK	67-64-1		
Benzene	ND	ug/l	5.0	09/01/06 23:06	DLK	71-43-2		
Bromodichloromethane	ND	ug/l	5.0	09/01/06 23:06	DLK	75-27-4		
Bromoform	ND	ug/l	5.0	09/01/06 23:06	DLK	75-25-2		
Bromomethane	ND	ug/l	5.0	09/01/06 23:06	DLK	74-83-9		
Carbon tetrachloride	ND	ug/l	5.0	09/01/06 23:06	DLK	56-23-5		
Chlorobenzene	ND	ug/l	5.0	09/01/06 23:06	DLK	108-90-7		
Chloroethane	ND	ug/l	5.0	09/01/06 23:06	DLK	75-00-3		
2-Chloroethylvinyl ether	ND	ug/l	10.	09/01/06 23:06	DLK	110-75-8		
Chloroform	ND	ug/l	5.0	09/01/06 23:06	DLK	67-66-3		
Chloromethane	ND	ug/l	5.0	09/01/06 23:06	DLK	74-87-3		
Dibromochloromethane	ND	ug/l	5.0	09/01/06 23:06	DLK	124-48-1		
1,2-Dichlorobenzene	ND	ug/l	5.0	09/01/06 23:06	DLK	95-50-1		
1,3-Dichlorobenzene	ND	ug/l	5.0	09/01/06 23:06	DLK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	5.0	09/01/06 23:06	DLK	106-46-7		
1,1-Dichloroethane	ND	ug/l	5.0	09/01/06 23:06	DLK	75-34-3		
1,2-Dichloroethane	ND	ug/l	5.0	09/01/06 23:06	DLK	107-06-2		
1,1-Dichloroethene	ND	ug/l	5.0	09/01/06 23:06	DLK	75-35-4		
cis-1,2-Dichloroethene	ND	ug/l	5.0	09/01/06 23:06	DLK	156-59-2		
trans-1,2-Dichloroethene	ND	ug/l	5.0	09/01/06 23:06	DLK	156-60-5		
1,2-Dichloropropane	ND	ug/l	5.0	09/01/06 23:06	DLK	78-87-5		
cis-1,3-Dichloropropene	ND	ug/l	5.0	09/01/06 23:06	DLK	10061-01-5		
trans-1,3-Dichloropropene	ND	ug/l	5.0	09/01/06 23:06	DLK	10061-02-6		
Ethylbenzene	ND	ug/l	5.0	09/01/06 23:06	DLK	100-41-4		
Methylene chloride	ND	ug/l	5.0	09/01/06 23:06	DLK	75-09-2		
1,1,2,2-Tetrachloroethane	ND	ug/l	5.0	09/01/06 23:06	DLK	79-34-5		
Tetrachloroethene	ND	ug/l	5.0	09/01/06 23:06	DLK	127-18-4		
Toluene	ND	ug/l	5.0	09/01/06 23:06	DLK	108-88-3		
1,1,1-Trichloroethane	ND	ug/l	5.0	09/01/06 23:06	DLK	71-55-6		
1,1,2-Trichloroethane	ND	ug/l	5.0	09/01/06 23:06	DLK	79-00-5		
Trichloroethene	ND	ug/l	5.0	09/01/06 23:06	DLK	79-01-6		
Trichlorofluoromethane	ND	ug/l	5.0	09/01/06 23:06	DLK	75-69-4		
Vinyl chloride	ND	ug/l	5.0	09/01/06 23:06	DLK	75-01-4		
Toluene-d8 (S)	100	%		09/01/06 23:06	DLK	2037-26-5		
4-Bromofluorobenzene (S)	97	%		09/01/06 23:06	DLK	460-00-4		
Dibromofluoromethane (S)	101	%		09/01/06 23:06	DLK	1868-53-7		

Asheville Certification IDs
NC Wastewater 40
NC Drinking Water 37712
SC Environmental 99030
FL NELAP E87648

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Charlotte Certification IDs
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NC Drinking Water 37706
SC 99006
FL NELAP E87627

EFFLUENT

NPDES PERMIT NO: NC0029033 DISCHARGE No. 001 MONTH Aug YEAR 2006
FACILITY NAME Neuse River Waste Water Treatment Plant CLASS IV COUNTY Wake
OPERATOR IN RESPONSIBLE CHARGE (ORC Theodore J. Lynch GRADE IV PHONE (919) 662-5700
CERTIFIED LABORATORIES (1) Neuse River WWTP Lab (2) Tritest, Inc., EM Johnson Water Plant #426
CHECK BOX IF ORC HAS CHANGED [ ] PERSON(S) COLLECTING SAMPLES: Plant Pesonnel; Names on File

			00720	01002	01027	01034	01042	01051	01062	01067	01077	01092	01147	71900	01007
DATE	Operator Arrival Time	Operator Time On Site	Total Cyanide	Total Arsenic	Total Cadmium	Total Chrome	Total Copper	Total Lead	Total Molybdenum	Total Nickel	Total Silver	Total Zinc	Total Selenium	Total Mercury	Total Barium
	Hrs	Hrs	MG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	NG/L	UG/L
1	0000	24													
2	0000	24													
3	0000	24													
4	0000	24													
5	0000	24													
6	0000	24		<5.000	<2.000	<2.000	<5.000	<5.000	<5.000	<2.000	<2.000	60.000	<5.000		<2.000
7	0000	24													
8	0000	24	<0.0040											1.160	
9	0000	24													
1[illegible]	0000	24													
11	0000	24													
12	0000	24													
13	0000	24		<5.000	<2.000	<2.000	<5.000	<5.000	<5.000	<2.000	<2.000	48.000	<5.000		<2.000
14	0000	24													
15	0000	24													
16	0000	24													
17	0000	24													
18	0000	24													
19	0000	24													
20	0000	24		<5.000	<2.000	<2.000	<5.000	<5.000	<5.000	<2.000	<2.000	46.000	<5.000		<2.000
21	0000	24													
22	0000	24													
23	0000	24													
24	0000	24													
25	0000	24													
26	0000	24													
27	0000	24		<5.000	<2.000	<2.000	<5.000	<5.000	<5.000	<2.000	<2.000	52.000	<5.000		<2.000
28	0000	24													
29	0000	24	<0.0040												
30	0000	24													
31	0000	24													
AVERAGE			0.0000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	51.500	0.000	1.160	0.000
MAXIMUM			<0.0040	<5.000	<2.000	0.000	0.000	<5.000	0.000	0.000	<2.000	60.000	<5.000	1.160	0.000
MINIMUM			<0.0040	<5.000	<2.000	<2.000	0.000	<5.000	0.000	0.000	<2.000	46.000	<5.000	1.160	0.000

Comp(C)/Grab (G)	G	C	C	C	C	C	C	C	C	C	C	G	C
Monthly Limit													

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1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Mr. Burrell Brock
City of Raleigh Neuse River WWTP
PO Box 590

Raleigh, NC 27610

Report Summary

Monday February 19, 2007

Report Number: L279280
Samples Received: 02/07/07
Client Project:

Description:

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Reviewed By: Linda Cashman

Linda Cashman, ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, WA - C1915

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REPORT OF ANALYSIS

Mr. Burrell Brock
City of Raleigh Neuse River WWTP
PO Box 590
Raleigh, NC 27610

February 19, 2007

Date Received : February 07, 2007
Description :

ESC Sample # : L279280-01

Sample ID : EFF

Site ID :

Collected By : Staff
Collection Date : 02/05/07 13:30

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
TTO Volatile Organics						
Acrolein	BDL	0.050	mg/l	624	02/17/07	1
Acrylonitrile	BDL	0.010	mg/l	624	02/17/07	1
Benzene	BDL	0.0010	mg/l	624	02/17/07	1
Bromodichloromethane	BDL	0.0010	mg/l	624	02/17/07	1
Bromoform	BDL	0.0010	mg/l	624	02/17/07	1
Bromomethane	BDL	0.0050	mg/l	624	02/17/07	1
Carbon tetrachloride	BDL	0.0010	mg/l	624	02/17/07	1
Chlorobenzene	BDL	0.0010	mg/l	624	02/17/07	1
Chlorodibromomethane	BDL	0.0010	mg/l	624	02/17/07	1
Chloroethane	BDL	0.0010	mg/l	624	02/17/07	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	624	02/17/07	1
Chloroform	BDL	0.0050	mg/l	624	02/17/07	1
Chloromethane	BDL	0.0010	mg/l	624	02/17/07	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	624	02/17/07	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	624	02/17/07	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	624	02/17/07	1
Dichlorodifluoromethane	BDL	0.0010	mg/l	624	02/17/07	1
1,1-Dichloroethane	BDL	0.0010	mg/l	624	02/17/07	1
1,2-Dichloroethane	BDL	0.0010	mg/l	624	02/17/07	1
1,1-Dichloroethene	BDL	0.0010	mg/l	624	02/17/07	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	624	02/17/07	1
1,2-Dichloropropane	BDL	0.0010	mg/l	624	02/17/07	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	624	02/17/07	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	624	02/17/07	1
Ethylbenzene	BDL	0.0010	mg/l	624	02/17/07	1
Methylene Chloride	BDL	0.0050	mg/l	624	02/17/07	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	624	02/17/07	1
Tetrachloroethene	BDL	0.0010	mg/l	624	02/17/07	1
Toluene	BDL	0.0050	mg/l	624	02/17/07	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	624	02/17/07	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	624	02/17/07	1
Trichloroethene	BDL	0.0010	mg/l	624	02/17/07	1
Trichlorofluoromethane	BDL	0.0010	mg/l	624	02/17/07	1
Vinyl chloride	BDL	0.0010	mg/l	624	02/17/07	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	624	02/17/07	1
Dibromofluoromethane	112.		% Rec.	624	02/17/07	1
4-Bromofluorobenzene	95.2		% Rec.	624	02/17/07	1
Pesticide/PCBs						
Aldrin	BDL	0.00050	mg/l	608	02/15/07	1
Alpha BHC	BDL	0.00050	mg/l	608	02/15/07	1
Beta BHC	BDL	0.00050	mg/l	608	02/15/07	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Mr. Burrell Brock
City of Raleigh Neuse River WWTP
PO Box 590
Raleigh, NC 27610

February 19, 2007

Date Received : February 07, 2007
Description :

ESC Sample # : L279280-01

Sample ID : EFF

Site ID :

Collected By : Staff
Collection Date : 02/05/07 13:30

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Delta BHC	BDL	0.00050	mg/l	608	02/15/07	1
Gamma BHC	BDL	0.00050	mg/l	608	02/15/07	1
Chlordane	BDL	0.0050	mg/l	608	02/15/07	1
4,4-DDD	BDL	0.00050	mg/l	608	02/15/07	1
4,4-DDE	BDL	0.00050	mg/l	608	02/15/07	1
4,4-DDT	BDL	0.00050	mg/l	608	02/15/07	1
Dieldrin	BDL	0.00050	mg/l	608	02/15/07	1
Endosulfan I	BDL	0.00050	mg/l	608	02/15/07	1
Endosulfan II	BDL	0.00050	mg/l	608	02/15/07	1
Endosulfan sulfate	BDL	0.00050	mg/l	608	02/15/07	1
Endrin	BDL	0.00050	mg/l	608	02/15/07	1
Endrin aldehyde	BDL	0.00050	mg/l	608	02/15/07	1
Endrin ketone	BDL	0.00050	mg/l	608	02/15/07	1
Heptachlor	BDL	0.00050	mg/l	608	02/15/07	1
Heptachlor epoxide	BDL	0.00050	mg/l	608	02/15/07	1
Hexachlorobenzene	BDL	0.00050	mg/l	608	02/15/07	1
Methoxychlor	BDL	0.00050	mg/l	608	02/15/07	1
Toxaphene	BDL	0.010	mg/l	608	02/15/07	1
PCB 1016	BDL	0.00050	mg/l	608	02/13/07	1
PCB 1221	BDL	0.00050	mg/l	608	02/13/07	1
PCB 1232	BDL	0.00050	mg/l	608	02/13/07	1
PCB 1242	BDL	0.00050	mg/l	608	02/13/07	1
PCB 1248	BDL	0.00050	mg/l	608	02/13/07	1
PCB 1254	BDL	0.00050	mg/l	608	02/13/07	1
PCB 1260	BDL	0.00050	mg/l	608	02/13/07	1
Pest/PCBs Surrogates						
Decachlorobiphenyl	78.8	0.000500	% Rec.	608	02/13/07	1
Tetrachloro-m-xylene	56.3	0.000500	% Rec.	608	02/13/07	1
TTO Base/Neutral Extractables						
Acenaphthene	BDL	0.010	mg/l	625	02/10/07	1
Acenaphthylene	BDL	0.010	mg/l	625	02/10/07	1
Anthracene	BDL	0.010	mg/l	625	02/10/07	1
Benzidine	BDL	0.050	mg/l	625	02/10/07	1
Benzo(a)anthracene	BDL	0.010	mg/l	625	02/10/07	1
Benzo(b)fluoranthene	BDL	0.010	mg/l	625	02/10/07	1
Benzo(k)fluoranthene	BDL	0.010	mg/l	625	02/10/07	1
Benzo(g,h,i)perylene	BDL	0.010	mg/l	625	02/10/07	1
Benzo(a)pyrene	BDL	0.010	mg/l	625	02/10/07	1
Bis(2-chlorethoxy)methane	BDL	0.010	mg/l	625	02/10/07	1
Bis(2-chloroethyl)ether	BDL	0.010	mg/l	625	02/10/07	1
Bis(2-chloroisopropyl)ether	BDL	0.010	mg/l	625	02/10/07	1
4-Bromophenyl-phenylether	BDL	0.010	mg/l	625	02/10/07	1
2-Chloronaphthalene	BDL	0.010	mg/l	625	02/10/07	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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Est. 1970

REPORT OF ANALYSIS

Mr. Burrell Brock
City of Raleigh Neuse River WWTP
PO Box 590
Raleigh, NC 27610

February 19, 2007

Date Received : February 07, 2007
Description :

ESC Sample # : L279280-01

Sample ID : EFF

Site ID :

Collected By : Staff
Collection Date : 02/05/07 13:30

Project # :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
4-Chlorophenyl-phenylether	BDL	0.010	mg/l	625	02/10/07	1
Chrysene	BDL	0.010	mg/l	625	02/10/07	1
Dibenz(a,h)anthracene	BDL	0.010	mg/l	625	02/10/07	1
3,3-Dichlorobenzidine	BDL	0.010	mg/l	625	02/10/07	1
2,4-Dinitrotoluene	BDL	0.010	mg/l	625	02/10/07	1
2,6-Dinitrotoluene	BDL	0.010	mg/l	625	02/10/07	1
1,2-Diphenylhydrazine	BDL	0.010	mg/l	625	02/10/07	1
Fluoranthene	BDL	0.010	mg/l	625	02/10/07	1
Fluorene	BDL	0.010	mg/l	625	02/10/07	1
Hexachlorobenzene	BDL	0.010	mg/l	625	02/10/07	1
Hexachloro-1,3-butadiene	BDL	0.010	mg/l	625	02/10/07	1
Hexachlorocyclopentadiene	BDL	0.010	mg/l	625	02/10/07	1
Hexachloroethane	BDL	0.010	mg/l	625	02/10/07	1
Indeno(1,2,3-cd)pyrene	BDL	0.010	mg/l	625	02/10/07	1
Isophorone	BDL	0.010	mg/l	625	02/10/07	1
Naphthalene	BDL	0.010	mg/l	625	02/10/07	1
Nitrobenzene	BDL	0.010	mg/l	625	02/10/07	1
n-Nitrosodimethylamine	BDL	0.050	mg/l	625	02/10/07	1
n-Nitrosodiphenylamine	BDL	0.010	mg/l	625	02/10/07	1
n-Nitrosodi-n-propylamine	BDL	0.010	mg/l	625	02/10/07	1
Phenanthrene	BDL	0.010	mg/l	625	02/10/07	1
Benzylbutyl phthalate	BDL	0.010	mg/l	625	02/10/07	1
Bis(2-ethylhexyl)phthalate	BDL	0.010	mg/l	625	02/10/07	1
Di-n-butyl phthalate	BDL	0.010	mg/l	625	02/10/07	1
Diethyl phthalate	BDL	0.010	mg/l	625	02/10/07	1
Dimethyl phthalate	BDL	0.010	mg/l	625	02/10/07	1
Di-n-octyl phthalate	BDL	0.010	mg/l	625	02/10/07	1
Pyrene	BDL	0.010	mg/l	625	02/10/07	1
1,2,4-Trichlorobenzene	BDL	0.010	mg/l	625	02/10/07	1
TTO Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.010	mg/l	625	02/10/07	1
2-Chlorophenol	BDL	0.010	mg/l	625	02/10/07	1
2,4-Dichlorophenol	BDL	0.010	mg/l	625	02/10/07	1
2,4-Dimethylphenol	BDL	0.010	mg/l	625	02/10/07	1
4,6-Dinitro-2-methylphenol	BDL	0.010	mg/l	625	02/10/07	1
2,4-Dinitrophenol	BDL	0.010	mg/l	625	02/10/07	1
2-Nitrophenol	BDL	0.010	mg/l	625	02/10/07	1
4-Nitrophenol	BDL	0.010	mg/l	625	02/10/07	1
Pentachlorophenol	BDL	0.010	mg/l	625	02/10/07	1
Phenol	BDL	0.010	mg/l	625	02/10/07	1
2,4,6-Trichlorophenol	BDL	0.010	mg/l	625	02/10/07	1
Surrogate Recovery						
Nitrobenzene-d5	57.8		% Rec.	625	02/10/07	1
2-Fluorobiphenyl	66.0		% Rec.	625	02/10/07	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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Est. 1970

REPORT OF ANALYSIS

Mr. Burrell Brock
City of Raleigh Neuse River WWTP
PO Box 590
Raleigh, NC 27610

February 19, 2007

Date Received : February 07, 2007
Description :

ESC Sample # : L279280-01

Sample ID : EFF

Site ID :

Project # :

Collected By : Staff
Collection Date : 02/05/07 13:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
p-Terphenyl-d14	86.7		% Rec.	625	02/10/07	1
Phenol-d5	42.7		% Rec.	625	02/10/07	1
2-Fluorophenol	53.9		% Rec.	625	02/10/07	1
2,4,6-Tribromophenol	82.8		% Rec.	625	02/10/07	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Reported: 02/19/07 10:32 Printed: 02/19/07 10:39

Company Name/Address:
BURRELL BROCK
CITY OF RALEIGH PUBLIC UTILITIES
P.O. BOX 590
RALEIGH, NC 27602

Alternate billing Information: PLEASE BILL TO

Report to: BURRELL BROCK

Email to: burrell.brock@ci.raleigh.nc.us

Project Description:

City/State Collected: RALEIGH, NC

Phone: 919 779 8588
FAX: 919 662 5707

Client Project #:

ESC Key:

Collected by: STAFF

Site/Facility ID#:

P.O.#: P00712627

Collected by (signature):

Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day.....200%
___ Next Day.....100%
___ Two Day.....50%
X Three Day.....25%

Date Results Needed:
Email? ___No ✓Yes
FAX? ✓No ___Yes

Analysis/Container/Preservative

Chain of Custody Page 1 of 1

Prepared by:

ENVIRONMENTAL SCIENCE CORP.
12065 Lebanon Road
Mt. Juliet, TN 37122
Phone (615) 758-5858
Phone (800) 767-5859
FAX (615) 758-5859

CoCode: (lab use only)
Template/Prelogin
Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	EPA 624 TTO	EPA 625 TTO	EPA 608 TTO	EPA 8260	EPA 8270	EPA 8081		Remarks/Contaminant	Sample # (lab only)
WILD RUSH ONLY	GRAB	WW		2/5/07	10:35	4	X	X	X						
BASIN 4	GRAB	WW		2/5/07	1:20	4				X	X	X			L279280-01-04
EFF	COMP/GRAB	WW		2/5/07	1:30/24HR	4	X	X	X						01 02
INF	COMP/GRAB	WW		2/5/07	1:05/24HR	4	X	X	X						02 03
Trip Blank (SH)															03 04

*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other ___

pH ___ Temp ___

Remarks:

Flow ___ Other ___

Relinquished by: (Signature)	Date: 2/6/07	Time: 8:45	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☐ Courier	Condition: (lab use only)
Relinquished by: (Signature)	Date: 2/6/07	Time: 1425	Received by: (Signature) Brent Bradley	Temp: 3.2°C / Bottles Received: 16 HCB	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 2/7/07 / Time: 0905	pH Checked: / NCF:

EFFLUENT

NPDES PERMIT NO. NC0029033 DISCHARGE No 001 MONTH Feb YEAR 2007
FACILTY NAME Neuse River Waste Water Treatment Plant CLASS IV COUNTY Wake
OPERATOR IN RESPONSIBLE CHARGE (ORC) Theodore J. Lynch GRADE IV PHONE (919) 662-5700
CERTIFIED LABORATORIES (1) Neuse River WWTP Lab (2) Tritest Inc.
CH BOX IF ORC HAS CHANGED [ ] PERSON(S) COLLECTING SAMPLES: Plant Personnel;Names on File

			01002	01027	01034	01042	01051	01062	01067	01077	01092	01147	71900	01007	
DATE	Operator Arrival Time	Operator Time On Site	Total Arsenic	Total Cadmium	Total Chrome	Total Copper	Total Lead	Total Molybdenum	Total Nickel	Total Silver	Total Zinc	Total Selenium	Total Mercury	Total Barium	Volatile Organics Attached
	Hrs	Hrs	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	UG/L	NG/L	UG/L	Y/N
1	0000	24													
2	0000	24													
3	0000	24													
4	0000	24	<5.000	<2.000	<5.000	6.810	<5.000	<5.000	6.229	<5.000	53.626	<5.000		<5.000	
5	0000	24											<1.000		Y
6	0000	24													
7	0000	24													
8	0000	24													
9	0000	24													
10	0000	24													
11	0000	24	<5.000	<2.000	<5.000	<5.000	<5.000	<5.000	5.560	<2.000	49.578	<5.000		<5.000	
12	0000	24													
13	0000	24													
14	0000	24													
15	0000	24													
16	0000	24													
17	0000	24													
18	0000	24	<5.000	<2.000	<5.000	<5.000	<5.000	<5.000	<5.000	<2.000	42.119	<5.000		<5.000	
19	0000	24													
20	0000	24													
21	0000	24													
22	0000	24													
23	0000	24													
24	0000	24													
25	0000	24	<5.000	<2.000	<5.000	<5.000	<5.000	<5.000	7.872	<5.000	46.715	<5.000		<5.000	
26	0000	24													
27	0000	24													
28	0000	24													
29	0000	24													
30	0000	24													
31	0000	24													
AVERAGE			0.000	0.000	0.000	1.702	0.000	0.000	4.915	0.000	48.009	0.000	0.000	0.000	
MAXIMUM			<5.000	<2.000	0.000	6.810	<5.000	0.000	7.872	<5.000	53.626	<5.000	<1.000	0.000	
MINIMUM			<5.000	<2.000	<5.000	0.000	<5.000	0.000	0.000	<5.000	42.119	<5.000	<1.000	0.000	

Comp(C)/Grab (G)	C	C	C	C	C	C	C	C	C	C	G	C	C
Monthly Limit													

TRiTEST
6701 Conference Drive
Raleigh, NC 27607

Telephone: (919) 834-4984
Fax: (919) 834-6497

NC/WW Cert. #: 067
NC/DW Cert. #: 37731

Laboratory Report

--- Prepared for ---

Marla Dalton
Raleigh, City of/Neuse WWTP
P.O. Box 590
SHIP:8500 BATTLE BRIDGE /27610
Raleigh, NC 27602

Report Date: **12/13/2005**
Date Received: **11/17/2005**

Work Order #: **0511-00571**

Project No.: **01**
Project ID: **PRIORITY POLLUTANTS**

Cust. Code: **RA2010**
Cust. P.O.#: **P0065121**

No.	Sample ID	Date Sampled	Time Sampled	Matrix	Sample Type	Condition
001	SAMPLE #1	11/17/2005	8:00	WW	Composite	4 +/- 2 deg C

Test Performed	Method	Results	Analyzed Date	Time	Qualifier
ICP/MS METAL SCAN			12/13/05	11:02	
Beryllium	EPA 200.8	<0.002 mg/L	12/1/05	13:12	
Aluminum	EPA 200.8	<0.050 mg/L	12/1/05	13:12	
Vanadium	EPA 200.8	<0.010 mg/L	12/1/05	13:12	
Chromium	EPA 200.8	<0.010 mg/L	12/1/05	13:12	
Manganese	EPA 200.8	0.032 mg/L	12/1/05	13:12	
Cobalt	EPA 200.8	<0.005 mg/L	12/1/05	13:12	
Nickel	EPA 200.8	<0.010 mg/L	12/1/05	13:12	
Copper	EPA 200.8	<0.010 mg/L	12/1/05	13:12	
Zinc	EPA 200.8	0.116 mg/L	12/1/05	13:12	
Arsenic	EPA 200.8	<0.005 mg/L	12/1/05	13:12	
Selenium	EPA 200.8	<0.002 mg/L	12/1/05	13:12	
Molybdenum	EPA 200.8	<0.005 mg/L	12/1/05	13:12	
Silver	EPA 200.8	<0.010 mg/L	12/1/05	13:12	
Cadmium	EPA 200.8	<0.005 mg/L	12/1/05	13:12	
Antimony	EPA 200.8	<0.003 mg/L	12/1/05	13:12	
Tin	EPA 200.8	<0.002 mg/L	12/1/05	13:12	
Barium	EPA 200.8	<0.005 mg/L	12/1/05	13:12	
Thallium	EPA 200.8	<0.001 mg/L	12/1/05	13:12	
Lead	EPA 200.8	<0.005 mg/L	12/1/05	13:12	
Iron	EPA 200.8	0.192 mg/L	12/1/05	13:12	
Phenol by 625	EPA 625	<10 ug/L	11/21/05	8:00	
VOCs by 624			11/29/05	8:26	
Benzene	EPA 624	<5 ug/L	11/29/05	8:26	
Acrolein	EPA 624	<50 ug/L	11/29/05	8:26	
Acrylonitrile	EPA 624	<50 ug/L	11/29/05	8:26	
Bromodichloromethane	EPA 624	<5 ug/L	11/29/05	8:26	
Bromoform	EPA 624	<5 ug/L	11/29/05	8:26	
Bromomethane	EPA 624	<10 ug/L	11/29/05	8:26	
Dibromomethane	EPA 624	<2 ug/L	11/29/05	8:26	
Carbon tetrachloride	EPA 624	<5 ug/L	11/29/05	8:26	
Chlorobenzene	EPA 624	<5 ug/L	11/29/05	8:26	
Chloroethane	EPA 624	<5 ug/L	11/29/05	8:26	
2-Chloroethylvinyl ether	EPA 624	<10 ug/L	11/29/05	8:26	
Chloroform	EPA 624	<5 ug/L	11/29/05	8:26	

TRiTEST
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NC/WW Cert. #: 067
NC/DW Cert. #: 37731

Laboratory Report

Work Order #: **0511-00571**

No.	Sample ID	Date Sampled	Time Sampled	Matrix	Sample Type	Condition
001	SAMPLE #1	11/17/2005	8:00	WW	Composite	4 +/- 2 deg C

Test Performed	Method	Results	Analyzed Date	Analyzed Time	Qualifier
Chloromethane	EPA 624	<5 ug/L	11/29/05	8:26	
Dibromochloromethane	EPA 624	<5 ug/L	11/29/05	8:26	
1,2-Dichlorobenzene	EPA 624	<5 ug/L	11/29/05	8:26	
1,3-Dichlorobenzene	EPA 624	<5 ug/L	11/29/05	8:26	
1,4-Dichlorobenzene	EPA 624	<5 ug/L	11/29/05	8:26	
1,1-Dichloroethane	EPA 624	<5 ug/L	11/29/05	8:26	
1,2-Dichloroethane	EPA 624	<5 ug/L	11/29/05	8:26	
1,1-Dichloroethene	EPA 624	<5 ug/L	11/29/05	8:26	
trans-1,2-Dichloroethene	EPA 624	<5 ug/L	11/29/05	8:26	
1,2-Dichloropropane	EPA 624	<5 ug/L	11/29/05	8:26	
cis-1,3-Dichloropropene	EPA 624	<5 ug/L	11/29/05	8:26	
trans-1,3-Dichloropropene	EPA 624	<5 ug/L	11/29/05	8:26	
Ethylbenzene	EPA 624	<5 ug/L	11/29/05	8:26	
Methylene chloride	EPA 624	<5 ug/L	11/29/05	8:26	
1,1,2,2-Tetrachloroethane	EPA 624	<5 ug/L	11/29/05	8:26	
Tetrachloroethene	EPA 624	<5 ug/L	11/29/05	8:26	
Toluene	EPA 624	<5 ug/L	11/29/05	8:26	
1,1,1-Trichloroethane	EPA 624	<10 ug/L	11/29/05	8:26	
1,1,2-Trichloroethane	EPA 624	<5 ug/L	11/29/05	8:26	
Trichloroethene	EPA 624	<5 ug/L	11/29/05	8:26	
Trichlorofluoromethane	EPA 624	<5 ug/L	11/29/05	8:26	
Vinyl chloride	EPA 624	<5 ug/L	11/29/05	8:26	
cis-1,2-Dichloroethene	EPA 624	<5 ug/L	11/29/05	8:26	
Extraction, 625 Acids Only	EPA 625	DONE	11/21/05	8:00	
SVOCs (A&B/N) by 625			11/21/05	8:00	
Acenaphthene	EPA 625	<10 ug/L	11/21/05	8:00	
Acenaphthylene	EPA 625	<10 ug/L	11/21/05	8:00	
Anthracene	EPA 625	<10 ug/L	11/21/05	8:00	
Benzidine	EPA 625	<50 ug/L	11/21/05	8:00	
Benzo(a)anthracene	EPA 625	<10 ug/L	11/21/05	8:00	
Benzo(b)fluoranthene	EPA 625	<10 ug/L	11/21/05	8:00	
Benzo(k)fluoranthene	EPA 625	<10 ug/L	11/21/05	8:00	
Benzo(a)pyrene	EPA 625	<10 ug/L	11/21/05	8:00	
Benzo(g,h,i)perylene	EPA 625	<10 ug/L	11/21/05	8:00	
Benzyl butyl phthalate	EPA 625	<10 ug/L	11/21/05	8:00	
Bis(2-chloroethyl)ether	EPA 625	<10 ug/L	11/21/05	8:00	
Bis(2-chloroethoxy)methane	EPA 625	<10 ug/L	11/21/05	8:00	
Bis(2-chloroisopropyl)ether	EPA 625	<10 ug/L	11/21/05	8:00	
Bis(2-ethylhexyl)phthalate	EPA 625	<10 ug/L	11/21/05	8:00	
4-Bromophenyl phenyl ether	EPA 625	<10 ug/L	11/21/05	8:00	
2-Chloronaphthalene	EPA 625	<10 ug/L	11/21/05	8:00	
4-Chloro-3-methylphenol	EPA 625	<10 ug/L	11/21/05	8:00	
2-Chlorophenol	EPA 625	<10 ug/L	11/21/05	8:00	

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Laboratory Report

Work Order #: **0511-00571**

No.	Sample ID	Date Sampled	Time Sampled	Matrix	Sample Type	Condition
001	SAMPLE #1	11/17/2005	8:00	WW	Composite	4 +/- 2 deg C

Test Performed	Method	Results	Analyzed Date	Analyzed Time	Qualifier
4-Chlorophenyl phenyl ether	EPA 625	<10 ug/L	11/21/05	8:00	
Chrysene	EPA 625	<10 ug/L	11/21/05	8:00	
Dibenzo(a,h)anthracene	EPA 625	<10 ug/L	11/21/05	8:00	
Di-n-butyl phthalate	EPA 625	<10 ug/L	11/21/05	8:00	
3,3'-Dichlorobenzidine	EPA 625	<20 ug/L	11/21/05	8:00	
1,2-Dichlorobenzene	EPA 625	<10 ug/L	11/21/05	8:00	
1,3-Dichlorobenzene	EPA 625	<10 ug/L	11/21/05	8:00	
1,4-Dichlorobenzene	EPA 625	<10 ug/L	11/21/05	8:00	
2,4-Dichlorophenol	EPA 625	<10 ug/L	11/21/05	8:00	
Diethyl phthalate	EPA 625	<10 ug/L	11/21/05	8:00	
2,4-Dimethylphenol	EPA 625	<10 ug/L	11/21/05	8:00	
Dimethyl phthalate	EPA 625	<10 ug/L	11/21/05	8:00	
2,4-Dinitrophenol	EPA 625	<50 ug/L	11/21/05	8:00	
2,4-Dinitrotoluene	EPA 625	<10 ug/L	11/21/05	8:00	
2,6-Dinitrotoluene	EPA 625	<10 ug/L	11/21/05	8:00	
Di-n-octyl phthalate	EPA 625	<10 ug/L	11/21/05	8:00	
Fluoranthene	EPA 625	<10 ug/L	11/21/05	8:00	
Fluorene	EPA 625	<10 ug/L	11/21/05	8:00	
Hexachlorobenzene	EPA 625	<10 ug/L	11/21/05	8:00	
Hexachlorobutadiene	EPA 625	<10 ug/L	11/21/05	8:00	
Hexachlorocyclopentadiene	EPA 625	<10 ug/L	11/21/05	8:00	
Hexachloroethane	EPA 625	<10 ug/L	11/21/05	8:00	
Indeno(1,2,3-c,d)pyrene	EPA 625	<10 ug/L	11/21/05	8:00	
Isophorone	EPA 625	<10 ug/L	11/21/05	8:00	
2-Methyl-4,6-dinitrophenol	EPA 625	<50 ug/L	11/21/05	8:00	
Naphthalene	EPA 625	<10 ug/L	11/21/05	8:00	
Nitrobenzene	EPA 625	<10 ug/L	11/21/05	8:00	
2-Nitrophenol	EPA 625	<10 ug/L	11/21/05	8:00	
4-Nitrophenol	EPA 625	<10 ug/L	11/21/05	8:00	
N-Nitrosodi-n-propylamine	EPA 625	<20 ug/L	11/21/05	8:00	
Pentachlorophenol	EPA 625	<30 ug/L	11/21/05	8:00	
Phenanthrene	EPA 625	<10 ug/L	11/21/05	8:00	
Phenol	EPA 625	<10 ug/L	11/21/05	8:00	
Pyrene	EPA 625	<10 ug/L	11/21/05	8:00	
1,2,4-Trichlorobenzene	EPA 625	<20 ug/L	11/21/05	8:00	
2,4,6-Trichlorophenol	EPA 625	<10 ug/L	11/21/05	8:00	
N-Nitrosodimethylamine	EPA 625	<10 ug/L	11/21/05	8:00	
N-Nitrosodiphenylamine	EPA 625	<20 ug/L	11/21/05	8:00	
1,2-Diphenylhydrazine	EPA 625	<10 ug/L	11/21/05	8:00	
Extraction, 625 (A&B/N)	EPA 625	DONE	11/21/05	8:00	

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Work Order #: **0511-00571**

JUL 22 08

Reviewed by:

Edison L. Lewis

for Tritest, Inc.

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

NPDES
newly issued permit

November 20, 2006

Mr. Howard D. Crisp, Public Utilities Director
City of Raleigh
P.O. Box 590
Raleigh, North Carolina 27602

Subject: NPDES Permit Issuance
Permit No. NC0079316
Little Creek WWTP
Wake County

Dear Mr. Crisp:

Division personnel have reviewed and approved your application for expansion of the subject treatment system. Accordingly, we are forwarding the attached NPDES discharge permit. This permit is issued pursuant to the requirements of North Carolina General Statute 143-215.1 and the Memorandum of Agreement between North Carolina and the U.S. Environmental Protection Agency dated May 9, 1994 (or as subsequently amended).

The final permit includes the following changes from your draft permit:

- The permit number for the non-discharge permit referenced in the Supplement to Permit Cover Sheet was corrected.
- Item 3 in the Supplement to Permit cover Sheet was modified to read "After obtaining an Authorization to Construct from the Division, and upon submittal of the engineer's certification, operate the above facility at a capacity of 2.2 MGD."

The Division received comments from the North Carolina Wildlife Resources Commission, Habitat Conservation Program, regarding the presence of endangered and threatened species in Moccasin Creek. Little Creek is a tributary to Moccasin Creek. The Commission is concerned with the toxicity effects of ammonia on several species found in Moccasin Creek. The protection of endangered and threatened species is addressed in Rule 15A NCAC 02B .0110. The Wildlife Resource Commission will develop site-specific management strategies for waters where threatened and endangered species are present. At this time there is no site-specific strategy for Moccasin Creek. When the site-specific strategy is established your ammonia limits may be more stringent than those in your current permit.

If any parts, measurement frequencies or sampling requirements contained in this permit are unacceptable to you, you have the right to an adjudicatory hearing upon written request within thirty (30) days following receipt of this letter. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings (6714 Mail Service Center, Raleigh, North Carolina 27699-6714). Unless such demand is made, this decision shall be final and binding.

Please note that this permit is not transferable except after notice to the Division. The Division may require modification or revocation and reissuance of the permit. This permit does not affect the legal requirements to obtain other permits which may be required by the Division of Water Quality or permits required by the Division of Land Resources, the Coastal Area Management Act or any other Federal or Local governmental permit that may be required.

If you have any questions concerning this permit, please contact Teresa Rodriguez at telephone number (919) 733-5083, extension 553.

Sincerely,

for: Alan W. Klimek, P.E.

Cc: NPDES Files
Raleigh Regional Office – Surface Water Protection
Construction Grants and Loans Section
PERCS Unit
USEPA Region 4
Brian C. Gay – Town of Zebulon

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER QUALITY

PERMIT

TO DISCHARGE WASTEWATER UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended, the

City of Raleigh

is hereby authorized to discharge wastewater and stormwater from a facility located at the

Little Creek Wastewater Treatment Plant
NC Highway 39 southeast of Zebulon
Wake County

to receiving waters designated as Little Creek in the Neuse River Basin in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, and IV hereof.

The permit shall become effective January 1, 2007.

This permit and the authorization to discharge shall expire at midnight on May 31, 2008.

Signed this day November 20, 2006.

for : Alan W. Klimek, P.E., Director
Division of Water Quality
By Authority of the Environmental Management Commission

SUPPLEMENT TO PERMIT COVER SHEET

All previous NPDES Permits issued to this facility, whether for operation or discharge are hereby revoked, and as of this issuance, any previously issued permit bearing this number is no longer effective. Therefore, the exclusive authority to operate and discharge from this facility arises under the permit conditions, requirements, terms, and provisions included herein.

The City of Raleigh is hereby authorized to:

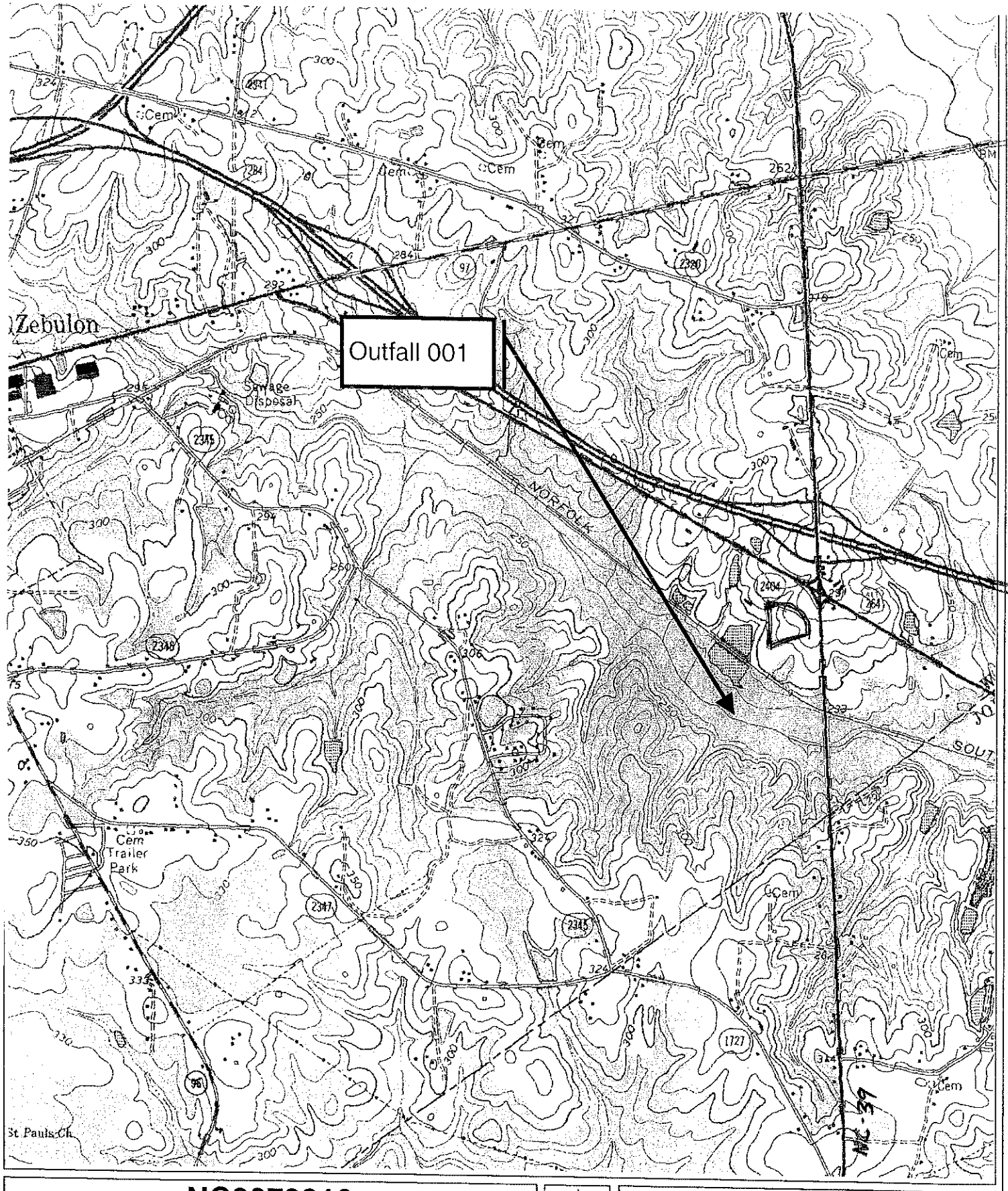
1. Continue operation of a 1.85 MGD wastewater treatment facility that includes the following components:
   - Bar screening
   - Grit removal
   - Dual-train activated sludge process
   - Biological nutrient removal
   - Three-channel oxidation ditch
   - Dual secondary clarifiers
   - Dual traveling bridge tertiary filters
   - Post aeration
   - Ultraviolet disinfection
   - Alum feed system
   - Caustic feed system
   - Aerobic digester
   - Sludge holding lagoon
   - Standby power

   This facility is located at the Little Creek Wastewater Treatment Plant off NC Highway 39 southeast of Zebulon in Wake County.

2. After obtaining an Authorization to Construct from the Division, and upon submittal of an engineering certification, operate the above facility at a capacity of 2.2 MGD.

3. Operate facilities for reclaimed water distribution in accordance with Non-Discharge Permit No. WQ0020409; and

4. Discharge from said treatment works at the location specified on the attached map into Little Creek, a class C-NSW water in the Neuse River Basin.

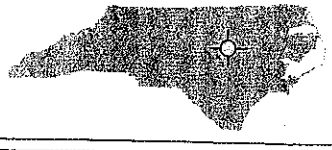


NC0079316

Receiving Stream:	Little Creek	Latitude:	35°48'57"
Stream Class:	C-NSW	Longitude:	78°16'20"
Sub-Basin:	03-04-07		
Quad #:	Zebulon, N.C.		

North

Facility Location



City of Raleigh
Little Creek WWTP

A. (1) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Beginning on the effective date of this permit and lasting until expansion above 1.85 MGD or expiration, the Permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

PARAMETER	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location [1]
Flow	1.85 MGD			Continuous	Recording	Influent or Effluent
BOD_5 (Summer)[2,3]	5.0 mg/L	7.5 mg/L		Daily	Composite	Influent & Effluent
BOD_5 (Winter)[2,3]	10.0 mg/L	15.0 mg/L		Daily	Composite	Influent & Effluent
Total Suspended Solids[2]	30.0 mg/L	45.0 mg/L		Daily	Composite	Influent & Effluent
NH_3 as N (Summer)[3]	2.0 mg/L	6.0 mg/L		Daily	Composite	Effluent
NH_3 as N (Winter)[3]	4.0 mg/L	12.0 mg/L		Daily	Composite	Effluent
Dissolved Oxygen	Daily average not less than 5.0 mg/L			Daily	Grab	Effluent
Fecal Coliform	200/100 ml	400/100 ml		Daily	Grab	Effluent
Total Residual Chlorine[4]			17 μg/L	Daily	Grab	Effluent
Temperature				Daily	Grab	Effluent
TKN (mg/L)	Monitor & Report			Weekly	Composite	Effluent
NO_3-N + NO_2-N (mg/L)	Monitor & Report			Weekly	Composite	Effluent
TN (mg/L)[5]	Monitor & Report			Weekly	Composite	Effluent
TN Load[6]	Monitor & Report			Monthly	Calculated	Effluent
	22,455 lb/year[7]			Annually	Calculated	Effluent
Total Phosphorus	1.0 mg/L (quarterly average)[8]			Weekly	Composite	Effluent
pH	Between 6.0 and 9.0 Standard Units			Daily	Grab	Effluent
Chronic Toxicity[9]				Quarterly	Composite	Effluent
Total Nickel				Monthly	Composite	Effluent
Total Copper				Monthly	Composite	Effluent
Total Zinc				Monthly	Composite	Effluent

Footnotes:

1. See condition A. (3) of this permit for instream monitoring requirements.
2. The monthly average BOD5 and Total Suspended Solids concentrations shall not exceed 15% of the respective influent value (85% removal).
3. Summer shall be defined as April 1 – October 31 with winter defined as the balance of the year.
4. Total residual chlorine monitoring and limit only apply if chlorine or a chlorine derivative is employed for disinfection.
5. For a given wastewater sample, TN = TKN + NO_3-N + NO_2-N, where TN is total nitrogen, TKN is total Kjeldahl Nitrogen, and NO_3-N and NO_2-N are nitrate and nitrite nitrogen, respectively.
6. TN load is the mass quantity of total nitrogen discharged in a given week. See condition A. (4).
7. Compliance with this limit shall be determined in accordance with condition A. (5).
8. The quarterly average for total phosphorus shall be the average of composite samples collected weekly during each calendar quarter (January - March, April - June, July - September, October - December).
9. Chronic Toxicity (Ceriodaphnia) @ 90%, January, April, July, October; see condition A. (6) of this permit.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. (2) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Beginning upon expansion to 2.2 MGD and lasting until expiration, the Permittee is authorized to discharge from Outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

PARAMETER	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location [1]
Flow	2.20 MGD			Continuous	Recording	Influent or Effluent
BOD_5 (Summer)[2,3]	5.0 mg/L	7.5 mg/L		Daily	Composite	Influent & Effluent
BOD_5 (Winter)[2,3]	10.0 mg/L	15.0 mg/L		Daily	Composite	Influent & Effluent
Total Suspended Solids[2]	30.0 mg/L	45.0 mg/L		Daily	Composite	Influent & Effluent
NH_3 as N (Summer)[3]	1.0 mg/L	3.0 mg/L		Daily	Composite	Effluent
NH_3 as N (Winter)[3]	2.0 mg/L	6.0 mg/L		Daily	Composite	Effluent
Dissolved Oxygen	Daily average not less than 6.0 mg/L			Daily	Grab	Effluent
Fecal Coliform	200/100 ml	400/100 ml		Daily	Grab	Effluent
Total Residual Chlorine[4]			17 μg/L	Daily	Grab	Effluent
Temperature				Daily	Grab	Effluent
TKN (mg/L)	Monitor & Report			Weekly	Composite	Effluent
NO_3-N + NO_2-N (mg/L)	Monitor & Report			Weekly	Composite	Effluent
TN (mg/L)[5]	Monitor & Report			Weekly	Composite	Effluent
TN Load[6]	Monitor & Report			Monthly	Calculated	Effluent
	22,455 lb/year[7]			Annually	Calculated	Effluent
Total Phosphorus	1.0 mg/L (quarterly average)[8]			Weekly	Composite	Effluent
pH	Between 6.0 and 9.0 Standard Units			Daily	Grab	Effluent
Chronic Toxicity[9]				Quarterly	Composite	Effluent
Total Nickel				Monthly	Composite	Effluent
Total Copper				Monthly	Composite	Effluent
Total Zinc				Monthly	Composite	Effluent

Footnotes:

1. See condition A. (3) of this permit for instream monitoring requirements.
2. The monthly average BOD5 and Total Suspended Solids concentrations shall not exceed 15% of the respective influent value (85% removal).
3. Summer shall be defined as April 1 – October 31 with winter defined as the balance of the year.
4. Total residual chlorine monitoring and limit only apply if chlorine or a chlorine derivative is employed for disinfection.
5. For a given wastewater sample, TN = TKN + NO_3-N + NO_2-N, where TN is total nitrogen, TKN is total Kjeldahl Nitrogen, and NO_3-N and NO_2-N are nitrate and nitrite nitrogen, respectively.
6. TN load is the mass quantity of total nitrogen discharged in a given week. See condition A. (4).
7. Compliance with this limit shall be determined in accordance with condition A. (5).
8. The quarterly average for total phosphorus shall be the average of composite samples collected weekly during each calendar quarter (January - March, April - June, July - September, October - December).
9. Chronic Toxicity (Ceriodaphnia) @ 90%, January, April, July, October; see condition A. (6) of this permit.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. (3) INSTREAM MONITORING REQUIREMENTS

Instream monitoring is required for the following parameters at the locations specified:

Parameter	Sample Type	Location[1]
Total Nitrogen	Grab	U, $D_{1,2}$
NH_3 as N	Grab	U, $D_{1,2}$
Dissolved Oxygen	Grab	U, $D_{1,2}$
Temperature	Grab	U, $D_{1,2}$
Total Nitrogen	Grab	U, $D_{1,2}$
PO_4	Grab	U, $D_{1,2}$
TKN	Grab	U, $D_{1,2}$
Chlorophyll-a	Grab	U, $D_{1,2}$

Footnotes:

1. U: Upstream 200 feet from the outfall. D_1: Downstream 0.7 miles at the railroad tracks access. D_2: Downstream at Taylor's Mill Pond dam spillway. Stream samples shall be collected three times per week during the months of June, July, August, and September and weekly during the remainder of the year. As a participant in the Lower Neuse Basin Association, Inc. (LNBA), the subject facility is not responsible for conducting the instream monitoring requirements summarized above. Should your membership in the Association be terminated, the Division shall be immediately notified and all instream monitoring requirements will be immediately reinstated.

A. (4) CALCULATION OF TOTAL NITROGEN LOADS

(1) The Permittee shall calculate monthly and annual TN loads as follows:

(a) Monthly TN load (lb/month) = TN x TMF x 8.34

where:

TN = the average total nitrogen concentration (mg/L) of the composite samples collected during the month

TMF = the total wastewater flow discharged during the month (MG/month)

8.34 = conversion factor, from (mg/L x MG) to pounds

(b) Annual TN load (lb/year) = Sum of the 12 monthly TN loads for the calendar year.

(2) The Permittee shall report monthly total nitrogen results (mg/L and lb/month) in the discharge monitoring report for that month and shall report each year's annual results (lb/year) in the December report for that year.

A. (5) ANNUAL LIMITS FOR TOTAL NITROGEN

(1) Total Nitrogen (TN) allocations and TN Load limits for NPDES dischargers in the Neuse River basin are annual limits and are applied for the calendar year.

(2) For any given calendar year, the Permittee shall be in compliance with the annual TN Load limit in this Permit if:

(a) the Permittee's annual TN Load is less than or equal to said limit, or

(b) the Permittee is a Co-Permittee Member of a compliance association.

(3) The TN Load limit in this Permit (if any) may be modified as the result of allowable changes in the Permittee's TN allocation.

(a) Allowable changes include those resulting from purchase of TN allocation from the Wetlands Restoration Fund; purchase, sale, trade, or lease of allocation between the Permittee and other dischargers; regionalization; and other transactions approved by the Division.

(b) The Permittee may request a modification of the TN Load limit in this Permit to reflect allowable changes in its TN allocation. Upon receipt of timely and proper application, the Division will modify the permit as appropriate and in accordance with state and federal program requirements.

(c) Changes in TN limits become effective on January 1 of the year following permit modification. The Division must receive application no later than August 31 for changes proposed for the following calendar year.

(d) Application shall be sent to:

NCDWQ / NPDES Unit
Attn: Neuse River Basin Coordinator
Mail Service Center
Raleigh, NC 27699-1617

(4) If the Permittee is a member and co-permittee of an approved compliance association, its TN discharge during that year is governed by that association's group NPDES permit and the TN limits therein.

(a) The Permittee shall be considered a Co-Permittee Member for any given calendar year in which it is identified as such in Appendix A of the association's group NPDES permit.

(b) Association roster(s) and members' TN allocations will be updated annually and in accordance with state and federal program requirements.

(c) If the Permittee intends to join or leave a compliance association, the Division must be notified of the proposed action in accordance with the procedures defined in the association's NPDES permit.

(i) Upon receipt of timely and proper notification, the Division will modify the permit as appropriate and in accordance with state and federal program requirements.

(ii) Membership changes in a compliance association become effective on January 1 of the year following modification of the association's permit.

(5) The TN monitoring and reporting requirements in this Permit remain in effect until expiration of this Permit and are not affected by the Permittee's membership in a compliance association.

A. (6) CHRONIC TOXICITY PERMIT LIMIT (Quarterly)

The effluent discharge shall at no time exhibit observable inhibition of reproduction or significant mortality to *Ceriodaphnia dubia* at an effluent concentration of 90%.

The permit holder shall perform at a minimum, quarterly monitoring using test procedures outlined in the "North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure," Revised February 1998, or subsequent versions or "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions. The tests will be performed during the months of January, April, July, and October. Effluent sampling for this testing shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

If the test procedure performed as the first test of any single quarter results in a failure or ChV below the permit limit, then multiple-concentration testing shall be performed at a minimum, in each of the two following months as

described in "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

The chronic value for multiple concentration tests will be determined using the geometric mean of the highest concentration having no detectable impairment of reproduction or survival and the lowest concentration that does have a detectable impairment of reproduction or survival. The definition of "detectable impairment," collection methods, exposure regimes, and further statistical methods are specified in the "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the months in which tests were performed, using the parameter code TGP3B for the pass/fail results and THP3B for the Chronic Value. Additionally, DWQ Form AT-3 (original) is to be sent to the following address:

Attention: NC DENR / DWQ / Environmental Sciences Section
1621 Mail Service Center
Raleigh, North Carolina 27699-1621

Completed Aquatic Toxicity Test Forms shall be filed with the Environmental Sciences Section no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete, accurate, include all supporting chemical/physical measurements and all concentration/response data, and be certified by laboratory supervisor and ORC or approved designate signature. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Environmental Sciences Section at the address cited above.

Should the permittee fail to monitor during a month in which toxicity monitoring is required, monitoring will be required during the following month.

Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Quality indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an invalid test and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

A. (7) EFFLUENT POLLUTANT SCAN

The permittee shall perform an annual Effluent Pollutant Scan for all parameters listed in the table below (in accordance with 40 CFR Part 136). The annual effluent pollutant scan samples shall represent seasonal (summer, winter, fall, spring) variations over the 5-year permit cycle. Unless otherwise indicated, metals shall be analyzed as "total recoverable." Additionally, the method detection level and the minimum level shall be the most sensitive as provided by the appropriate analytical procedure.

Ammonia (as N)
Chlorine (total residual, TRC)
Dissolved oxygen
Nitrate/Nitrite
Total Kjeldahl nitrogen
Oil and grease
Total Phosphorus
Total dissolved solids
Hardness
Antimony
Arsenic
Beryllium
Cadmium
Chromium
Copper
Lead
Mercury
Nickel
Selenium
Silver
Thallium
Zinc
Cyanide
Total phenolic compounds

Volatile organic compounds:

Acrolein
Acrylonitrile
Benzene
Bromoform
Carbon tetrachloride
Chlorobenzene
Chlorodibromomethane
Chloroethane
2-chloroethylvinyl ether
Chloroform
Dichlorobromomethane
1,1-dichloroethane
1,2-dichloroethane
Trans-1,2-dichloroethylene
1,1-dichloroethylene
1,2-dichloropropane
1,3-dichloropropylene
Ethylbenzene
Methyl bromide
Methyl chloride
Methylene chloride
1,1,2,2-tetrachloroethane
Tetrachloroethylene
Toluene
1,1,1-trichloroethane
1,1,2-trichloroethane
Trichloroethylene
Vinyl chloride

Acid-extractable compounds:

P-chloro-m-cresol
2-chlorophenol
2,4-dichlorophenol
2,4-dimethylphenol
4,6-dinitro-o-cresol
2,4-dinitrophenol
2-nitrophenol
4-nitrophenol
Pentachlorophenol
Phenol
2,4,6-trichlorophenol

Base-neutral compounds:

Acenaphthene
Acenaphthylene
Anthracene
Benzidine
Benzo(a)anthracene
Benzo(a)pyrene
3,4 benzofluoranthene
Benzo(ghi)perylene
Benzo(k)fluoranthene
Bis (2-chloroethoxy) methane
Bis (2-chloroethyl) ether
Bis (2-chloroisopropyl) ether
Bis (2-ethylhexyl) phthalate
4-bromophenyl phenyl ether
Butyl benzyl phthalate
2-chloronaphthalene
4-chlorophenyl phenyl ether
Chrysene
Di-n-butyl phthalate
Di-n-octyl phthalate
Dibenzo(a,h)anthracene
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
3,3-dichlorobenzidine
Diethyl phthalate
Dimethyl phthalate
2,4-dinitrotoluene
2,6-dinitrotoluene
1,2-diphenylhydrazine
Fluoranthene
Fluorene
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclo-pentadiene
Hexachloroethane
Indeno(1,2,3-cd)pyrene
Isophorone
Naphthalene
Nitrobenzene
N-nitrosodi-n-propylamine
N-nitrosodimethylamine
N-nitrosodiphenylamine
Phenanthrene
Pyrene
1,2,4-trichlorobenzene

Test results shall be reported to the Division in DWQ Form- DMR-PPA1 or in a form approved by the Director, within 90 days of sampling. A copy of the report shall be submitted to Central Files to the following address: Division of Water Quality, Water Quality Section, 1617 Mail Service Center, Raleigh, North Carolina 27699-1617.

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

August 22, 2006

Mr. Kenneth Waldroup
Town of Zebulon
100 N. Arendell Avenue
Zebulon, North Carolina 27597-2837

Subject: Speculative Limits for Zebulon WWTP
Proposed Little River location
Wake County

Dear Mr. Waldroup:

This letter is in response to the request for speculative effluent limits for a proposed Zebulon WWTP discharge. Wastewater flows of 4 and 6 MGD were proposed for discharge into the Little River at State Road 2353 (Morphus Bridge) in the Neuse River Basin.

Please be advised that response to this request does not guarantee that the Division will issue an NPDES permit to discharge treated wastewater into these receiving waters. The Town of Zebulon will be required to complete an Engineering Alternatives Analysis (EAA) that must be submitted with the application for the NPDES permit. The EAA should contain a clear and strong justification for the proposed facility and an analysis of potential alternatives, which should include a thorough evaluation of non-discharge alternatives. Nondischarge alternatives, such as spray irrigation, water conservation, or connection to a regional treatment and disposal system, are considered to be environmentally preferable to a surface water discharge. In accordance with the North Carolina General Statutes, the practicable waste treatment and disposal alternative with the least adverse impact on the environment is required to be implemented. (A copy of the EAA guidance is attached with this letter).

It should be noted that expanding facilities, involving an expenditure of public funds or use of public (state) lands, will be required to prepare an Environmental Assessment (EA) when wasteflows exceed or equal 0.5 MGD. If the EA demonstrates that the project may result in a significant adverse effect on the quality of the environment, an Environmental Impact Statement (EIS) is required. DWQ will not accept a permit application for a project requiring an EA or EIS until: (1) the document has been approved by the Department of Environment and Natural Resources and, (2) a Finding of No Significant Impact (FONSI) has been sent to the State Clearinghouse for review and comment or an EIS has been approved. The Division of Water Quality's Planning Branch can provide further information regarding the requirements of the N.C. Environmental Policy Act. Please contact Hannah Stallings of the DWQ Planning Branch at (919) 733-5083 ext. 555 if you have questions on this subject.

This segment of the Little River has a stream classification of WS-V NSW. These waters are protected as water supplies, which are generally upstream and draining to Class WS-IV waters. (See North Carolina Water Quality regulation 15A NCAC 02B .0218 (1) for the best usage of this stream.) There is also a designation as nutrient sensitive waters (NSW), which requires limitations on nutrient inputs. Based on information provided by the United States Geological Survey, the discharge point has an estimated drainage area of 68.3 square miles, with an average flow of 70 cfs; a summer 7Q10 flow of 0.7 cfs and a winter 7Q10 flow of 5 cfs.

One NorthCarolina Naturally

The tentative effluent limits for oxygen-consuming constituents of the proposed Zebulon WWTP discharge at the flows of 4 and 6 MGD are included on the attached effluent sheet. The instream waste concentration of the proposed plant at 4 MGD is 90% and at 6 MGD is 93%. Additionally, initial model results indicate a BOD5 (summer) limit of 4 mg/l and NH3-N (summer) limit of 1 mg/l. (The model would also support a BOD5 limit of 5 mg/l with an equivalent NH3-N limit of 0.56 mg/l.) The Town may wish to evaluate the treatment plant and determine which limits may be the most feasible (both sets of limits protect the dissolved oxygen water quality standard of 5 mg/l at both 4 MGD and 6 MGD). Upon formal permit application, if there are industrial wastewater contributors to the plant, an evaluation of limits and monitoring requirements for metals and other toxicants will be done.

As you are aware, the town of Zebulon will also have to comply with its current total nitrogen load of 22,455 pounds per year. Please contact Mike Templeton at (919) 733-5083, ext. 541 should you have questions regarding the Neuse River Nutrient Management Strategy.

The Division of Water Quality is requiring total residual chlorine limits for all new or expanding dischargers proposing the use of chlorine for disinfection. The process of chlorination/dechlorination or an alternate form of disinfection, such as ultraviolet radiation, should allow the facility to comply with this requirement. The tentative chlorine limits are 19 ug/l at 4 MGD and 18 ug/l at 6 MGD.

Final NPDES effluent limitations will be determined if a permit application is submitted to the Division. If there are any additional questions concerning this matter, please feel free to contact Jackie Nowell of my staff at (919) 733-5083 ext. 512.

Respectfully,

Susan A. Wilson

Susan A. Wilson, P.E., Supervisor
NPDES Western Program

Attachments
cc: US Fish and Wildlife Service, Ecological Services, PO Box 33726, Raleigh, NC 27636-3726 Attn: Sara Myers
NC WRC, Inland Fisheries, 1721 Mail Service Center, Raleigh, NC, 27699-1721 Attn: Fred Harris
Raleigh Regional Office/Surface Water Protection Section Attn: Chuck Wakild
DWQ Planning Branch/Attn: Hannah Stallings
PERCS Unit
Bobby Blowe, Construction Grants and Loans
Central Files
NPDES Permit File

A. SPECULATIVE EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - PROPOSED ZEBULON WWTP AT 4 MGD

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow	4 MGD			Continuous	Recording	Influent or Effluent
BOD, 5-day, 20°C[2] (April 1 – October 31)	4.0 mg/L	6.0 mg/L		Weekly	Composite	Influent, Effluent
BOD, 5-day, 20°C[2] (November 1 – March 30))	8.0 mg/L	12.0 mg/L		Weekly	Composite	Influent, Effluent
Total Suspended Residue [2]	30.0 mg/L	45.0 mg/L		Weekly	Composite	Influent, Effluent
NH_3 as N (April 1 – October 31)	1.0 mg/L	3.0 mg/L		2/Month	Composite	Effluent
NH_3 as N (November 1 – March 30)	2.0 mg/L	6.0 mg/L		2/Month	Composite	Effluent
Fecal Coliform (geometric mean)	200 / 100 ml	400 / 100 ml		Weekly	Grab	Effluent
pH[3]				Weekly	Grab	Effluent
Total Residual Chlorine[4]			19 µg/L	2/Week	Grab	Effluent
Total Nitrogen Load (NO_2+NO_3+TKN)	22,455 (pounds/year) *equivalent to 1.84 mg/l TN*				Composite	Effluent
Total Phosphorus	1.0 mg/l			Weekly	Composite	Effluent
Temperature, °C				Weekly	Grab	Effluent
Chronic Toxicity[5]				Quarterly	Composite	Effluent

Notes:

1. Influent, Effluent
2. The monthly average effluent BOD5 and Total Suspended Residue concentrations shall not exceed 15% of the respective influent value (85% removal).
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.
4. Limit applies only if chlorine is added for disinfection.
5. Chronic Toxicity limit (*Ceriodaphnia*) at 90 % with quarterly testing.

There shall be no discharge of floating solids or visible foam in other than trace

B. SPECULATIVE EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - PROPOSED ZEBULON WWTP AT 4 MGD

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow	4 MGD			Continuous	Recording	Influent or Effluent
BOD, 5-day, 20°C[2] (April 1 – October 31)	5.0 mg/L	7.5 mg/L		Weekly	Composite	Influent, Effluent
BOD, 5-day, 20°C[2] (November 1 – March 30))	10.0 mg/L	15.0 mg/L		Weekly	Composite	Influent, Effluent
Total Suspended Residue [2]	30.0 mg/L	45.0 mg/L		Weekly	Composite	Influent, Effluent
NH_3 as N (April 1 – October 31)	0.56 mg/L	1.7 mg/L		2/Month	Composite	Effluent
NH_3 as N (November 1 – March 30)	1.1 mg/L	3.3 mg/L		2/Month	Composite	Effluent
Fecal Coliform (geometric mean)	200 / 100 ml	400 / 100 ml		Weekly	Grab	Effluent
pH[3]				Weekly	Grab	Effluent
Total Residual Chlorine[4]			19 µg/L	2/Week	Grab	Effluent
Total Nitrogen Load (NO_2+NO_3+TKN)	22,455 (pounds/year) *equivalent to 1.84 mg/l TN*				Composite	Effluent
Total Phosphorus	1.0 mg/l			Weekly	Composite	Effluent
Temperature, °C				Weekly	Grab	Effluent
Chronic Toxicity[5]				Quarterly	Composite	Effluent

Notes:

1. Influent, Effluent
2. The monthly average effluent BOD5 and Total Suspended Residue concentrations shall not exceed 15% of the respective influent value (85% removal).
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.
4. Limit applies only if chlorine is added for disinfection.
5. Chronic Toxicity limit (*Ceriodaphnia*) at 90 % with quarterly testing.

There shall be no discharge of floating solids or visible foam in other than trace

C. SPECULATIVE EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - PROPOSED ZEBULON WWTP AT 6 MGD

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow	6 MGD			Continuous	Recording	Influent or Effluent
BOD, 5-day, 20°C[2] (April 1 – October 31)	4.0 mg/L	7.5 mg/L		Weekly	Composite	Influent, Effluent
BOD, 5-day, 20°C[2] (November 1 – March 30))	8.0 mg/L	15.0 mg/L		Weekly	Composite	Influent, Effluent
Total Suspended Residue [2]	30.0 mg/L	45.0 mg/L		Weekly	Composite	Influent, Effluent
NH_3 as N (April 1 – October 31)	1.0 mg/L	3.0 mg/L		2/Month	Composite	Effluent
NH_3 as N (November 1 – March 30)	2.0 mg/L	6.0 mg/L		2/Month	Composite	Effluent
Fecal Coliform (geometric mean)	200 / 100 ml	400 / 100 ml		Weekly	Grab	Effluent
pH[3]				Weekly	Grab	Effluent
Total Residual Chlorine[4]			18 µg/L	2/Week	Grab	Effluent
Total Nitrogen Load (NO_2+NO_3+TKN)	22,455 (pounds/year) *equivalent to 1.23 mg/l TN*				Composite	Effluent
Total Phosphorus	1.0 mg/l			Weekly	Composite	Effluent
Temperature, °C				Weekly	Grab	Effluent
Chronic Toxicity				Quarterly	Composite	Effluent

Notes:

1. Influent, Effluent
2. The monthly average effluent BOD5 and Total Suspended Residue concentrations shall not exceed 15% of the respective influent value (85% removal).
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.
4. Limit applies only if chlorine is added for disinfection.
5. Chronic Toxicity limit (*Ceriodaphnia*) at 90 % with quarterly testing.

There shall be no discharge of floating solids or visible foam in other than trace

D. SPECULATIVE EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS - PROPOSED ZEBULON WWTP AT 6 MGD

During the period beginning on the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow	6 MGD			Continuous	Recording	Influent or Effluent
BOD, 5-day, 20°C[2] (April 1 – October 31)	5.0 mg/L	7.5 mg/L		Weekly	Composite	Influent, Effluent
BOD, 5-day, 20°C[2] (November 1 – March 30))	10.0 mg/L	15.0 mg/L		Weekly	Composite	Influent, Effluent
Total Suspended Residue [2]	30.0 mg/L	45.0 mg/L		Weekly	Composite	Influent, Effluent
NH_3 as N (April 1 – October 31)	0.56 mg/L	1.7 mg/L		2/Month	Composite	Effluent
NH_3 as N (November 1 – March 30)	1.1 mg/L	3.3 mg/L		2/Month	Composite	Effluent
Fecal Coliform (geometric mean)	200 / 100 ml	400 / 100 ml		Weekly	Grab	Effluent
pH[3]				Weekly	Grab	Effluent
Total Residual Chlorine[4]			18 µg/L	2/Week	Grab	Effluent
Total Nitrogen Load (NO_2+NO_3+TKN)	22,455 (pounds/year) *equivalent to 1.23 mg/l TN*				Composite	Effluent
Total Phosphorus	1.0 mg/l			Weekly	Composite	Effluent
Temperature, °C				Weekly	Grab	Effluent
Chronic Toxicity				Quarterly	Composite	Effluent

Notes:

1. Influent, Effluent
2. The monthly average effluent BOD5 and Total Suspended Residue concentrations shall not exceed 15% of the respective influent value (85% removal).
3. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.
4. Limit applies only if chlorine is added for disinfection.
5. Chronic Toxicity limit (*Ceriodaphnia*) at 90 % with quarterly testing.

There shall be no discharge of floating solids or visible foam in other than trace

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

July 14, 2008

Mr. Dale Crisp
Public Utilities Director
City of Raleigh
P. O. Box 590
Raleigh, North Carolina 27602

Subject: Issuance of NPDES Permit NC0007528
G.G. Hill WTP
Wake County

Dear Mr. Crisp:

Division personnel have reviewed and approved your application for renewal of the subject permit. Accordingly, we are forwarding the attached NPDES discharge permit. This permit is issued pursuant to the requirements of North Carolina General Statute 143-215.1 and the Memorandum of Agreement between North Carolina and the U.S. Environmental Protection Agency dated October 15, 2007 (or as subsequently amended).

The permit effluent limit for Aluminum that was in the draft permit has been removed, but the monitoring frequency remains at twice per month.

If any parts, measurement frequencies or sampling requirements contained in this permit are unacceptable to you, you have the right to an adjudicatory hearing upon written request within thirty (30) days following receipt of this letter. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings (6714 Mail Service Center, Raleigh, North Carolina 27699-6714). Unless such demand is made, this decision shall be final and binding.

Please note that this permit is not transferable except after notice to the Division. The Division may require modification or revocation and reissuance of the permit. This permit does not affect the legal requirements to obtain other permits which may be required by the Division of Water Quality or permits required by the Division of Land Resources, the Coastal Area Management Act or any other Federal or Local governmental permit that may be required. If you have any questions concerning this permit, please contact Karen Rust at telephone number (919) 807-6400.

Sincerely,

for: Coleen H. Sullins

cc: Central Files
Raleigh Regional Office/Surface Water Protection Section
NPDES Files
Aquatic Toxicology Unit

RECD BY CENTRAL FILES

JUL 29 08

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER QUALITY

PERMIT

TO DISCHARGE WASTEWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provision of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended, the

City of Raleigh

is hereby authorized to discharge wastewater from a facility located at the

G.G. Hill WTP
1143 East Wait Avenue Southeast of Wake Forest
Wake County

to receiving waters designated as Smith Creek in the Neuse River Basin in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III and IV hereof.

This permit shall become effective August 1, 2008.

This permit and authorization to discharge shall expire at midnight on February 28, 2013.

Signed this day July 14, 2008.

for: Coleen H. Sullins, Director
Division of Water Quality
By Authority of the Environmental Management Commission

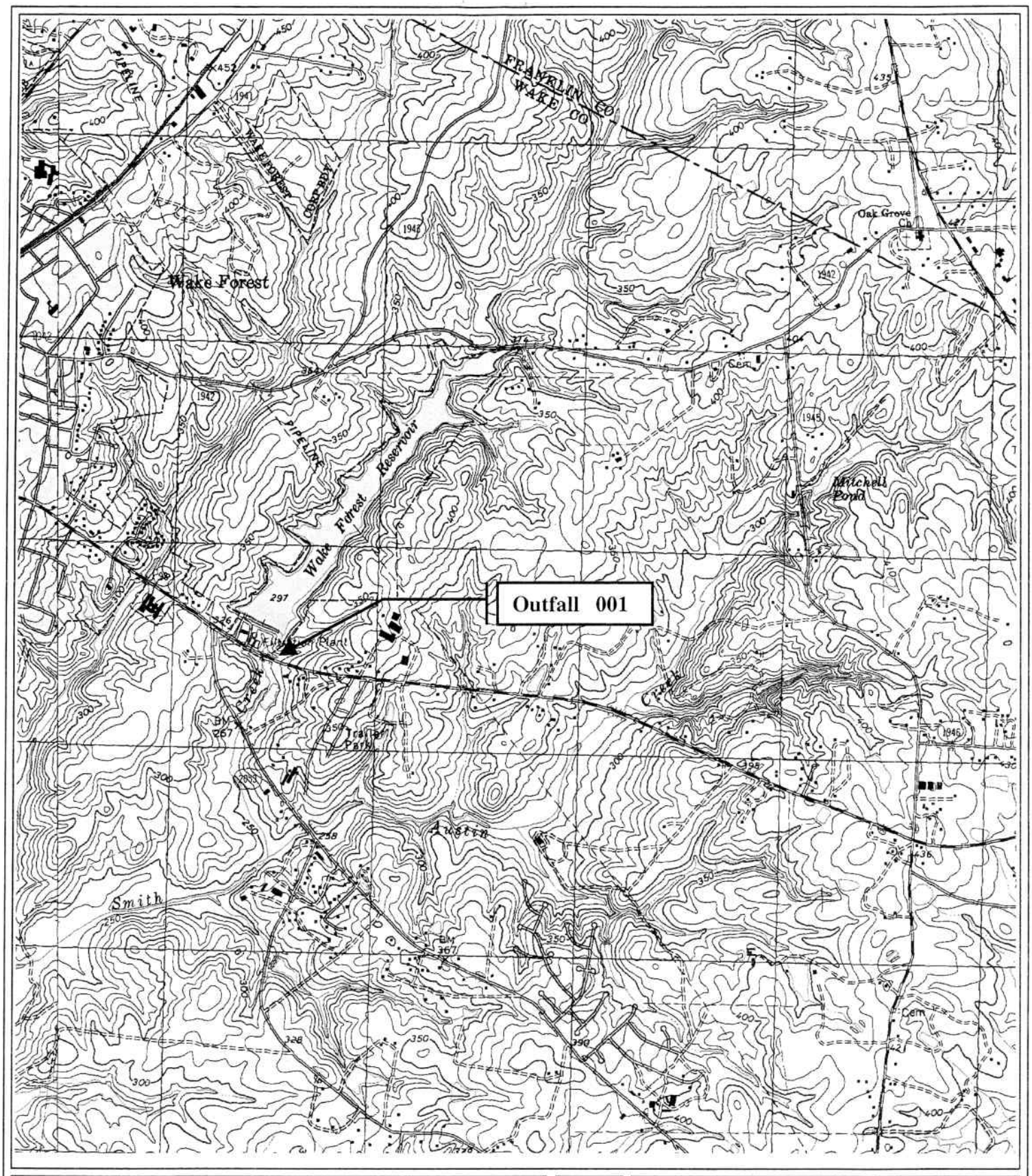
SUPPLEMENT TO PERMIT COVER SHEET

All previous NPDES Permits issued to this facility, whether for operation or discharge are hereby revoked. As of this permit issuance, any previously issued permit bearing this number is no longer effective. Therefore, the exclusive authority to operate and discharge from this facility arises under the permit conditions, requirements, terms, and provisions included herein.

The City of Raleigh is hereby authorized to:

1. Continue to discharge treated filter backwash water from a water treatment facility. This facility includes an alum sludge holding lagoon, a recycle pump and discharge piping. The facility is located off East Wait Avenue southeast of Wake Forest at the G.G.Hill WTP in Wake County.

2. Discharge from said treatment works at the location specified on the attached map into Smith Creek, classified C-NSW waters in the Neuse River Basin.



Quad: Rolesville, N.C.
Latitude: 35°58'10"
Longitude: 78°29'20"
Stream Class: C-NSW
Subbasin: 30402
Receiving Stream: Smith Creek

NC0007528

G.G. Hill WTP

North

Facility Location

SCALE 1:24000

A. (1) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge filter backwash from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow	0.07 MGD			Continuous	Recording	Effluent
Total Suspended Solids	30.0 mg/L		45.0 mg/L	2/Month	Grab	Effluent
pH[1]				2/Month	Grab	Effluent
Total Residual Chlorine[2]			28 μg/L	2/Month	Grab	Effluent
Iron				Monthly	Grab	Effluent
Aluminum				2/Month	Grab	Effluent
Calcium				Quarterly	Grab	Effluent
Magnesium				Quarterly	Grab	Effluent
Manganese				Quarterly	Grab	Effluent
Fluoride				Monthly	Grab	Effluent
Zinc				Monthly	Grab	Effluent
Copper				Monthly	Grab	Effluent
Ammonia Nitrogen				Monthly	Grab	Effluent
Whole Effluent Toxicity Monitoring[3]				Quarterly	Grab	Effluent
Total Monthly Flow [4]	Monitor & Report (million gallons/month)			Monthly	Calculated	Effluent
Total Nitrogen (TN) [4]	Monitor & Report (mg/L)			Monthly	Grab	Effluent
Nitrate/Nitrite Nitrogen[4] ($NO_2 + NO_3$)	Monitor & Report (mg/L)			Monthly	Grab	Effluent
Total Kjeldahl Nitrogen[4] (TKN)	Monitor & Report (mg/L)			Monthly	Grab	Effluent
TN load (pounds/month) [4]	Monitor & Report (pounds per month)			Monthly	Calculated	Effluent
TN load (pounds/year) [4]	Monitor & Report (pounds per year)			Annually	Calculated	Effluent
Total Phosphorus	Monitor & Report (mg/L)			Monthly	Grab	Effluent

Footnotes:

1. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.
2. Limit and monitoring apply if chlorine is used in the treatment system or the backwash includes chlorinated water. The facility shall report all effluent TRC values reported by a NC certified laboratory including field certified. However, effluent values below 50 ug/l will be treated as zero for compliance purposes.
3. See Special Condition A. (3).
4. See A. (2) for Total Nitrogen monitoring and reporting requirements.

All samples collected should be from a representative discharge event.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

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A. (2) CALCULATION OF TOTAL NITROGEN LOADS

a. The Permittee shall calculate monthly and annual TN Loads as follows:

i. Monthly TN Load (pounds/month) = TN x TMF x 8.34

where:

TN = the average TN concentration (mg/L) of the samples collected during the month

TMF = the Total Monthly Flow of wastewater discharged during the month (MG/month). If all discharges are not recorded at the facility, document the calculation(s) used to determine total monthly flow

8.34 = conversion factor, from (mg/L x MG) to pounds

ii. Annual TN Load (pounds/year) = Sum of the 12 Monthly TN Loads for the calendar year

b. The Permittee shall report monthly Total Nitrogen results (mg/L and pounds/month) in the discharge monitoring report for that month. The Permittee shall report each year's annual results (pounds per year) in the December report for that year.

A. (3) CHRONIC TOXICITY MONITORING (QRTRLY)

The permittee shall conduct quarterly chronic toxicity tests using test procedures outlined in the "North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure," Revised February 1998, or subsequent versions.

The effluent concentration defined as treatment two in the procedure document is **90**%. The testing shall be performed as a *Ceriodaphnia dubia* 7day pass/fail test. The tests will be performed **during the months of January, April, July and October**. Effluent sampling for this testing shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the month in which it was performed, using the parameter code **TGP3B**. Additionally, DWQ **Form AT-1** (original) is to be sent to the following address:

Attention: NC DENR / DWQ / Environmental Sciences Section
1621 Mail Service Center
Raleigh, N.C. 27699-1621

Completed Aquatic Toxicity Test Forms shall be filed with the Environmental Sciences Section no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete and accurate and include all supporting chemical/physical measurements performed in association with the toxicity tests, as well as all dose/response data. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Environmental Sciences Section at the address cited above.

Should the permittee fail to monitor during a month in which toxicity monitoring is required, then monthly monitoring will begin immediately. Upon submission of a valid test, this monthly test requirement will revert to quarterly in the months specified above.

Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Quality indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

If the Permittee monitors any pollutant more frequently then required by this permit, the results of such monitoring shall be included in the calculation & reporting of the data submitted on the DMR & all AT Forms submitted.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an invalid test and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

PART II
STANDARD CONDITIONS FOR NPDES PERMITS

Section A. Definitions

2/Month
Samples are collected twice per month with at least ten calendar days between sampling events.

3/Week
Samples are collected three times per week on three separate calendar days.

Act or "the Act"
The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 USC 1251, et. seq.

Annual Average
The arithmetic mean of all "daily discharges" of a pollutant measured during the calendar year. In the case of fecal coliform, the geometric mean of such discharges.

Arithmetic Mean
The summation of the individual values divided by the number of individual values.

Bypass
The known diversion of waste streams from any portion of a treatment facility including the collection system, which is not a designed or established or operating mode for the facility.

Calendar Day
The period from midnight of one day until midnight of the next day. However, for purposes of this permit, any consecutive 24-hour period that reasonably represents the calendar day may be used for sampling.

Calendar Quarter
One of the following distinct periods: January through March, April through June, July through September, and October through December.

Composite Sample
A sample collected over a 24-hour period by continuous sampling or combining grab samples of at least 100 ml in such a manner as to result in a total sample representative of the wastewater discharge during the sample period. The Director may designate the most appropriate method (specific number and size of aliquots necessary, the time interval between grab samples, etc.) on a case-by-case basis. Samples may be collected manually or automatically. Composite samples may be obtained by the following methods:

(1) Continuous: a single, continuous sample collected over a 24-hour period proportional to the rate of flow.
(2) Constant time/variable volume: a series of grab samples collected at equal time intervals over a 24 hour period of discharge and combined proportional to the rate of flow measured at the time of individual sample collection, or
(3) Variable time/constant volume: a series of grab samples of equal volume collected over a 24 hour period with the time intervals between samples determined by a preset number of gallons passing the sampling point. Flow measurement between sample intervals shall be determined by use of a flow recorder and totalizer, and the preset gallon interval between sample collection fixed at no greater than 1/24 of the expected total daily flow at the treatment system, or
(4) Constant time/constant volume: a series of grab samples of equal volume collected over a 24-hour period at a constant time interval. **Use of this method requires prior approval by the Director. This method may only be used in situations where effluent flow rates vary less than 15 percent.** The following restrictions also apply:
    - Influent and effluent grab samples shall be of equal size and of no less than 100 milliliters

- Influent samples shall not be collected more than once per hour.
- Permittees with wastewater treatment systems whose detention time $\leq$ 24 hours shall collect effluent grab samples at intervals of no greater than 20 minutes apart during any 24-hour period.
- Permittees with wastewater treatment systems whose detention time exceeds 24 hours shall collect effluent grab samples at least every X hours [X = days detention time] over a 24-hour period. Effluent samples shall be collected at least every six hours; there must be a minimum of four samples during a 24-hour sampling period.

Continuous flow measurement
Flow monitoring that occurs without interruption throughout the operating hours of the facility. Flow shall be monitored continually except for the infrequent times when there may be no flow or for infrequent maintenance activities on the flow device.

Daily Discharge
The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants measured in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. The "daily discharge" concentration comprises the mean concentration for a 24-hour sampling period as either a composite sample concentration or the arithmetic mean of all grab samples collected during that period. (40 CFR 122.2)

Daily Maximum
The highest "daily discharge" for conventional and other non-toxicant parameters. NOTE: Permittees may not submit a "daily average" calculation [for determining compliance with permit limits] for toxicants. See the relevant Federal effluent guideline[s] for the appropriate calculation interval.

Daily Sampling
Parameters requiring daily sampling shall be sampled 5 out of every 7 days per week unless otherwise specified in the permit. The Division expects that sampling shall be conducted on weekdays except where holidays or other disruptions of normal operations prevent weekday sampling. If sampling is required for all seven days of the week for any permit parameter(s), that requirement will be so noted on the Effluent Limitations and Monitoring Page(s).

DWQ or "the Division"
The Division of Water Quality, Department of Environment and Natural Resources.

EMC
The North Carolina Environmental Management Commission.

Facility Closure
The cessation of wastewater treatment at a permitted facility, or the cessation of all activities that require coverage under the NPDES. Completion of facility closure will allow this permit to be rescinded.

Geometric Mean
The Nth root of the product of the individual values where N = the number of individual values. For purposes of calculating the geometric mean, values of "0" (or "< [detection level]") shall be considered = 1.

Grab Sample
Individual samples of at least 100 ml collected over a period of time not exceeding 15 minutes. Grab samples can be collected manually. Grab samples must be representative of the discharge (or the receiving stream, for instream samples).

Hazardous Substance
Any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act.

Instantaneous flow measurement
A measure of flow taken at the time of sampling, when both the sample and flow will be representative of the total discharge.

Monthly Average (concentration limit)
The arithmetic mean of all "daily discharges" of a pollutant measured during the calendar month. In the case of fecal coliform, the geometric mean of such discharges.

Permit Issuing Authority
The Director of the Division of Water Quality.

Quarterly Average (concentration limit)
The average of all samples taken over a calendar quarter.

Severe property damage
Substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage excludes economic loss caused by delays in production.

Toxic Pollutant:
Any pollutant listed as toxic under Section 307(a)(l) of the Clean Water Act.

Upset
An incident beyond the reasonable control of the Permittee causing unintentional and temporary noncompliance with permit effluent limitations and/or monitoring requirements. An upset does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Weekly Average (concentration limit)
The arithmetic mean of all "daily discharges" of a pollutant measured during the calendar week. In the case of fecal coliform, the geometric mean of such discharges.

Section B. General Conditions

1. Duty to Comply
   The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application [40 CFR 122.41].

   a. The Permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

   b. The Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. [40 CFR 122.41 (a)(2)]

   c. The Clean Water Act provides that any person who *negligently* violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under

section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both. [40 CFR 122.41 (a) (2)]

d. Any person who *knowingly* violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both. [40 CFR 122.41 (a) (2)]

e. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions. [40 CFR 122.41 (a) (2)]

f. Under state law, a civil penalty of not more than $25,000 per violation may be assessed against any person who violates or fails to act in accordance with the terms, conditions, or requirements of a permit. [North Carolina General Statutes § 143-215.6A]

g. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000. [40 CFR 122.41 (a) (3)]

2. Duty to Mitigate
The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit with a reasonable likelihood of adversely affecting human health or the environment [40 CFR 122.41 (d)].

3. Civil and Criminal Liability
Except as provided in permit conditions on "Bypassing" (Part II. C. 4), "Upsets" (Part II. C. 5) and "Power Failures" (Part II. C. 7), nothing in this permit shall be construed to relieve the Permittee from any responsibilities, liabilities, or penalties for noncompliance pursuant to NCGS 143-215.3, 143-215.6 or Section 309 of the Federal Act, 33 USC 1319. Furthermore, the Permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.

4. Oil and Hazardous Substance Liability
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject to under NCGS 143-215.75 et seq. or Section 311 of the Federal Act, 33 USG 1321. Furthermore, the Permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.

5. Property Rights
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations [40 CFR 122.41 (g)].

6. Onshore or Offshore Construction
This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

7. Severability
The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby [NCGS 150B-23].

8. Duty to Provide Information
The Permittee shall furnish to the Permit Issuing Authority, within a reasonable time, any information which the Permit Issuing Authority may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also furnish to the Permit Issuing Authority upon request, copies of records required by this permit [40 CFR 122.41 (h)].

9. Duty to Reapply
If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit [40 CFR 122.41 (b)].

10. Expiration of Permit
The Permittee is not authorized to discharge after the expiration date. In order to receive automatic authorization to discharge beyond the expiration date, the Permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date. Any Permittee that has not requested renewal at least 180 days prior to expiration, or any Permittee that does not have a permit after the expiration and has not requested renewal at least 180 days prior to expiration, will subject the Permittee to enforcement procedures as provided in NCGS 143-215.6 and 33 USC 1251 et. seq.

11. Signatory Requirements
All applications, reports, or information submitted to the Permit Issuing Authority shall be signed and certified [40 CFR 122.41 (k)].

   a. **All permit applications shall be signed as follows:**
      (1) For a corporation: by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means: (a) a president, secretary, treasurer or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or (b) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures .
      (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
      (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official [40 CFR 122.22].

b. All reports required by the permit and other information requested by the Permit Issuing Authority shall be signed by a person described in paragraph a. above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
   1. The authorization is made in writing by a person described above;
   2. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or well field, superintendent, a position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
   3. The written authorization is submitted to the Permit Issuing Authority [40 CFR 122.22]

c. Changes to authorization: If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative [40 CFR 122.22]

d. Certification. Any person signing a document under paragraphs a. or b. of this section shall make the following certification [40 CFR 122.22]:
"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

12. Permit Actions
This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition [40 CFR 122.41 (f)].

13. Permit Modification, Revocation and Reissuance, or Termination
The issuance of this permit does not prohibit the permit issuing authority from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit as allowed by the laws, rules, and regulations contained in Title 40, Code of Federal Regulations, Parts 122 and 123; Title 15A of the North Carolina Administrative Code, Subchapter 2H .0100; and North Carolina General Statute 143-215.1 et. al.

14. Annual Administering and Compliance Monitoring Fee Requirements
The Permittee must pay the annual administering and compliance monitoring fee within thirty days after being billed by the Division. Failure to pay the fee in a timely manner in accordance with 15A NCAC 2H.0105 (b) (2) may cause this Division to initiate action to revoke the permit.

Section C. Operation and Maintenance of Pollution Controls

1. Certified Operator
Upon classification of the permitted facility by the Certification Commission, the Permittee shall employ a certified water pollution control treatment system operator in responsible charge (ORC) of the water pollution control treatment system. Such operator must hold a certification of the grade equivalent to or greater than the classification assigned to the water pollution control treatment system by the Certification Commission. The Permittee must also employ one or more certified Back-up ORCs who possess a currently valid certificate of the type of the system. Back-up ORCs must possess a grade equal to (or no more than one grade less than) the grade of the system [15A NCAC 8G.0201].

The ORC of each Class I facility must:

- Visit the facility at least weekly
- Comply with all other conditions of 15A NCAC 8G.0204.

The ORC of each Class II, III and IV facility must:

- Visit the facility at least five days per week, excluding holidays
- Properly manage and document daily operation and maintenance of the facility
- Comply with all other conditions of 15A NCAC 8G.0204.

Once the facility is classified, the Permittee shall submit a letter to the Certification Commission designating the operator in responsible charge:

a. Within 60 calendar days prior to wastewater being introduced into a new system
b. Within 120 calendar days of:
    - Receiving notification of a change in the classification of the system requiring the designation of a new ORC and back-up ORC
    - A vacancy in the position of ORC or back-up ORC.

2. Proper Operation and Maintenance

The Permittee shall at all times provide the operation and maintenance resources necessary to operate the existing facilities at optimum efficiency. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the Permittee to install and operate backup or auxiliary facilities only when necessary to achieve compliance with the conditions of the permit [40 CFR 122.41 (e)].

3. Need to Halt or Reduce not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the condition of this permit [40 CFR 122.41 (c)].

4. Bypassing of Treatment Facilities

a. Bypass not exceeding limitations [40 CFR 122.41 (m) (2)]
The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Paragraphs b. and c. of this section.

b. Notice [40 CFR 122.41 (m) (3)]
    (1) Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass; including an evaluation of the anticipated quality and effect of the bypass.
    (2) Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required in Part II. E. 6. (24-hour notice).

c. Prohibition of Bypass
    (1) Bypass from the treatment facility is prohibited and the Permit Issuing Authority may take enforcement action against a Permittee for bypass, unless:
        (A) Bypass was unavoidable to prevent loss of life, personal injury or severe property damage;
        (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
        (C) The Permittee submitted notices as required under Paragraph b. of this section.

(2) Bypass from the collection system is prohibited and the Permit Issuing Authority may take enforcement action against a Permittee for a bypass as provided in any current or future system-wide collection system permit associated with the treatment facility.

(3) The Permit Issuing Authority may approve an anticipated bypass, after considering its adverse effects, if the Permit Issuing Authority determines that it will meet the three conditions listed above in Paragraph c. (1) of this section.

5. Upsets

a. Effect of an upset [40 CFR 122.41 (n) (2)]: An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph b. of this condition are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

b. Conditions necessary for a demonstration of upset: A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
(1) An upset occurred and that the Permittee can identify the cause(s) of the upset;
(2) The Permittee facility was at the time being properly operated; and
(3) The Permittee submitted notice of the upset as required in Part II. E. 6. (b) of this permit.
(4) The Permittee complied with any remedial measures required under Part II. B. 2. of this permit.

c. Burden of proof [40 CFR 122.41 (n) (4)]: The Permittee seeking to establish the occurrence of an upset has the burden of proof in any enforcement proceeding.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be utilized/disposed of in accordance with NCGS 143-215.1 and in a manner such as to prevent any pollutant from such materials from entering waters of the State or navigable waters of the United States. The Permittee shall comply with all existing Federal regulations governing the disposal of sewage sludge. Upon promulgation of 40 CFR Part 503, any permit issued by the Permit Issuing Authority for the utilization/disposal of sludge may be reopened and modified, or revoked and reissued, to incorporate applicable requirements at 40 CFR 503. The Permittee shall comply with applicable 40 CFR 503 Standards for the Use and Disposal of Sewage Sludge (when promulgated) within the time provided in the regulation, even if the permit is not modified to incorporate the requirement. The Permittee shall notify the Permit Issuing Authority of any significant change in its sludge use or disposal practices.

7. Power Failures

The Permittee is responsible for maintaining adequate safeguards (as required by 15A NCAC 2H.0124 – Reliability) to prevent the discharge of untreated or inadequately treated wastes during electrical power failures either by means of alternate power sources, standby generators or retention of inadequately treated effluent.

Section D. Monitoring and Records

1. Representative Sampling

Samples collected and measurements taken, as required herein, shall be characteristic of the volume and nature of the permitted discharge. Samples collected at a frequency less than daily shall be taken on a day and time that is characteristic of the discharge over the entire period the sample represents. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Permit Issuing Authority [40 CFR 122.41 (j)].

2. Reporting
Monitoring results obtained during the previous month(s) shall be summarized for each month and reported on a monthly Discharge Monitoring Report (DMR) Form (MR 1, 1.1, 2, 3) or alternative forms approved by the Director, postmarked no later than the last calendar day of the month following the completed reporting period.

The first DMR is due on the last day of the month following the issuance of the permit or in the case of a new facility, on the last day of the month following the commencement of discharge. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the following address:

NC DENR / Division of Water Quality / Water Quality Section
ATTENTION: Central Files
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

3. Flow Measurements
Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from the true discharge rates throughout the range of expected discharge volumes. Flow measurement devices shall be accurately calibrated at a minimum of once per year and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. The Director shall approve the flow measurement device and monitoring location prior to installation.

Once-through condenser cooling water flow monitored by pump logs, or pump hour meters as specified in Part I of this permit and based on the manufacturer's pump curves shall not be subject to this requirement.

4. Test Procedures
Test procedures for the analysis of pollutants shall conform to the EMC regulations (published pursuant to NCGS 143-215.63 et. seq.), the Water and Air Quality Reporting Acts, and to regulations published pursuant to Section 304(g), 33 USC 1314, of the Federal Water Pollution Control Act (as Amended), and 40 CFR 136; or in the case of sludge use or disposal, approved under 40 CFR 136, unless otherwise specified in 40 CFR 503, unless other test procedures have been specified in this permit [40 CFR 122.41].

To meet the intent of the monitoring required by this permit, all test procedures must produce minimum detection and reporting levels that are below the permit discharge requirements and all data generated must be reported down to the minimum detection or lower reporting level of the procedure. If no approved methods are determined capable of achieving minimum detection and reporting levels below permit discharge requirements, then the most sensitive (method with the lowest possible detection and reporting level) approved method must be used.

5. Penalties for Tampering
The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both [40 CFR 122.41].

6. Records Retention
Except for records of monitoring information required by this permit related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR 503), the Permittee shall retain records of all monitoring information, including:
- all calibration and maintenance records
- all original strip chart recordings for continuous monitoring instrumentation

- copies of all reports required by this permit
- copies of all data used to complete the application for this permit

These records or copies shall be maintained for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time [40 CFR 122.41].

7. Recording Results

For each measurement or sample taken pursuant to the requirements of this permit, the Permittee shall record the following information [40 CFR 122.41]:

a. The date, exact place, and time of sampling or measurements;
b. The individual(s) who performed the sampling or measurements;
c. The date(s) analyses were performed;
d. The individual(s) who performed the analyses;
e. The analytical techniques or methods used; and
f. The results of such analyses.

8. Inspection and Entry

The Permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Director), upon the presentation of credentials and other documents as may be required by law, to;

a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location [40 CFR 122.41 (i)].

Section E Reporting Requirements

1. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.

2. Planned Changes

The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility [40 CFR 122.41 (l)]. Notice is required only when:

a. The alteration or addition to a permitted facility may meet one of the criteria for new sources at 40 CFR 122.29 (b); or
b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR l22.42 (a) (l).
c. The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

3. Anticipated Noncompliance

The Permittee shall give advance notice to the Director of any planned changes to the permitted facility or other activities that might result in noncompliance with the permit [40 CFR 122.41 (l) (2)].

4. Transfers
This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to document the change of ownership. Any such action may incorporate other requirements as may be necessary under the Clean Water Act [40 CFR 122.41 (l) (3)].

5. Monitoring Reports
Monitoring results shall be reported at the intervals specified elsewhere in this permit [40 CFR 122.41 (l) (4)].

   a. Monitoring results must be reported on a Discharge Monitoring Report (DMR) (See Part II. D. 2) or forms provided by the Director for reporting results of monitoring of sludge use or disposal practices.
   b. If the Permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included in the calculation and reporting of the data submitted on the DMR.

6. Twenty-four Hour Reporting
   a. The Permittee shall report to the Director or the appropriate Regional Office any noncompliance that potentially threatens public health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee became aware of the circumstances. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance, and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [40 CFR 122.41 (l) (6)].

   b. The Director may waive the written report on a case-by-case basis for reports under this section if the oral report has been received within 24 hours.

   c. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

7. Other Noncompliance
The Permittee shall report all instances of noncompliance not reported under Part II. E. 5 and 6. of this permit at the time monitoring reports are submitted. The reports shall contain the information listed in Part II. E. 6. of this permit [40 CFR 122.41 (l) (7)].

8. Other Information
Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information [40 CFR 122.41 (l) (8)].

9. Noncompliance Notification
The Permittee shall report by telephone to either the central office or the appropriate regional office of the Division as soon as possible, but in no case more than 24 hours or on the next working day following the occurrence or first knowledge of the occurrence of any of the following:

   a. Any occurrence at the water pollution control facility which results in the discharge of significant amounts of wastes which are abnormal in quantity or characteristic, such as the dumping of the contents of a sludge digester; the known passage of a slug of hazardous substance through the facility; or any other unusual circumstances.
   b. Any process unit failure, due to known or unknown reasons, that render the facility incapable of adequate wastewater treatment such as mechanical or electrical failures of pumps, aerators, compressors, etc.
   c. Any failure of a pumping station, sewer line, or treatment facility resulting in a by-pass directly to receiving waters without treatment of all or any portion of the influent to such station or facility.

Persons reporting such occurrences by telephone shall also file a written report within 5 days following first knowledge of the occurrence.

10. Availability of Reports
Except for data determined to be confidential under NCGS 143-215.3 (a)(2) or Section 308 of the Federal Act, 33 USC 1318, all reports prepared in accordance with the terms shall be available for public inspection at the offices of the Division. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NCGS 143-215.1 (b)(2) or in Section 309 of the Federal Act.

11. Penalties for Falsification of Reports
The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $25,000 per violation, or by imprisonment for not more than two years per violation, or by both [40 CFR 122.41].

12. Annual Performance Reports
Permittees who own or operate facilities that collect or treat municipal or domestic waste shall provide an annual report to the Permit Issuing Authority and to the users/customers served by the Permittee (NCGS 143-215.1C). The report shall summarize the performance of the collection or treatment system, as well as the extent to which the facility was compliant with applicable Federal or State laws, regulations and rules pertaining to water quality. The report shall be provided no later than sixty days after the end of the calendar or fiscal year, depending upon which annual period is used for evaluation.

PART III
OTHER REQUIREMENTS

Section A. Construction

The Permittee shall not commence construction of wastewater treatment facilities, nor add to the plant's treatment capacity, nor change the treatment process(es) utilized at the treatment plant unless the Division has issued an Authorization to Construct (AtC) permit. Issuance of an AtC will not occur until Final Plans and Specifications for the proposed construction have been submitted by the Permittee and approved by the Division.

Section B. Groundwater Monitoring

The Permittee shall, upon written notice from the Director, conduct groundwater monitoring as may be required to determine the compliance of this NPDES permitted facility with the current groundwater standards.

Section C. Changes in Discharges of Toxic Substances

The Permittee shall notify the Permit Issuing Authority as soon as it knows or has reason to believe (40 CFR 122.42):

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels";
   (1) One hundred micrograms per liter (100 μg/L);
   (2) Two hundred micrograms per liter (200 μg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 μg/L) for 2.4-dinitrophenol and for 2-methyl-4.6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
   (3) Five times the maximum concentration value reported for that pollutant in the permit application.

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels";

(1) Five hundred micrograms per liter (500 µg/L);
(2) One milligram per liter (1 mg/L) for antimony;
(3) Ten times the maximum concentration value reported for that pollutant in the permit application.

Section D. Evaluation of Wastewater Discharge Alternatives

The Permittee shall evaluate all wastewater disposal alternatives and pursue the most environmentally sound alternative of the reasonably cost effective alternatives. If the facility is in substantial non-compliance with the terms and conditions of the NPDES permit or governing rules, regulations or laws, the Permittee shall submit a report in such form and detail as required by the Division evaluating these alternatives and a plan of action within 60 days of notification by the Division.

Section E. Facility Closure Requirements

The Permittee must notify the Division at least 90 days prior to the closure of any wastewater treatment system covered by this permit. The Division may require specific measures during deactivation of the system to prevent adverse impacts to waters of the State. This permit cannot be rescinded while any activities requiring this permit continue at the permitted facility.

PART IV
SPECIAL CONDITIONS FOR MUNICIPAL FACILITIES

Section A. Publicly Owned Treatment Works (POTWs)

All POTWs must provide adequate notice to the Director of the following:

1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; and
2. Any substantial change in the volume or character of pollutants being introduced by an indirect discharger as influent to that POTW at the time of issuance of the permit.
3. For purposes of this paragraph, adequate notice shall include information on (1) the quality and quantity of effluent introduced into the POTW, and (2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

Section B. Municipal Control of Pollutants from Industrial Users.

1. Effluent limitations are listed in Part I of this permit. Other pollutants attributable to inputs from industries using the municipal system may be present in the Permittee's discharge. At such time as sufficient information becomes available to establish limitations for such pollutants, this permit may be revised to specify effluent limitations for any or all of such other pollutants in accordance with best practicable technology or water quality standards.

2. Under no circumstances shall the Permittee allow introduction of the following wastes in the waste treatment system:
   a. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
   b. Pollutants which will cause corrosive structural damage to the POTW, but in no case Discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such Discharges;
   c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in Interference;
   d. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a Discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
   e. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40°C (104°F) unless the Division, upon request of the POTW, approves alternate temperature limits;

f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;
g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

3. With regard to the effluent requirements listed in Part I of this permit, it may be necessary for the Permittee to supplement the requirements of the Federal Pretreatment Standards (40 CFR, Part 403) to ensure compliance by the Permittee with all applicable effluent limitations. Such actions by the Permittee may be necessary regarding some or all of the industries discharging to the municipal system.

4. The Permittee shall require any industrial discharges sending influent to the permitted system to meet Federal Pretreatment Standards promulgated in response to Section 307(b) of the Act. Prior to accepting wastewater from any significant industrial user, the Permittee shall either develop and submit to the Division a Pretreatment Program for approval per 15A NCAC 2H .0907(a) or modify an existing Pretreatment Program per 15A NCAC 2H .0907(b).

5. This permit shall be modified, or alternatively, revoked and reissued, to incorporate or modify an approved POTW Pretreatment Program or to include a compliance schedule for the development of a POTW Pretreatment Program as required under Section 402(b)(8) of the Clean Water Act and implementing regulations or by the requirements of the approved State pretreatment program, as appropriate.

Section C. Pretreatment Programs

Under authority of sections 307(b) and (c) and 402(b)(8) of the Clean Water Act and implementing regulations 40 CFR Part 403, North Carolina General Statute 143-215.3 (14) and implementing regulations 15A NCAC 2H .0900, and in accordance with the approved pretreatment program, all provisions and regulations contained and referenced in the Pretreatment Program Submittal are an enforceable part of this permit.

The Permittee shall operate its approved pretreatment program in accordance with Section 402(b)(8) of the Clean Water Act, the Federal Pretreatment Regulations 40 CFR Part 403, the State Pretreatment Regulations 15A NCAC 2H .0900, and the legal authorities, policies, procedures, and financial provisions contained in its pretreatment program submission and Division approved modifications there of. Such operation shall include but is not limited to the implementation of the following conditions and requirements:

1. Sewer Use Ordinance (SUO)
The Permittee shall maintain adequate legal authority to implement its approved pretreatment program.

2. Industrial Waste Survey (IWS)
The Permittee shall update its Industrial Waste Survey (IWS) to include all users of the sewer collection system at least once every five years.

3. Monitoring Plan
The Permittee shall implement a Division-approved Monitoring Plan for the collection of facility specific data to be used in a wastewater treatment plant Headworks Analysis (HWA) for the development of specific pretreatment local limits. Effluent data from the Plan shall be reported on the DMRs (as required by Part II, Section D, and Section E.5.).

4. Headworks Analysis (HWA) and Local Limits
The Permittee shall obtain Division approval of a Headworks Analysis (HWA) at least once every five years, and as required by the Division. Within 180 days of the effective date of this permit (or any subsequent permit modification) the Permittee shall submit to the Division a written technical evaluation of the need to revise local limits (i.e., an updated HWA or documentation of why one is not needed) [40 CFR 122.44]. The Permittee shall develop, in accordance with 40 CFR 403.5(c) and 15A NCAC 2H .0909, specific Local Limits to implement the prohibitions listed in 40 CFR 403.5(a) and (b) and 15A NCAC 2H .0909.

5. Industrial User Pretreatment Permits (IUP) & Allocation Tables
In accordance with NCGS 143-215.1, the Permittee shall issue to all significant industrial users, permits for operation of pretreatment equipment and discharge to the Permittee's treatment works. These permits shall contain limitations, sampling protocols, reporting requirements, appropriate standard and special conditions, and compliance schedules as necessary for the installation of treatment and control technologies to assure that their wastewater discharge will meet all applicable pretreatment standards and requirements. The Permittee shall maintain a current Allocation Table (AT) which summarizes the results of the Headworks Analysis (HWA) and the limits from all Industrial User Pretreatment Permits (IUP). Permitted IUP loadings for each parameter cannot exceed the treatment capacity of the POTW as determined by the HWA.

6. Authorization to Construct (AtC)
The Permittee shall ensure that an Authorization to Construct permit (AtC) is issued to all applicable industrial users for the construction or modification of any pretreatment facility. Prior to the issuance of an AtC, the proposed pretreatment facility and treatment process must be evaluated for its capacity to comply with all Industrial User Pretreatment Permit (IUP) limitations.

7. POTW Inspection & Monitoring of their SIUs
The Permittee shall conduct inspection, surveillance, and monitoring activities as described in its Division approved pretreatment program in order to determine, independent of information supplied by industrial users, compliance with applicable pretreatment standards. The Permittee must:
   a. Inspect all Significant Industrial Users (SIUs) at least once per calendar year; and
   b. Sample all Significant Industrial Users (SIUs) at least twice per calendar year for all permit-limited pollutants, once during the period from January 1 through June 30 and once during the period from July 1 through December 31, except for organic compounds which shall be sampled once per calendar year;

8. SIU Self Monitoring and Reporting
The Permittee shall require all industrial users to comply with the applicable monitoring and reporting requirements outlined in the Division-approved pretreatment program, the industry's pretreatment permit, or in 15A NCAC 2H .0908.

9. Enforcement Response Plan (ERP)
The Permittee shall enforce and obtain appropriate remedies for violations of all pretreatment standards promulgated pursuant to section 307(b) and (c) of the Clean Water Act (40 CFR 405 et. seq.), prohibitive discharge standards as set forth in 40 CFR 403.5 and 15A NCAC 2H .0909, and specific local limitations. All enforcement actions shall be consistent with the Enforcement Response Plan (ERP) approved by the Division.

10. Pretreatment Annual Reports (PAR)
The Permittee shall report to the Division in accordance with 15A NCAC 2H .0908. In lieu of submitting annual reports, Modified Pretreatment Programs developed under 15A NCAC 2H .0904 (b) may be required to meet with Division personnel periodically to discuss enforcement of pretreatment requirements and other pretreatment implementation issues.

For all other active pretreatment programs, the Permittee shall submit two copies of a Pretreatment Annual Report (PAR) describing its pretreatment activities over the previous twelve months to the Division at the following address:

NC DENR / DWQ / Pretreatment Unit
1617 Mail Service Center
Raleigh, NC 27699-1617

These reports shall be submitted according to a schedule established by the Director and shall contain the following:

a.) Narrative
A brief discussion of reasons for, status of, and actions taken for all Significant Industrial Users (SIUs) in Significant Non-Compliance (SNC);

b.) Pretreatment Program Summary (PPS)
A pretreatment program summary (PPS) on specific forms approved by the Division;

c.) Significant Non-Compliance Report (SNCR)
The nature of the violations and the actions taken or proposed to correct the violations on specific forms approved by the Division;

d.) Industrial Data Summary Forms (IDSF)
Monitoring data from samples collected by both the POTW and the Significant Industrial User (SIU). These analytical results must be reported on Industrial Data Summary Forms (IDSF) or other specific format approved by the Division;

e.) Other Information
Copies of the POTW's allocation table, new or modified enforcement compliance schedules, public notice of SIUs in SNC, and any other information, upon request, which in the opinion of the Director is needed to determine compliance with the pretreatment implementation requirements of this permit;

11. Public Notice
The Permittee shall publish annually a list of Significant Industrial Users (SIUs) that were in Significant Non-Compliance (SNC) as defined in the Permittee's Division-approved Sewer Use Ordinance with applicable pretreatment requirements and standards during the previous twelve month period. This list shall be published within four months of the applicable twelve-month period.

12. Record Keeping
The Permittee shall retain for a minimum of three years records of monitoring activities and results, along with support information including general records, water quality records, and records of industrial impact on the POTW.

13. Funding and Financial Report
The Permittee shall maintain adequate funding and staffing levels to accomplish the objectives of its approved pretreatment program.

14. Modification to Pretreatment Programs
Modifications to the approved pretreatment program including but not limited to local limits modifications, POTW monitoring of their Significant Industrial Users (SIUs), and Monitoring Plan modifications, shall be considered a permit modification and shall be governed by 15 NCAC 2H .0114 and 15A NCAC 2H .0907.

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The City of Raleigh has applied for modification of the NPDES discharge permit (NC0029033) for its Neuse River Wastewater Treatment Plant located on NCSR 2552 southeast of Raleigh. The modification is for the expansion of flow from 60 MGD to 75 MGD and includes allocations gained from connection of rescinded permitted facilities. This facilitity discharges to the Neuse River, a class C-NSW water in the Neuse River Basin. Currently, BOD, pH, dissolved oxygen, ammonia, total nitrogen, and total phosphorus are water quality limited. This discharge may affect future allocations in this portion of the Neuse River Basin.

NC0062715, Aqua North Carolina, Inc. (Crooked Creek Subdivision) has applied for a permit renewal of its facility located in Wake County discharging treated wastewater into Middle Creek in the Neuse River Basin. Currently Ammonia as N, Dissolved Oxygen, Total Residual Chlorine and Total Phosphorus are water quality limited. This discharge may affect future allocations in this portion of the receiving stream.

Alcatel USA Sourcing, LP (2301 Sugar Bush Road, Raleigh, NC 27612) has applied for renewal of NPDES permit NC0086126 for the Alcatel Facility in Wake County. This permitted facility discharges 0.08 MGD treated wastewater to Crabtree Creek in the Neuse River Basin. This discharge may affect future allocations in this portion of the Neuse River Basin.

The City of Raleigh (PO Box 590, Raleigh, NC 27602) has applied for renewal of NPDES permit NC0007528 for the G.G. Hill WTP in Wake County. This permitted facility discharges 0.07 MGD filter backwash wastewater to Smith Creek in the Neuse River Basin. Currently, total residual chlorine is water quality limited. This discharge may affect future allocations in this portion of the Neuse River Basin.

Carolina Water Service, Inc. of North Carolina (PO Box 240908, Charlotte, NC 28224) has applied for renewal of NPDES permit NC0086266 for the Woodtrace WTP in Wake County. This permitted facility discharges 0.003 MGD filter backwash water to an unnamed tributary to Little River in the Neuse River Basin. Currently, total residual chlorine is water quality limited. This discharge may affect future allocations in this portion of the Neuse River Basin.

Michael F. Easley, Governor
State of North Carolina

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

Coleen H. Sullins, Director
Division of Water Quality

Wednesday, May 07, 2008

To: **News And Observer**
Fax#: **919-829-4824**
Legal Advertisements Desk
Billing Department

From: Dina Sprinkle
(919) 733-5083, extension 363

Subject: Publication of Legal Advertisement (3 pages including this cover sheet)

North Carolina General Statute 143.215.1 and Administrative Code 15A NCAC 05H.0109 require the Division to provide public notice of permitting actions through local newspapers.

Please publish the attached public notice as a line advertisement in the legal section of your paper ONE TIME as soon as possible and fax a proof to (919) 733-0719 for final approval prior to publication. If you do not receive a response regarding the proof, no changes are needed.

BILLING INFORMATION

Please send the invoice and the original affidavit to: NCDENR/DWQ/NPDES
ATTN: Dina Sprinkle
1617 Mail Service Center
Raleigh, NC 27699-1617

Please call (919) 733-5083 extension 363 as soon as possible if other arrangements need to be made before publication.

Thank you for your assistance.

** Transmit Conf. Report **

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Michael F. Easley, Governor
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Thank you for your assistance.

Subject: Public Notice 07/08/08
From: "Dina.Sprinkle" <Dina.Sprinkle@NCMail.net>
Date: Thu, 08 May 2008 09:14:46 -0400
To: Pam Oleniczak <pamo@newsobserver.com>

Thanks Pam and I hope you have a great day.

Dina

--
Dina Sprinkle
NCDENR/DWQ/Point Source Branch
1617 Mail Service Center
Raleigh, NC 27699-1617
Office - (919) 733-5083, Ext. 363
Fax - (919) 733-0719
dina.sprinkle@ncmail.net

Public Notice-News and Observer.doc	**Content-Type:**	application/msword
	Content-Encoding:	base64

PUBLIC NOTICE
STATE OF NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION/NPDES UNIT
1617 MAIL SERVICE CENTER
RALEIGH, NC 27699-1617
NOTIFICATION OF INTENT TO ISSUE A NPDES WASTEWATER PERMIT

On the basis of thorough staff review and application of NC General Statute 143.215.1 and 15A NCAC 02H.0109 and other lawful standards and regulations, the North Carolina Environmental Management Commission proposes to issue a National Pollutant Discharge Elimination System (NPDES) wastewater discharge permit to the person(s) listed below effective 45 days from the publish date of this notice.

Written comments regarding the proposed permit will be accepted until 30 days after the publish date of this notice. All comments received prior to that date are considered in the final determinations regarding the proposed permit. The Director of the NC Division of Water Quality may decide to hold a public meeting for the proposed permit, should the Division receive a significant degree of public interest.

Copies of the draft permit and other supporting information on file used to determine conditions present in the draft permit are available upon request and payment of the costs of reproduction. Mail comments and/or requests for information to the NC Division of Water Quality at the above address or call Dina Sprinkle (919) 733-5083, extension 363 at the Point Source Branch. Please include the NPDES permit number (below) in any communication. Interested persons may also visit the Division of Water Quality at 512 N. Salisbury Street, Raleigh, NC 27604-1148 between the hours of 8:00 a.m. and 5:00 p.m. to review information on file.

The City of Raleigh has applied for modification of the NPDES discharge permit (NC0029033) for its Neuse River Wastewater Treatment Plant located on NCSR 2552 southeast of Raleigh. The modification is for the expansion of flow from 60 MGD to 75 MGD and includes allocations gained from connection of rescinded permitted facilities. This facility discharges to the Neuse River, a class C-NSW water in the Neuse River Basin. Currently, BOD, pH, dissolved oxygen, ammonia, total nitrogen, and total phosphorus are water quality limited. This discharge may affect future allocations in this portion of the Neuse River Basin.

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Subject: RE: Public Notice 07/08/08
From: "Pam Oleniczak" <pamo@newsobserver.com>
Date: Thu, 8 May 2008 11:23:57 -0400
To: "Dina.Sprinkle" <Dina.Sprinkle@NCMail.net>

no problem. I have already scheduled it for tomorrow. . we had time yet to get in in.
Thanks, Pam

-----Original Message-----
From: Dina.Sprinkle [mailto:Dina.Sprinkle@NCMail.net]
Sent: Thursday, May 08, 2008 11:16 AM
To: Pam Oleniczak
Subject: Re: Public Notice 07/08/08

Pam,

Tomorrow would be great, but if you need to hold it for a later day, that would be no problem.

Thanks,

Dina

Pam Oleniczak wrote:

Thanks Dina - gotta love email (cut n paste). . I have received the ad for pub, do you want tomorrow (Friday)?
Let me know. Pam (*_*)

-----Original Message-----
From: Dina.Sprinkle [mailto:Dina.Sprinkle@NCMail.net]
Sent: Thursday, May 08, 2008 9:15 AM
To: Pam Oleniczak
Subject: Public Notice 07/08/08

Thanks Pam and I hope you have a great day.

Dina

--
Dina Sprinkle
NCDENR/DWQ/Point Source Branch
1617 Mail Service Center
Raleigh, NC 27699-1617
Office - (919) 733-5083, Ext. 363
Fax - (919) 733-0719
dina.sprinkle@ncmail.net

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

May 7, 2008

Mr. Dale Crisp
Public Utilities Director
City of Raleigh
PO Box 590
Raleigh, North Carolina 27602

Subject: Draft NPDES Permit
Permit **NC0007528**
G.G. Hill WTP
Wake County

Dear Mr. Crisp:

Enclosed with this letter is a copy of the draft permit for your facility. Please review the draft very carefully to ensure thorough understanding of the conditions and requirements it contains.

An analysis of your monitoring data indicates there is a reasonable potential to exceed the water quality standard for aluminum. Therefore, a limit has been included in the permit for aluminum and the monitoring frequency has been increased to twice per month. Additionally, in accordance with the permitting strategy for conventional water treatment plants, monitoring for calcium, magnesium, manganese, zinc, copper, ammonia nitrogen, fluoride, pH, and whole effluent toxicity has been added to the permit, and a limit for flow has been included in the permit.

Submit any comments to me no later than thirty (30) days following your receipt of the draft. Comments should be sent to the address listed at the bottom of this page. Concurrent with this notification, the Division is publishing a notice in the newspapers having circulation in the general Wake County area, soliciting public comment on this draft permit. Following the thirty day public comment period, the Division will review all pertinent comments and take appropriate action prior to issuing a final permit. If no adverse comments are received from the public or from you, this permit will likely be issued in June, with an effective date of August 1, 2008.

If you have any questions or comments concerning this draft permit, call me at (919) 733-5083, extension 361.

Sincerely,

Karen Rust

Karen Rust
Eastern NPDES Program

cc: Washington Regional Office Supervisor (Surface Water Protection)
NPDES Files
Aquatic Toxicology Unit

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER QUALITY

PERMIT

TO DISCHARGE WASTEWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provision of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended, the

City of Raleigh

is hereby authorized to discharge wastewater from a facility located at the

G.G. Hill WTP
1143 East Wait Avenue Southeast of Wake Forest
Wake County

to receiving waters designated as Smith Creek in the Neuse River Basin in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III and IV hereof.

This permit shall become effective _____.

This permit and authorization to discharge shall expire at midnight on February 28, 2013.

Signed this day _____.

DRAFT

_____
Coleen H. Sullins, Director
Division of Water Quality
By Authority of the Environmental Management Commission

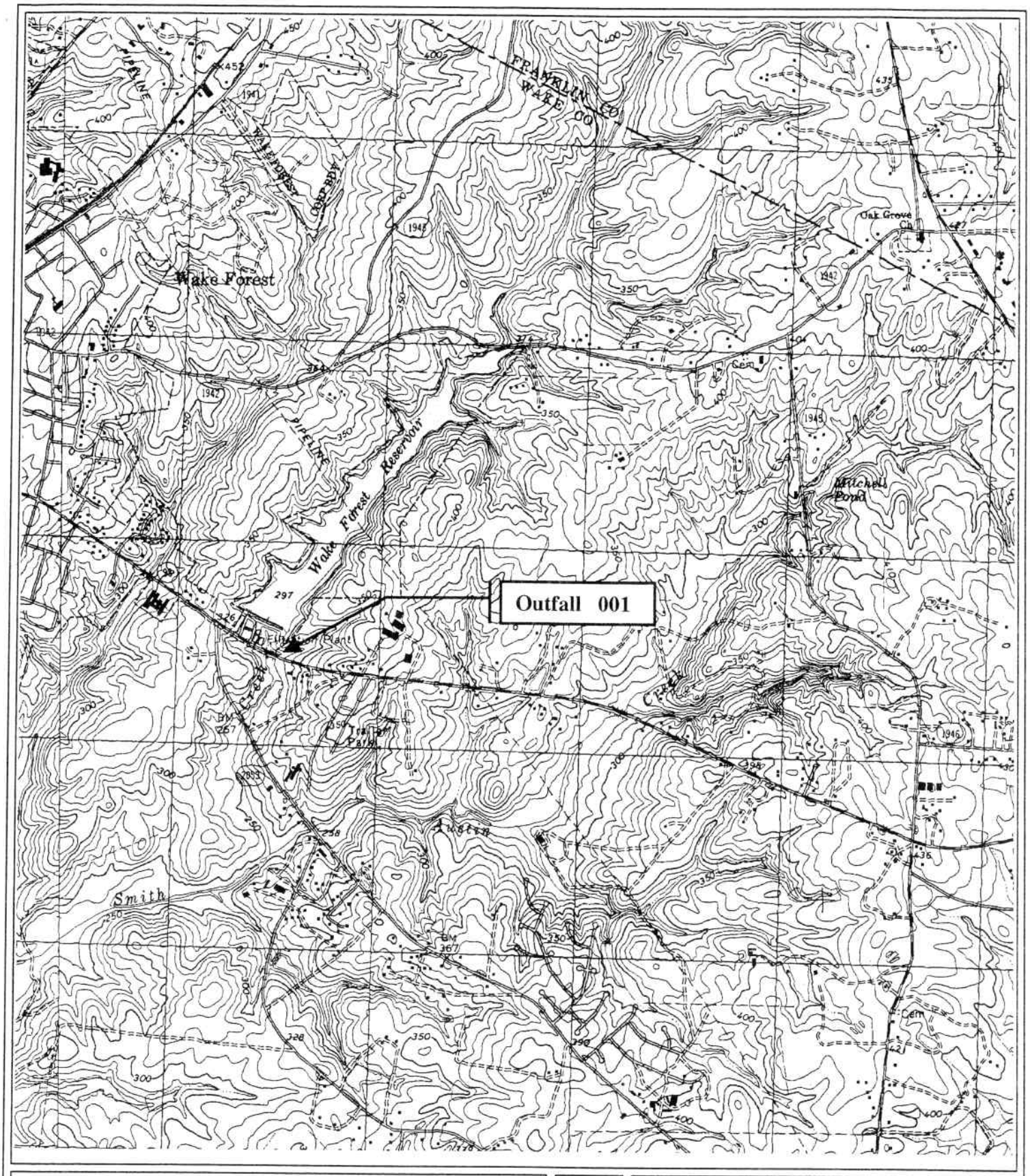
SUPPLEMENT TO PERMIT COVER SHEET

All previous NPDES Permits issued to this facility, whether for operation or discharge are hereby revoked. As of this permit issuance, any previously issued permit bearing this number is no longer effective. Therefore, the exclusive authority to operate and discharge from this facility arises under the permit conditions, requirements, terms, and provisions included herein.

The City of Raleigh is hereby authorized to:

1. Continue to discharge treated filter backwash water from a water treatment facility. This facility includes an alum sludge holding lagoon, a recycle pump and discharge piping. The facility is located off East Wait Avenue southeast of Wake Forest at the G.G.Hill WTP in Wake County.

2. Discharge from said treatment works at the location specified on the attached map into Smith Creek, classified C-NSW waters in the Neuse River Basin.



Quad: Rolesville, N.C.
Latitude: 35°58'10"
Longitude: 78°29'20"
Stream Class: C-NSW
Subbasin: 30402
Receiving Stream: Smith Creek

NC0007528

G.G. Hill WTP

North

Facility Location

SCALE 1:24000

A. (1) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting until expiration, the Permittee is authorized to discharge filter backwash from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow	0.07			Continuous	Recording	Effluent
Total Suspended Solids	30.0 mg/L		45.0 mg/L	2/Month	Grab	Effluent
pH[1]				2/Month	Grab	Effluent
Total Residual Chlorine[2]			28 μg/L	2/Month	Grab	Effluent
Iron				Monthly	Grab	Effluent
Aluminum		87 µg/L		2/Month	Grab	Effluent
Calcium				Quarterly	Grab	Effluent
Magnesium				Quarterly	Grab	Effluent
Manganese				Quarterly	Grab	Effluent
Fluoride				Monthly	Grab	Effluent
Zinc				Monthly	Grab	Effluent
Copper				Monthly	Grab	Effluent
Ammonia Nitrogen				Monthly	Grab	Effluent
Whole Effluent Toxicity Monitoring[3]				Quarterly	Grab	Effluent
Total Monthly Flow [4]	Monitor & Report (million gallons/month)			Monthly	Calculated	Effluent
Total Nitrogen (TN) [4]	Monitor & Report (mg/L)			Monthly	Grab	Effluent
Nitrate/Nitrite Nitrogen[4] ($NO_2 + NO_3$)	Monitor & Report (mg/L)			Monthly	Grab	Effluent
Total Kjeldahl Nitrogen[4] (TKN)	Monitor & Report (mg/L)			Monthly	Grab	Effluent
TN load (pounds/month) [4]	Monitor & Report (pounds per month)			Monthly	Calculated	Effluent
TN load (pounds/year) [4]	Monitor & Report (pounds per year)			Annually	Calculated	Effluent
Total Phosphorus	Monitor & Report (mg/L)			Monthly	Grab	Effluent

Footnotes:

1. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units.
2. Limit and monitoring apply if chlorine is used in the treatment system or the backwash includes chlorinated water.
3. See Special Condition A. (3).
4. See A. (2) for Total Nitrogen monitoring and reporting requirements.

All samples collected should be from a representative discharge event.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. (2) CALCULATION OF TOTAL NITROGEN LOADS

a. The Permittee shall calculate monthly and annual TN Loads as follows:

i. Monthly TN Load (pounds/month) = TN x TMF x 8.34

where:

TN = the average TN concentration (mg/L) of the samples collected during the month

TMF = the Total Monthly Flow of wastewater discharged during the month (MG/month). If all discharges are not recorded at the facility, document the calculation(s) used to determine total monthly flow

8.34 = conversion factor, from (mg/L x MG) to pounds

ii. Annual TN Load (pounds/year) = Sum of the 12 Monthly TN Loads for the calendar year

b. The Permittee shall report monthly Total Nitrogen results (mg/L and pounds/month) in the discharge monitoring report for that month. The Permittee shall report each year's annual results (pounds per year) in the December report for that year.

A. (3) CHRONIC TOXICITY MONITORING (QRTRLY)

The permittee shall conduct quarterly chronic toxicity tests using test procedures outlined in the "North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure," Revised February 1998, or subsequent versions.

The effluent concentration defined as treatment two in the procedure document is **90**%. The testing shall be performed as a *Ceriodaphnia dubia* 7day pass/fail test. The tests will be performed **during the months of January, April, July and October**. Effluent sampling for this testing shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the month in which it was performed, using the parameter code **TGP3B**. Additionally, DWQ **Form AT-1** (original) is to be sent to the following address:

Attention: NC DENR / DWQ / Environmental Sciences Section
1621 Mail Service Center
Raleigh, N.C. 27699-1621

Completed Aquatic Toxicity Test Forms shall be filed with the Environmental Sciences Section no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete and accurate and include all supporting chemical/physical measurements performed in association with the toxicity tests, as well as all dose/response data. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Environmental Sciences Section at the address cited above.

Should the permittee fail to monitor during a month in which toxicity monitoring is required, then monthly monitoring will begin immediately. Upon submission of a valid test, this monthly test requirement will revert to quarterly in the months specified above.

Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Quality indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

If the Permittee monitors any pollutant more frequently then required by this permit, the results of such monitoring shall be included in the calculation & reporting of the data submitted on the DMR & all AT Forms submitted.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an invalid test and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

RECD BY CENTRAL FILES

JUL 29 09

City Of Raleigh
North Carolina

NOV 28 2007
DENR - WATER QUALITY
POINT SOURCE BRANCH

November 28, 2007

Mrs. Frances Candelaria
N.C. Department of Environment and Natural Resources
Division of Water Quality
Point Source Branch
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

Re: City of Raleigh
G.G. Hill WTP
NPDES Permit Renewal
Permit No. N0007528

Dear Mrs. Candelaria:

Enclosed is the permit renewal package for the NPDES Permit for the G.G. Hill Water Treatment Plant (WTP) for the City of Raleigh, North Carolina. The package includes an original and two (2) copies of the following information:

- This cover letter.
- Completed NPDES Permit Application – Short Form C - WTP
- Sludge Management Plan for the G.G. Hill WTP Facilities

The renewal application does not include a Priority Pollutant Analysis (PPA) because communication with DWQ staff indicated that a PPA was not required since the G.G. Hill WTP is not a primary industry or a wastewater treatment plant.

Changes made to the facilities since the last permit was issued consist of construction of new dechlorination facilities consisting of calcium thiosulfate feed facities and sodium sulfite tablet chlorinators. A sampling tee was also added to allow sampling the effluent prior to the point of introduction of groundwater drainage from the sludge lagoon underdrains.

Please let us know if you have any questions or comments on this renewal package.

Very truly yours,

for H. Dale Crisp, P.E.
Public Utilities Director

HDC/rab
Enclosure
cc: Mr. John Garland
Mr. Jessee Walker
Mr. Perry Allen

NPDES PERMIT APPLICATION - SHORT FORM C - WTP

For discharges associated with water treatment plants

Mail the complete application to:
N. C. Department of Environment and Natural Resources
Division of Water Quality / NPDES Unit
1617 Mail Service Center, Raleigh, NC 27699-1617

DENR - WATER QUALITY
POINT SOURCE BRANCH

NPDES Permit Number NC0007528

If you are completing this form in computer use the TAB key or the up – down arrows to move from one field to the next. To check the boxes, click your mouse on top of the box. Otherwise, please print or type.

1. Contact Information:

Owner Name	City of Raleigh
Facility Name	G.G. Hill Water Treatment Plant
Mailing Address	P.O. Box 590
City	Raleigh
State / Zip Code	NC 27602
Telephone Number	(919) 857-4540
Fax Number	(919) 857-4545
e-mail Address	Dale.Crisp@ci.raleigh.nc.us

2. Location of facility producing discharge:

Check here if same as above ☐

Street Address or State Road	1143 E. Wait Avenue
City	Wake Forest
State / Zip Code	NC 27587
County	Wake

3. Operator Information:

Name of the firm, consultant or other entity that operates the facility. (Note that this is not referring to the Operator in Responsible Charge or ORC)

Name	City of Raleigh
Mailing Address	P.O. Box 590
City	Raleigh
State / Zip Code	NC 27602
Telephone Number	(919) 857-4540
Fax Number	(919) 857-4545

4. Ownership Status:

Federal ☐ State ☐ Private ☐ Public ☒

5. Type of treatment plant:

☒ **Conventional** (Includes coagulation, flocculation, and sedimentation, usually followed by filtration and disinfection)

☐ **Ion Exchange** (Sodium Cycle Cationic ion exchange)

☐ **Green Sand Filter** (No sodium recharge)

☐ **Membrane Technology** (RO, nanofiltration)

Check here if the treatment process also uses a water softener ☐

6. Description of source water(s) *(i.e. groundwater, surface water)*

surface water

7. Describe the treatment process(es) for the raw water:

see additional information

8. Describe the wastewater and the treatment process(es) for wastewater generated by the facility:

see additional information

9. Number of separate discharge points: 1

Outfall Identification number(s): 001

10. Frequency of discharge: **Continuous** ☐ **Intermittent** ☒

If intermittent:
Days per week discharge occurs: 3-4 **Duration:** 2-4 hours

11. Plant design potable flowrate: 2 **MGD**

Backwash or reject flow: 0.07 **MGD**

12. Name of receiving stream(s) *(Provide a map showing the exact location of each outfall, including latitude and longitude)*:

Smith Creek

13. Please list all water treatment additives, including cleaning chemicals, that have the potential to be discharged.

see additional information

14. Is this facility located on Indian country? *(check one)*

Yes ☐ **No** ☒

15. Additional Information:

- **Provide a schematic of flow through the facility, include flow volumes at all points in the treatment process, and point of addition of chemicals.**
- **Solids Handling Plan**

16. NEW Applicants

Information needed in addition to items 1-15:

- **New applicants must contact the NCDENR Customer Service Center. Was the Customer Service Center contacted?** ☐ **Yes** ☐ **No**
- **Analyses of source water collected**
- **Engineering Alternative Analysis**
- **Discharges from Ion Exchange and Reverse Osmosis plants shall be evaluated using a water quality model.**

17. Applicant Certification

I certify that I am familiar with the information contained in the application and that to the best of my knowledge and belief such information is true, complete, and accurate.

H. Dale Crisp — Public Utilities Director
Printed name of Person Signing — Title

11/27/07
Signature of Applicant — Date

North Carolina General Statute 143-215.6 (b)(2) provides that: Any person who knowingly makes any false statement representation, or certification in any application, record, report, plan, or other document files or required to be maintained under Article 21 or regulations of the Environmental Management Commission implementing that Article, or who falsifies, tampers with, or knowingly renders inaccurate any recording or monitoring device or method required to be operated or maintained under Article 21 or regulations of the Environmental Management Commission implementing that Article, shall be guilty of a misdemeanor punishable by a fine not to exceed $25,000, or by imprisonment not to exceed six months, or by both. (18 U.S.C. Section 1001 provides a punishment by a fine of not more than $25,000 or imprisonment not more than 5 years, or both, for a similar offense.)

Additional Information

Item 7. Treatment Processes for Raw Water

Water treatment processes include chemical addition, raw water pumping, flocculation, sedimentation, filtration and disinfection with chlorine (sodium hypochlorite) and ammonia. Raw water from the Smith Creek Reservoir is conveyed to the raw water pump station, from which it is pumped to a baffled flocculation channel. Chemicals are introduced to the raw water upstream of the raw water pump station. From the flocculation channel, the water is discharged into a channel that distributes the flow to two sedimentation basins. Settled solids are collected in the sedimentation basins. The sedimentation basins are manually cleaned and all solids removed from the basins are directed to the solids handling facilities.

Settled water from the sedimentation basins flows to the filter influent channel, from which it is distributed to two dual media (sand and anthracite) filters. Filter backwash water from the filters is also directed to the solids handling facilities.

Filtered water is collected in the filtered water flume and is conveyed to a disinfection contact basin and then to a clearwell. The disinfection contact basin and clearwell provide contact time for free chlorine disinfection and storage of finished water upstream from the finished water pumping facilities.

Aluminum sulfate (alum) is used as the primary coagulant in the plant. Powdered activated carbon (PAC) has been used intermittently to control taste and odor events. Chlorine is used as the primary disinfectant. A chloramine residual is formed by adding ammonia to the chlorinated water in order to produce chloramines after free chlorine disinfection in the disinfection contact tank and clearwell.

Item 8. Wastewater and Treatment Processes for Wastewater Generated by the Facility

Residuals from the water treatment plant process include solids settled in the sedimentation basins and filter backwash water.

The solids from the sedimentation basins and the filter backwash water are discharged to two sludge lagoons for thickening and solids storage. Liquid calcium thiosulfate is added to the solids from the sedimentation basins and the filter backwash water upstream of the sludge lagoons for dechlorination. The thickened sludge is pumped to trucks and hauled off-site for land application by a contractor. The supernatant from the sludge lagoons is pumped by decant pumps to the discharge point at Smith Creek downstream of the Smith Creek Reservoir. The supernatant passes through sodium sulfite tablet feeders for additional dechlorination before discharge, and is the only discharge to the receiving stream from the treatment facilities. The discharge to the receiving stream is intermittent (see Additional Information, Item 10).

Item 10. Frequency of Discharge

Discharge to Outfall 001 is intermittent, and occurs after settling of the filter backwash water and sedimentation basin solids in the sludge lagoons. Supernatant from the lagoons is pumped to the discharge point by the decant pumps. The decant pumps are typically operated 3 to 4 days per week. The pumps are started and stopped manually, and are operated for 2 to 4 hours.

Item 12. Name of Receiving Stream(s)

See Figure 1 for map showing outfall location.

Item 13. Water Treatment Additives That Have the Potential to be Discharged

CHEMICALS ADDED:

Water Treatment Processes
Aluminum sulfate (alum) (coagulant)
Caustic (pH control)
Potassium permanganate (oxidant)
Powdered activated carbon (odor control)
Zinc orthophosphate (corrosion inhibitor)
Hydrofluosilicic acid (fluoride)
Chlorine (sodium hypochlorite) (disinfectant)
Ammonia (gas) (disinfectant)

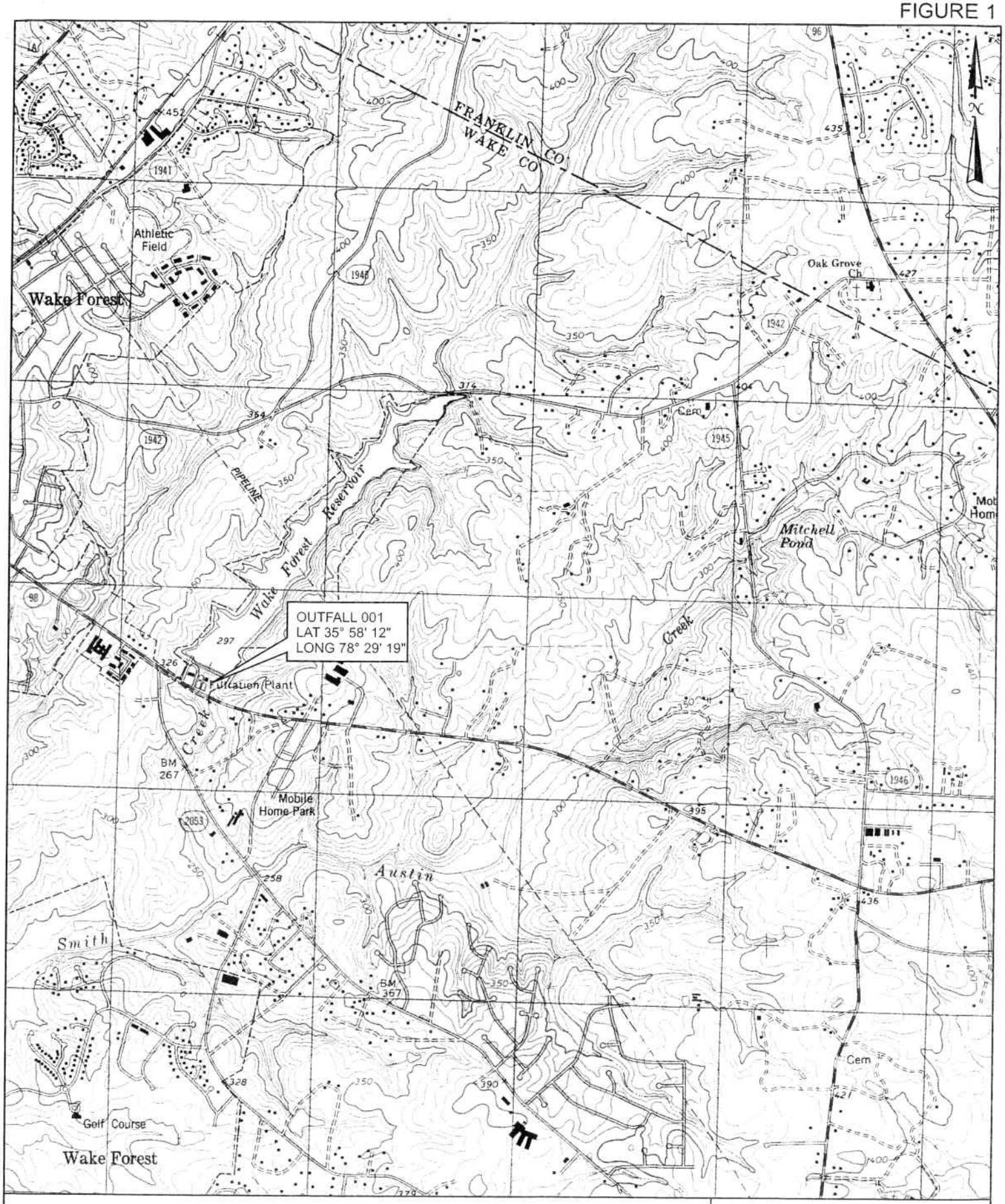
Wastewater Treatment Processes
Calcium thiosulfate (dechlorinating agent)
Sodium sulfite (tablets) (dechlorinating agent)

Item 15. Schematic of Flow Through the Facility and Solids Handling Plan

A schematic of the wastewater treatment processes at the G.G. Hill WTP is included in Figure 2.

The following page presents the sludge management plan for the facility.

FIGURE 1



FROM PORTION OF ROLESVILLE USGS QUAD

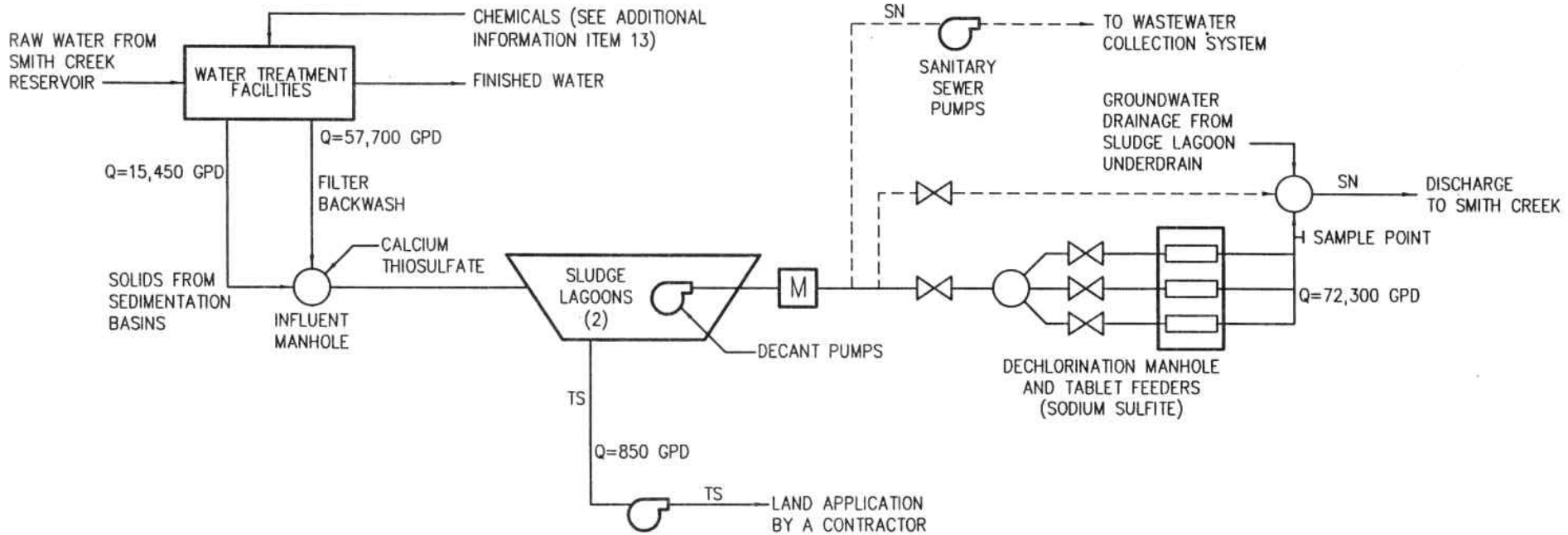
1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

G.G. HILL WTP
NC0007528
LOCATION MAP

30681-002-MP-10.cdr

20071107 12:40P H:\30681\FIGURES\30681-002-GGHill.dwg By:BGOODWIN Last Saved By: bgoodwin



LEGEND

SN	SUPERNATANT
TS	THICKENED SLUDGE
	PUMPS
M	FLOW METER
——	TYPICAL OPERATION
- - -	ALTERNATE OPERATION

HAZEN AND SAWYER
Environmental Engineers & Scientists

G.G. HILL WTP
CITY OF RALEIGH

RESIDUALS TREATMENT SYSTEM
PROCESS FLOW DIAGRAM

FIGURE 2

G.G. Hill WTP

Sludge Management Plan

Residuals from the G.G. Hill Water Treatment Plant (WTP) include solids from the sedimentation basins and filter backwash water. The residuals are treated in a residuals treatment system that includes the following:

- Influent Manhole (collects flow for discharge to Sludge Lagoons)
- Two Sludge Lagoons
- Decant Pumps (for supernatant from Sludge Lagoons)
- Dechlorination Manhole and Tablet Feeders
- Sanitary Sewer Pumps (for flow to wastewater collection system)

Solids from the sedimentation basins and filter backwash water are treated in the sludge lagoons. Supernatant (decant) from the sludge lagoons is pumped by the decant pumps for discharge to the receiving stream through Outfall 001. Supernatant can also be pumped by the sanitary sewer pumps to the wastewater collection system.

Solids from the sludge lagoons are pumped to trucks for hauling and land application by a contractor.

NCDENR

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

Michael F. Easley, Governor

William G. Ross, Jr., Secretary
Alan W. Klimek, P.E., Director

October 9, 2006

CERTIFIED MAIL 7002 0860 0006 5835 8592
RETURN RECEIPT REQUESTED

Mark S. Williams
Town of Wake Forest
401 Elm Street
Wake Forest, NC 27587

SUBJECT: **Final Notice - Delinquent Annual Fee**
NPDES Permit NC0007528
Wake County

Dear Permittee:

Our records indicate that you have not paid your annual permit fees for the year June 1, 2006 - May 31, 2007. This is a violation of your NPDES permit.

You owe $715.00. Please find the attached copy of invoice(s) previously sent by the Division's Budget Office. **Failure to pay your annual fees is grounds for the State of North Carolina to revoke your permit,** as documented in part II. B. 13, and II. B. 14.

You must resolve this matter immediately. This letter serves as **final notice**. If you fail to pay your fees by **October 27, 2006**, the Department will refer this matter to the North Carolina Attorney General's Office for collection through the courts.

Please make your check payable to NC DENR in the amount of **$715.00** and include the subject permit number to ensure proper credit. If you have evidence that the fee has already been paid, please contact me at (919) 733-5083, extension 532 or "vanessa.manuel@ncmail.net".

Sincerely,

Vanessa E. Manuel
Eastern NPDES Program

cc: Central Files
NPDES File NC0007528
DWQ/SWP – Raleigh Regional Office

PAID

1617 Mail Service Center, Raleigh, North Carolina 27699-1617
512 North Salisbury Street, Raleigh, North Carolina 27604
Phone: 919 733-5083 / FAX 919 733-0719 / Internet: h2o.enr.state.nc.us

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One NorthCarolina Naturally

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mark S. Williams, Town Manager
Town of Wake Forest
401 Elm Street
Wake Forest, NC 27587
NC0007528: Unpaid Annual Fee

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X J. Chaffin
☐ Agent
☐ Addressee

B. Received by (Printed Name)
J. CHAFFIN

C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label) 7002 0860 0006 5835 8592

PS Form 3811, August 2001 Domestic Return Receipt 102595-02-M-1540

JUL 29 08

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

February 8, 2008

Mr. Dale Crisp, P.E.
Director of Public Utilities
City of Raleigh
One Exchange Plaza
219 Fayetteville Street Mall, Suite 620
Raleigh, North Carolina 27601

Subject: Issuance of NPDES Permit NC0088285
Dempsey E. Benton WTP
Wake County

Dear Mr. Crisp:

Division personnel have reviewed and approved your application for renewal of the subject permit. Accordingly, we are forwarding the attached NPDES discharge permit. This permit is issued pursuant to the requirements of North Carolina General Statute 143-215.1 and the Memorandum of Agreement between North Carolina and the U.S. Environmental Protection Agency dated October 15, 2007 (or as subsequently amended).

This final permit includes the following major changes from the draft permit sent to you on October 21, 2007:

- Weekly Total Coliform monitoring has been added at the insistence of the Division of Environmental Health, Public Water Supply Section.

If any parts, measurement frequencies or sampling requirements contained in this permit are unacceptable to you, you have the right to an adjudicatory hearing upon written request within thirty (30) days following receipt of this letter. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings (6714 Mail Service Center, Raleigh, North Carolina 27699-6714). Unless such demand is made, this decision shall be final and binding.

Please note that this permit is not transferable except after notice to the Division. The Division may require modification or revocation and reissuance of the permit. This permit does not affect the legal requirements to obtain other permits which may be required by the Division of Water Quality or permits required by the Division of Land Resources, the Coastal Area Management Act or any other Federal or Local governmental permit that may be required. If you have any questions concerning this permit, please contact Sergei Chernikov at telephone number (919) 733-5083, extension 594.

Sincerely,

for Coleen H. Sullins

cc: Central Files
NPDES Files
Raleigh Regional Office / Surface Water Protection
Mr. Roosevelt Childress, EPA Region IV

N. C. Division of Water Quality / NPDES Unit
1617 Mail Service Center, Raleigh, NC 27699-1617
Internet: h2o.enr.state.nc.us

Phone: (919) 733-5083
fax: (919) 733-0719
DENR Customer Service Center: 1 800 623-7748

RECD BY CENTRAL FILES

FEB 15 08

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER QUALITY

PERMIT

TO DISCHARGE WASTEWATER UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provision of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended, the

City of Raleigh

is hereby authorized to discharge wastewater from a facility located at the

Dempsey E. Benton WTP
Benson Road (NC Hwy 50)
Garner
Wake County

to receiving waters designated as an unnamed tributary to the Lake Benson in the Neuse River Basin in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, and IV hereof.

This permit shall become effective March 1, 2008.

This permit and authorization to discharge shall expire at midnight on February 28, 2013.

Signed this day February 8, 2008.

for Coleen H. Sullins, Director
Division of Water Quality
By Authority of the Environmental Management Commission

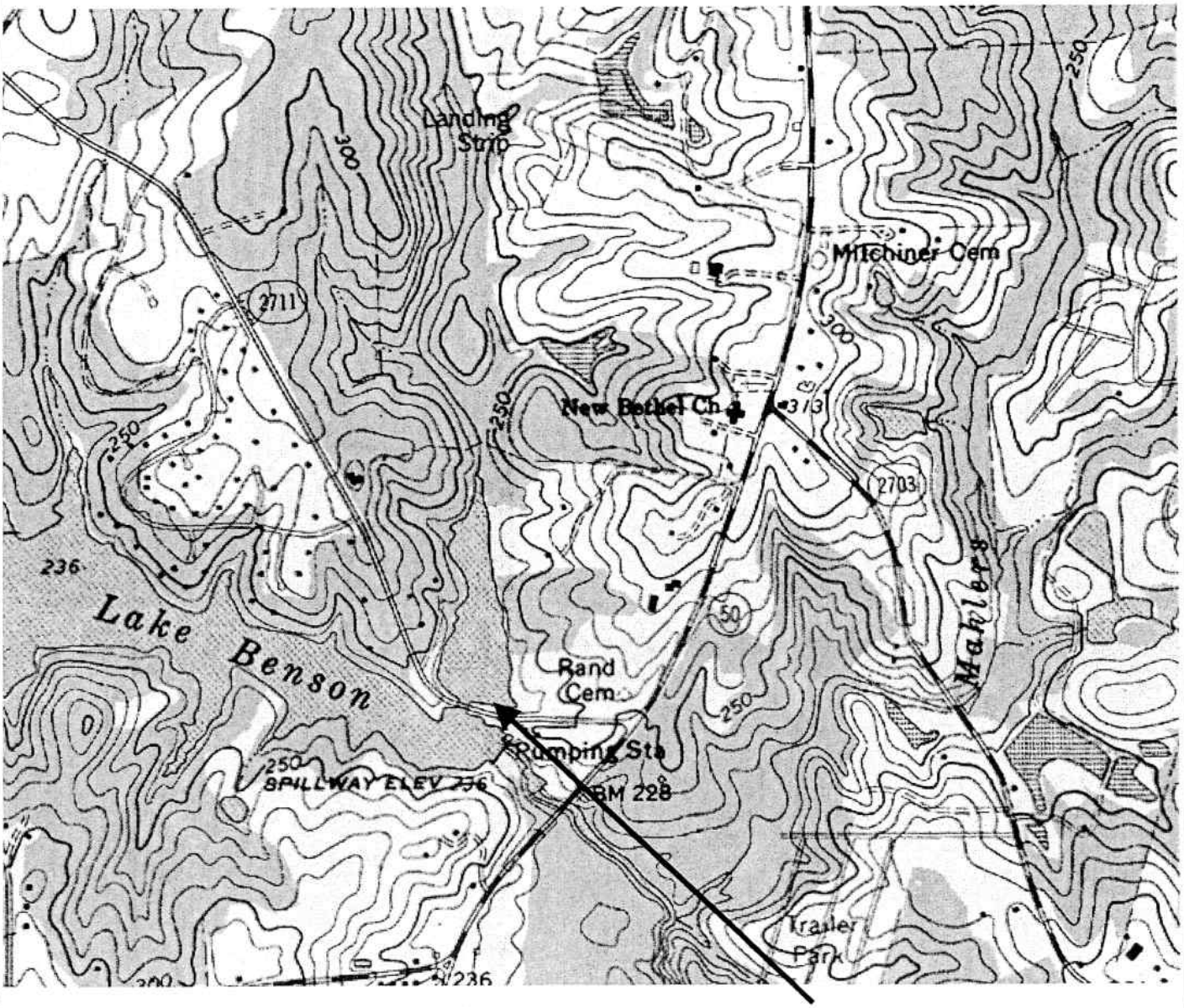
SUPPLEMENT TO PERMIT COVER SHEET

All previous NPDES Permits issued to this facility, whether for operation or discharge are hereby revoked. As of this permit issuance, any previously issued permit bearing this number is no longer effective. Therefore, the exclusive authority to operate and discharge from this facility arises under the permit conditions, requirements, terms, and provisions included herein.

The City of Raleigh is hereby authorized to:

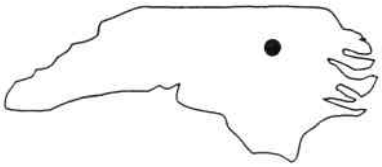
1. Discharge treated filter backwash from the Dempsey E. Benton Water Treatment Plant at Benson Road (NC Hwy 50), Garner, Wake County.

2. After submitting an Engineer's Certification for Authorization to Construct permit 088285A01, discharge from said treatment works at the location specified on the attached map into Lake Benson, a class WS-III NSW CA water in the Neuse River Basin.



Latitude: _____	35° 39′ 45.79″
Longitude:	78° 36′ 41.63″
USGS Quad #:____	E24NE
River Basin #:____	03-04-02
Receiving Stream:	Lake Benson
Stream Class:_____	WS-III, NSW, CA

N



City of Raleigh
Dempsey E. Benton
Water Treatment Plant
Wake County
NC0088285

A. (1) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning upon the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge from outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

PARAMETER	LIMITS		MONITORING REQUIREMENTS		
	Monthly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location
Flow	4.0 MGD		Continuous	Recording	Effluent
Total Suspended Solids	30.0 mg/L	45.0 mg/L	Weekly	Composite	Effluent
pH	≥ 6.0 and ≤ 9.0 standard units		Weekly	Grab	Effluent
Total Residual Chlorine		17 µg/L	Weekly	Grab	Effluent
NH_3-N			Monthly	Grab	Effluent
Total Iron			Quarterly	Grab	Effluent
Total Aluminum			Quarterly	Grab	Effluent
Total Calcium			Quarterly	Grab	Effluent
Total Copper			Quarterly	Grab	Effluent
Total Fluoride			Quarterly	Grab	Effluent
Total Magnesium			Quarterly	Grab	Effluent
Total Manganese			Quarterly	Grab	Effluent
Total Zinc			Quarterly	Grab	Effluent
Total Phosphorus			Monthly	Grab	Effluent
Total Nitrogen			Monthly	Grab	Effluent
Total Coliforms			Weekly	Grab	Effluent
Settleable Solids	0.1 mL/L	0.2 mL/L	2/Month	Grab	Effluent
Whole Effluent Toxicity[1]			Quarterly	Composite	Effluent

Notes:
1. Chronic Toxicity (Ceriodaphnia) P/F @ 90%; January, April, July, and October; See condition A(2) of the Supplement to Effluent Limitations and Monitoring Section of this permit.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. (2) CHRONIC TOXICITY PERMIT LIMIT (QUARTERLY)

The effluent discharge shall at no time exhibit observable inhibition of reproduction or significant mortality to *Ceriodaphnia dubia* at an effluent concentration of **90%.**

The permit holder shall perform at a minimum, *quarterly* monitoring using test procedures outlined in the "North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure," Revised February 1998, or subsequent versions or "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions. The tests will be performed *during the months of* **January, April, July and October**. Effluent sampling for this testing shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

If the test procedure performed as the first test of any single quarter results in a failure or ChV below the permit limit, then multiple-concentration testing shall be performed at a minimum, in each of the two

following months as described in "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

The chronic value for multiple concentration tests will be determined using the geometric mean of the highest concentration having no detectable impairment of reproduction or survival and the lowest concentration that does have a detectable impairment of reproduction or survival. The definition of "detectable impairment," collection methods, exposure regimes, and further statistical methods are specified in the "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the months in which tests were performed, using the parameter code TGP3B for the pass/fail results and THP3B for the Chronic Value. Additionally, DWQ Form AT-3 (original) is to be sent to the following address:

Attention: NC DENR / DWQ / Environmental Sciences Section
1621 Mail Service Center
Raleigh, North Carolina 27699-1621

Completed Aquatic Toxicity Test Forms shall be filed with the Environmental Sciences Branch no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete, accurate, include all supporting chemical/physical measurements and all concentration/response data, and be certified by laboratory supervisor and ORC or approved designate signature. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the Permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Environmental Sciences Branch at the address cited above.

Should the Permittee fail to monitor during a month in which toxicity monitoring is required, monitoring will be required during the following month.

Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Quality indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

If the Permittee monitors any pollutant more frequently then required by this permit, the results of such monitoring shall be included in the calculation & reporting of the data submitted on the DMR & all AT Forms submitted.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an invalid test and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

PART II
STANDARD CONDITIONS FOR NPDES PERMITS

Section A. Definitions

2/Month
Samples are collected twice per month with at least ten calendar days between sampling events.

3/Week
Samples are collected three times per week on three separate calendar days.

Act or "the Act"
The Federal Water Pollution Control Act, also known as the Clean Water Act, as amended, 33 USC 1251, et. seq.

Annual Average
The arithmetic mean of all "daily discharges" of a pollutant measured during the calendar year. In the case of fecal coliform, the geometric mean of such discharges.

Arithmetic Mean
The summation of the individual values divided by the number of individual values.

Bypass
The known diversion of waste streams from any portion of a treatment facility including the collection system, which is not a designed or established or operating mode for the facility.

Calendar Day
The period from midnight of one day until midnight of the next day. However, for purposes of this permit, any consecutive 24-hour period that reasonably represents the calendar day may be used for sampling.

Calendar Quarter
One of the following distinct periods: January through March, April through June, July through September, and October through December.

Composite Sample
A sample collected over a 24-hour period by continuous sampling or combining grab samples of at least 100 ml in such a manner as to result in a total sample representative of the wastewater discharge during the sample period. The Director may designate the most appropriate method (specific number and size of aliquots necessary, the time interval between grab samples, etc.) on a case-by-case basis. Samples may be collected manually or automatically. Composite samples may be obtained by the following methods:

(1) Continuous: a single, continuous sample collected over a 24-hour period proportional to the rate of flow.
(2) Constant time/variable volume: a series of grab samples collected at equal time intervals over a 24 hour period of discharge and combined proportional to the rate of flow measured at the time of individual sample collection, or
(3) Variable time/constant volume: a series of grab samples of equal volume collected over a 24 hour period with the time intervals between samples determined by a preset number of gallons passing the sampling point. Flow measurement between sample intervals shall be determined by use of a flow recorder and totalizer, and the preset gallon interval between sample collection fixed at no greater than 1/24 of the expected total daily flow at the treatment system, or
(4) Constant time/constant volume: a series of grab samples of equal volume collected over a 24-hour period at a constant time interval. **Use of this method requires prior approval by the Director. This method may only be used in situations where effluent flow rates vary less than 15 percent.** The following restrictions also apply:
    - Influent and effluent grab samples shall be of equal size and of no less than 100 milliliters

- Influent samples shall not be collected more than once per hour.
- Permittees with wastewater treatment systems whose detention time ≤ 24 hours shall collect effluent grab samples at intervals of no greater than 20 minutes apart during any 24-hour period.
- Permittees with wastewater treatment systems whose detention time exceeds 24 hours shall collect effluent grab samples at least every X hours [X = days detention time] over a 24-hour period. Effluent samples shall be collected at least every six hours; there must be a minimum of four samples during a 24-hour sampling period.

Continuous flow measurement
Flow monitoring that occurs without interruption throughout the operating hours of the facility. Flow shall be monitored continually except for the infrequent times when there may be no flow or for infrequent maintenance activities on the flow device.

Daily Discharge
The discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants measured in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. The "daily discharge" concentration comprises the mean concentration for a 24-hour sampling period as either a composite sample concentration or the arithmetic mean of all grab samples collected during that period. (40 CFR 122.2)

Daily Maximum
The highest "daily discharge" for conventional and other non-toxicant parameters. NOTE: Permittees may not submit a "daily average" calculation [for determining compliance with permit limits] for toxicants. See the relevant Federal effluent guideline[s] for the appropriate calculation interval.

Daily Sampling
Parameters requiring daily sampling shall be sampled 5 out of every 7 days per week unless otherwise specified in the permit. The Division expects that sampling shall be conducted on weekdays except where holidays or other disruptions of normal operations prevent weekday sampling. If sampling is required for all seven days of the week for any permit parameter(s), that requirement will be so noted on the Effluent Limitations and Monitoring Page(s).

DWQ or "the Division"
The Division of Water Quality, Department of Environment and Natural Resources.

EMC
The North Carolina Environmental Management Commission.

Facility Closure
The cessation of wastewater treatment at a permitted facility, or the cessation of all activities that require coverage under the NPDES. Completion of facility closure will allow this permit to be rescinded.

Geometric Mean
The Nth root of the product of the individual values where N = the number of individual values. For purposes of calculating the geometric mean, values of "0" (or "< [detection level]") shall be considered = 1.

Grab Sample
Individual samples of at least 100 ml collected over a period of time not exceeding 15 minutes. Grab samples can be collected manually. Grab samples must be representative of the discharge (or the receiving stream, for instream samples).

Hazardous Substance
Any substance designated under 40 CFR Part 116 pursuant to Section 311 of the Clean Water Act.

Instantaneous flow measurement
A measure of flow taken at the time of sampling, when both the sample and flow will be representative of the total discharge.

Monthly Average (concentration limit)
The arithmetic mean of all "daily discharges" of a pollutant measured during the calendar month. In the case of fecal coliform, the geometric mean of such discharges.

Permit Issuing Authority
The Director of the Division of Water Quality.

Quarterly Average (concentration limit)
The average of all samples taken over a calendar quarter.

Severe property damage
Substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage excludes economic loss caused by delays in production.

Toxic Pollutant:
Any pollutant listed as toxic under Section 307(a)(l) of the Clean Water Act.

Upset
An incident beyond the reasonable control of the Permittee causing unintentional and temporary noncompliance with permit effluent limitations and/or monitoring requirements. An upset does not include noncompliance caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

Weekly Average (concentration limit)
The arithmetic mean of all "daily discharges" of a pollutant measured during the calendar week. In the case of fecal coliform, the geometric mean of such discharges.

Section B. General Conditions

1. Duty to Comply
   The Permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application [40 CFR 122.41].

   a. The Permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

   b. The Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. [40 CFR 122.41 (a)(2)]

   c. The Clean Water Act provides that any person who *negligently* violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under

section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than 1 year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than 2 years, or both. [40 CFR 122.41 (a) (2)]

d. Any person who *knowingly* violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than 3 years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both. [40 CFR 122.41 (a) (2)]

e. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions. [40 CFR 122.41 (a) (2)]

f. Under state law, a civil penalty of not more than $25,000 per violation may be assessed against any person who violates or fails to act in accordance with the terms, conditions, or requirements of a permit. [North Carolina General Statutes § 143-215.6A]

g. Any person may be assessed an administrative penalty by the Administrator for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000. [40 CFR 122.41 (a) (3)]

2. Duty to Mitigate
The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit with a reasonable likelihood of adversely affecting human health or the environment [40 CFR 122.41 (d)].

3. Civil and Criminal Liability
Except as provided in permit conditions on "Bypassing" (Part II. C. 4), "Upsets" (Part II. C. 5) and "Power Failures" (Part II. C. 7), nothing in this permit shall be construed to relieve the Permittee from any responsibilities, liabilities, or penalties for noncompliance pursuant to NCGS 143-215.3, 143-215.6 or Section 309 of the Federal Act, 33 USC 1319. Furthermore, the Permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.

4. Oil and Hazardous Substance Liability
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities, or penalties to which the Permittee is or may be subject to under NCGS 143-215.75 et seq. or Section 311 of the Federal Act, 33 USG 1321. Furthermore, the Permittee is responsible for consequential damages, such as fish kills, even though the responsibility for effective compliance may be temporarily suspended.

5. Property Rights
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations [40 CFR 122.41 (g)].

6. Onshore or Offshore Construction
This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

7. Severability
The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby [NCGS 150B-23].

8. Duty to Provide Information
The Permittee shall furnish to the Permit Issuing Authority, within a reasonable time, any information which the Permit Issuing Authority may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also furnish to the Permit Issuing Authority upon request, copies of records required by this permit [40 CFR 122.41 (h)].

9. Duty to Reapply
If the Permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the Permittee must apply for and obtain a new permit [40 CFR 122.41 (b)].

10. Expiration of Permit
The Permittee is not authorized to discharge after the expiration date. In order to receive automatic authorization to discharge beyond the expiration date, the Permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date. Any Permittee that has not requested renewal at least 180 days prior to expiration, or any Permittee that does not have a permit after the expiration and has not requested renewal at least 180 days prior to expiration, will subject the Permittee to enforcement procedures as provided in NCGS 143-215.6 and 33 USC 1251 et. seq.

11. Signatory Requirements
All applications, reports, or information submitted to the Permit Issuing Authority shall be signed and certified [40 CFR 122.41 (k)].

a. **All permit applications shall be signed as follows:**
   (1) For a corporation: by a responsible corporate officer. For the purpose of this Section, a responsible corporate officer means: (a) a president, secretary, treasurer or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation, or (b) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures .
   (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
   (3) For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official [40 CFR 122.22].

b. All reports required by the permit and other information requested by the Permit Issuing Authority shall be signed by a person described in paragraph a. above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
   1. The authorization is made in writing by a person described above;
   2. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or well field, superintendent, a position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
   3. The written authorization is submitted to the Permit Issuing Authority [40 CFR 122.22]

c. Changes to authorization: If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative [40 CFR 122.22]

d. Certification. Any person signing a document under paragraphs a. or b. of this section shall make the following certification [40 CFR 122.22]:
"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations."

12. Permit Actions
This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition [40 CFR 122.41 (f)].

13. Permit Modification, Revocation and Reissuance, or Termination
The issuance of this permit does not prohibit the permit issuing authority from reopening and modifying the permit, revoking and reissuing the permit, or terminating the permit as allowed by the laws, rules, and regulations contained in Title 40, Code of Federal Regulations, Parts 122 and 123; Title 15A of the North Carolina Administrative Code, Subchapter 2H .0100; and North Carolina General Statute 143-215.1 et. al.

14. Annual Administering and Compliance Monitoring Fee Requirements
The Permittee must pay the annual administering and compliance monitoring fee within thirty days after being billed by the Division. Failure to pay the fee in a timely manner in accordance with 15A NCAC 2H.0105 (b) (2) may cause this Division to initiate action to revoke the permit.

Section C. Operation and Maintenance of Pollution Controls

1. Certified Operator
Upon classification of the permitted facility by the Certification Commission, the Permittee shall employ a certified water pollution control treatment system operator in responsible charge (ORC) of the water pollution control treatment system. Such operator must hold a certification of the grade equivalent to or greater than the classification assigned to the water pollution control treatment system by the Certification Commission. The Permittee must also employ one or more certified Back-up ORCs who possess a currently valid certificate of the type of the system. Back-up ORCs must possess a grade equal to (or no more than one grade less than) the grade of the system [15A NCAC 8G.0201].

The ORC of each Class I facility must:

- Visit the facility at least weekly
- Comply with all other conditions of 15A NCAC 8G.0204.

The ORC of each Class II, III and IV facility must:

- Visit the facility at least five days per week, excluding holidays
- Properly manage and document daily operation and maintenance of the facility
- Comply with all other conditions of 15A NCAC 8G.0204.

Once the facility is classified, the Permittee shall submit a letter to the Certification Commission designating the operator in responsible charge:

a. Within 60 calendar days prior to wastewater being introduced into a new system
b. Within 120 calendar days of:
    - Receiving notification of a change in the classification of the system requiring the designation of a new ORC and back-up ORC
    - A vacancy in the position of ORC or back-up ORC.

2. Proper Operation and Maintenance

The Permittee shall at all times provide the operation and maintenance resources necessary to operate the existing facilities at optimum efficiency. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the Permittee to install and operate backup or auxiliary facilities only when necessary to achieve compliance with the conditions of the permit [40 CFR 122.41 (e)].

3. Need to Halt or Reduce not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the condition of this permit [40 CFR 122.41 (c)].

4. Bypassing of Treatment Facilities

a. Bypass not exceeding limitations [40 CFR 122.41 (m) (2)]

The Permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of Paragraphs b. and c. of this section.

b. Notice [40 CFR 122.41 (m) (3)]

(1) Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass; including an evaluation of the anticipated quality and effect of the bypass.

(2) Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required in Part II. E. 6. (24-hour notice).

c. Prohibition of Bypass

(1) Bypass from the treatment facility is prohibited and the Permit Issuing Authority may take enforcement action against a Permittee for bypass, unless:

(A) Bypass was unavoidable to prevent loss of life, personal injury or severe property damage;

(B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and

(C) The Permittee submitted notices as required under Paragraph b. of this section.

(2) Bypass from the collection system is prohibited and the Permit Issuing Authority may take enforcement action against a Permittee for a bypass as provided in any current or future system-wide collection system permit associated with the treatment facility.

(3) The Permit Issuing Authority may approve an anticipated bypass, after considering its adverse effects, if the Permit Issuing Authority determines that it will meet the three conditions listed above in Paragraph c. (l) of this section.

5. Upsets

a. Effect of an upset [40 CFR 122.41 (n) (2)]: An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph b. of this condition are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

b. Conditions necessary for a demonstration of upset: A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
(1) An upset occurred and that the Permittee can identify the cause(s) of the upset;
(2) The Permittee facility was at the time being properly operated; and
(3) The Permittee submitted notice of the upset as required in Part II. E. 6. (b) of this permit.
(4) The Permittee complied with any remedial measures required under Part II. B. 2. of this permit.

c. Burden of proof [40 CFR 122.41 (n) (4)]: The Permittee seeking to establish the occurrence of an upset has the burden of proof in any enforcement proceeding.

6. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be utilized/disposed of in accordance with NCGS 143-215.1 and in a manner such as to prevent any pollutant from such materials from entering waters of the State or navigable waters of the United States. The Permittee shall comply with all existing Federal regulations governing the disposal of sewage sludge. Upon promulgation of 40 CFR Part 503, any permit issued by the Permit Issuing Authority for the utilization/disposal of sludge may be reopened and modified, or revoked and reissued, to incorporate applicable requirements at 40 CFR 503. The Permittee shall comply with applicable 40 CFR 503 Standards for the Use and Disposal of Sewage Sludge (when promulgated) within the time provided in the regulation, even if the permit is not modified to incorporate the requirement. The Permittee shall notify the Permit Issuing Authority of any significant change in its sludge use or disposal practices.

7. Power Failures

The Permittee is responsible for maintaining adequate safeguards (as required by 15A NCAC 2H.0124 – Reliability) to prevent the discharge of untreated or inadequately treated wastes during electrical power failures either by means of alternate power sources, standby generators or retention of inadequately treated effluent.

Section D. Monitoring and Records

1. Representative Sampling

Samples collected and measurements taken, as required herein, shall be characteristic of the volume and nature of the permitted discharge. Samples collected at a frequency less than daily shall be taken on a day and time that is characteristic of the discharge over the entire period the sample represents. All samples shall be taken at the monitoring points specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the Permit Issuing Authority [40 CFR 122.41 (j)].

2. Reporting

Monitoring results obtained during the previous month(s) shall be summarized for each month and reported on a monthly Discharge Monitoring Report (DMR) Form (MR 1, 1.1, 2, 3) or alternative forms approved by the Director, postmarked no later than the last calendar day of the month following the completed reporting period.

The first DMR is due on the last day of the month following the issuance of the permit or in the case of a new facility, on the last day of the month following the commencement of discharge. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the following address:

NC DENR / Division of Water Quality / Water Quality Section
ATTENTION: Central Files
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

3. Flow Measurements

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10% from the true discharge rates throughout the range of expected discharge volumes. Flow measurement devices shall be accurately calibrated at a minimum of once per year and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. The Director shall approve the flow measurement device and monitoring location prior to installation.

Once-through condenser cooling water flow monitored by pump logs, or pump hour meters as specified in Part I of this permit and based on the manufacturer's pump curves shall not be subject to this requirement.

4. Test Procedures

Test procedures for the analysis of pollutants shall conform to the EMC regulations (published pursuant to NCGS 143-215.63 et. seq.), the Water and Air Quality Reporting Acts, and to regulations published pursuant to Section 304(g), 33 USC 1314, of the Federal Water Pollution Control Act (as Amended), and 40 CFR 136; or in the case of sludge use or disposal, approved under 40 CFR 136, unless otherwise specified in 40 CFR 503, unless other test procedures have been specified in this permit [40 CFR 122.41].

To meet the intent of the monitoring required by this permit, all test procedures must produce minimum detection and reporting levels that are below the permit discharge requirements and all data generated must be reported down to the minimum detection or lower reporting level of the procedure. If no approved methods are determined capable of achieving minimum detection and reporting levels below permit discharge requirements, then the most sensitive (method with the lowest possible detection and reporting level) approved method must be used.

5. Penalties for Tampering

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both [40 CFR 122.41].

6. Records Retention

Except for records of monitoring information required by this permit related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR 503), the Permittee shall retain records of all monitoring information, including:

- all calibration and maintenance records
- all original strip chart recordings for continuous monitoring instrumentation

- copies of all reports required by this permit
- copies of all data used to complete the application for this permit

These records or copies shall be maintained for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time [40 CFR 122.41].

7. Recording Results

For each measurement or sample taken pursuant to the requirements of this permit, the Permittee shall record the following information [40 CFR 122.41]:

a. The date, exact place, and time of sampling or measurements;
b. The individual(s) who performed the sampling or measurements;
c. The date(s) analyses were performed;
d. The individual(s) who performed the analyses;
e. The analytical techniques or methods used; and
f. The results of such analyses.

8. Inspection and Entry

The Permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Director), upon the presentation of credentials and other documents as may be required by law, to;

a. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location [40 CFR 122.41 (i)].

Section E Reporting Requirements

1. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.

2. Planned Changes

The Permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility [40 CFR 122.41 (l)]. Notice is required only when:

a. The alteration or addition to a permitted facility may meet one of the criteria for new sources at 40 CFR 122.29 (b); or
b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42 (a) (l).
c. The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.

3. Anticipated Noncompliance

The Permittee shall give advance notice to the Director of any planned changes to the permitted facility or other activities that might result in noncompliance with the permit [40 CFR 122.41 (l) (2)].

4. Transfers
This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to document the change of ownership. Any such action may incorporate other requirements as may be necessary under the Clean Water Act [40 CFR 122.41 (l) (3)].

5. Monitoring Reports
Monitoring results shall be reported at the intervals specified elsewhere in this permit [40 CFR 122.41 (l) (4)].

   a. Monitoring results must be reported on a Discharge Monitoring Report (DMR) (See Part II. D. 2) or forms provided by the Director for reporting results of monitoring of sludge use or disposal practices.
   b. If the Permittee monitors any pollutant more frequently than required by this permit, the results of such monitoring shall be included in the calculation and reporting of the data submitted on the DMR.

6. Twenty-four Hour Reporting
   a. The Permittee shall report to the Director or the appropriate Regional Office any noncompliance that potentially threatens public health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee became aware of the circumstances. A written submission shall also be provided within 5 days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance, and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [40 CFR 122.41 (l) (6)].

   b. The Director may waive the written report on a case-by-case basis for reports under this section if the oral report has been received within 24 hours.

   c. Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at (800) 662-7956, (800) 858-0368 or (919) 733-3300.

7. Other Noncompliance
The Permittee shall report all instances of noncompliance not reported under Part II. E. 5 and 6. of this permit at the time monitoring reports are submitted. The reports shall contain the information listed in Part II. E. 6. of this permit [40 CFR 122.41 (l) (7)].

8. Other Information
Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information [40 CFR 122.41 (l) (8)].

9. Noncompliance Notification
The Permittee shall report by telephone to either the central office or the appropriate regional office of the Division as soon as possible, but in no case more than 24 hours or on the next working day following the occurrence or first knowledge of the occurrence of any of the following:

   a. Any occurrence at the water pollution control facility which results in the discharge of significant amounts of wastes which are abnormal in quantity or characteristic, such as the dumping of the contents of a sludge digester; the known passage of a slug of hazardous substance through the facility; or any other unusual circumstances.
   b. Any process unit failure, due to known or unknown reasons, that render the facility incapable of adequate wastewater treatment such as mechanical or electrical failures of pumps, aerators, compressors, etc.
   c. Any failure of a pumping station, sewer line, or treatment facility resulting in a by-pass directly to receiving waters without treatment of all or any portion of the influent to such station or facility.

Persons reporting such occurrences by telephone shall also file a written report within 5 days following first knowledge of the occurrence.

10. Availability of Reports
Except for data determined to be confidential under NCGS 143-215.3 (a)(2) or Section 308 of the Federal Act, 33 USC 1318, all reports prepared in accordance with the terms shall be available for public inspection at the offices of the Division. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NCGS 143-215.1 (b)(2) or in Section 309 of the Federal Act.

11. Penalties for Falsification of Reports
The Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $25,000 per violation, or by imprisonment for not more than two years per violation, or by both [40 CFR 122.41].

12. Annual Performance Reports
Permittees who own or operate facilities that collect or treat municipal or domestic waste shall provide an annual report to the Permit Issuing Authority and to the users/customers served by the Permittee (NCGS 143-215.1C). The report shall summarize the performance of the collection or treatment system, as well as the extent to which the facility was compliant with applicable Federal or State laws, regulations and rules pertaining to water quality. The report shall be provided no later than sixty days after the end of the calendar or fiscal year, depending upon which annual period is used for evaluation.

PART III
OTHER REQUIREMENTS

Section A. Construction

The Permittee shall not commence construction of wastewater treatment facilities, nor add to the plant's treatment capacity, nor change the treatment process(es) utilized at the treatment plant unless the Division has issued an Authorization to Construct (AtC) permit. Issuance of an AtC will not occur until Final Plans and Specifications for the proposed construction have been submitted by the Permittee and approved by the Division.

Section B. Groundwater Monitoring

The Permittee shall, upon written notice from the Director, conduct groundwater monitoring as may be required to determine the compliance of this NPDES permitted facility with the current groundwater standards.

Section C. Changes in Discharges of Toxic Substances

The Permittee shall notify the Permit Issuing Authority as soon as it knows or has reason to believe (40 CFR 122.42):

a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels";
   (1) One hundred micrograms per liter (100 μg/L);
   (2) Two hundred micrograms per liter (200 μg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 μg/L) for 2.4-dinitrophenol and for 2-methyl-4.6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
   (3) Five times the maximum concentration value reported for that pollutant in the permit application.

b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels";

(1) Five hundred micrograms per liter (500 µg/L);
(2) One milligram per liter (1 mg/L) for antimony;
(3) Ten times the maximum concentration value reported for that pollutant in the permit application.

Section D. Evaluation of Wastewater Discharge Alternatives

The Permittee shall evaluate all wastewater disposal alternatives and pursue the most environmentally sound alternative of the reasonably cost effective alternatives. If the facility is in substantial non-compliance with the terms and conditions of the NPDES permit or governing rules, regulations or laws, the Permittee shall submit a report in such form and detail as required by the Division evaluating these alternatives and a plan of action within 60 days of notification by the Division.

Section E. Facility Closure Requirements

The Permittee must notify the Division at least 90 days prior to the closure of any wastewater treatment system covered by this permit. The Division may require specific measures during deactivation of the system to prevent adverse impacts to waters of the State. This permit cannot be rescinded while any activities requiring this permit continue at the permitted facility.

PART IV
SPECIAL CONDITIONS FOR MUNICIPAL FACILITIES

Section A. Publicly Owned Treatment Works (POTWs)

All POTWs must provide adequate notice to the Director of the following:

1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging those pollutants; and
2. Any substantial change in the volume or character of pollutants being introduced by an indirect discharger as influent to that POTW at the time of issuance of the permit.
3. For purposes of this paragraph, adequate notice shall include information on (1) the quality and quantity of effluent introduced into the POTW, and (2) any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

Section B. Municipal Control of Pollutants from Industrial Users.

1. Effluent limitations are listed in Part I of this permit. Other pollutants attributable to inputs from industries using the municipal system may be present in the Permittee's discharge. At such time as sufficient information becomes available to establish limitations for such pollutants, this permit may be revised to specify effluent limitations for any or all of such other pollutants in accordance with best practicable technology or water quality standards.

2. Under no circumstances shall the Permittee allow introduction of the following wastes in the waste treatment system:
   a. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
   b. Pollutants which will cause corrosive structural damage to the POTW, but in no case Discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such Discharges;
   c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in Interference;
   d. Any pollutant, including oxygen demanding pollutants (BOD, etc.) released in a Discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;
   e. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference, but in no case heat in such quantities that the temperature at the POTW Treatment Plant exceeds 40°C (104°F) unless the Division, upon request of the POTW, approves alternate temperature limits;

f. Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

3. With regard to the effluent requirements listed in Part I of this permit, it may be necessary for the Permittee to supplement the requirements of the Federal Pretreatment Standards (40 CFR, Part 403) to ensure compliance by the Permittee with all applicable effluent limitations. Such actions by the Permittee may be necessary regarding some or all of the industries discharging to the municipal system.

4. The Permittee shall require any industrial discharges sending influent to the permitted system to meet Federal Pretreatment Standards promulgated in response to Section 307(b) of the Act. Prior to accepting wastewater from any significant industrial user, the Permittee shall either develop and submit to the Division a Pretreatment Program for approval per 15A NCAC 2H .0907(a) or modify an existing Pretreatment Program per 15A NCAC 2H .0907(b).

5. This permit shall be modified, or alternatively, revoked and reissued, to incorporate or modify an approved POTW Pretreatment Program or to include a compliance schedule for the development of a POTW Pretreatment Program as required under Section 402(b)(8) of the Clean Water Act and implementing regulations or by the requirements of the approved State pretreatment program, as appropriate.

Section C. Pretreatment Programs

Under authority of sections 307(b) and (c) and 402(b)(8) of the Clean Water Act and implementing regulations 40 CFR Part 403, North Carolina General Statute 143-215.3 (14) and implementing regulations 15A NCAC 2H .0900, and in accordance with the approved pretreatment program, all provisions and regulations contained and referenced in the Pretreatment Program Submittal are an enforceable part of this permit.

The Permittee shall operate its approved pretreatment program in accordance with Section 402(b)(8) of the Clean Water Act, the Federal Pretreatment Regulations 40 CFR Part 403, the State Pretreatment Regulations 15A NCAC 2H .0900, and the legal authorities, policies, procedures, and financial provisions contained in its pretreatment program submission and Division approved modifications there of. Such operation shall include but is not limited to the implementation of the following conditions and requirements:

1. Sewer Use Ordinance (SUO)
The Permittee shall maintain adequate legal authority to implement its approved pretreatment program.

2. Industrial Waste Survey (IWS)
The Permittee shall update its Industrial Waste Survey (IWS) to include all users of the sewer collection system at least once every five years.

3. Monitoring Plan
The Permittee shall implement a Division-approved Monitoring Plan for the collection of facility specific data to be used in a wastewater treatment plant Headworks Analysis (HWA) for the development of specific pretreatment local limits. Effluent data from the Plan shall be reported on the DMRs (as required by Part II, Section D, and Section E.5.).

4. Headworks Analysis (HWA) and Local Limits
The Permittee shall obtain Division approval of a Headworks Analysis (HWA) at least once every five years, and as required by the Division. Within 180 days of the effective date of this permit (or any subsequent permit modification) the Permittee shall submit to the Division a written technical evaluation of the need to revise local limits (i.e., an updated HWA or documentation of why one is not needed) [40 CFR 122.44]. The Permittee shall develop, in accordance with 40 CFR 403.5(c) and 15A NCAC 2H .0909, specific Local Limits to implement the prohibitions listed in 40 CFR 403.5(a) and (b) and 15A NCAC 2H .0909.

5. Industrial User Pretreatment Permits (IUP) & Allocation Tables
In accordance with NCGS 143-215.1, the Permittee shall issue to all significant industrial users, permits for operation of pretreatment equipment and discharge to the Permittee's treatment works. These permits shall contain limitations, sampling protocols, reporting requirements, appropriate standard and special conditions, and compliance schedules as necessary for the installation of treatment and control technologies to assure that their wastewater discharge will meet all applicable pretreatment standards and requirements. The Permittee shall maintain a current Allocation Table (AT) which summarizes the results of the Headworks Analysis (HWA) and the limits from all Industrial User Pretreatment Permits (IUP). Permitted IUP loadings for each parameter cannot exceed the treatment capacity of the POTW as determined by the HWA.

6. Authorization to Construct (AtC)
The Permittee shall ensure that an Authorization to Construct permit (AtC) is issued to all applicable industrial users for the construction or modification of any pretreatment facility. Prior to the issuance of an AtC, the proposed pretreatment facility and treatment process must be evaluated for its capacity to comply with all Industrial User Pretreatment Permit (IUP) limitations.

7. POTW Inspection & Monitoring of their SIUs
The Permittee shall conduct inspection, surveillance, and monitoring activities as described in its Division approved pretreatment program in order to determine, independent of information supplied by industrial users, compliance with applicable pretreatment standards. The Permittee must:
   a. Inspect all Significant Industrial Users (SIUs) at least once per calendar year; and
   b. Sample all Significant Industrial Users (SIUs) at least twice per calendar year for all permit-limited pollutants, once during the period from January 1 through June 30 and once during the period from July 1 through December 31, except for organic compounds which shall be sampled once per calendar year;

8. SIU Self Monitoring and Reporting
The Permittee shall require all industrial users to comply with the applicable monitoring and reporting requirements outlined in the Division-approved pretreatment program, the industry's pretreatment permit, or in 15A NCAC 2H .0908.

9. Enforcement Response Plan (ERP)
The Permittee shall enforce and obtain appropriate remedies for violations of all pretreatment standards promulgated pursuant to section 307(b) and (c) of the Clean Water Act (40 CFR 405 et. seq.), prohibitive discharge standards as set forth in 40 CFR 403.5 and 15A NCAC 2H .0909, and specific local limitations. All enforcement actions shall be consistent with the Enforcement Response Plan (ERP) approved by the Division.

10. Pretreatment Annual Reports (PAR)
The Permittee shall report to the Division in accordance with 15A NCAC 2H .0908. In lieu of submitting annual reports, Modified Pretreatment Programs developed under 15A NCAC 2H .0904 (b) may be required to meet with Division personnel periodically to discuss enforcement of pretreatment requirements and other pretreatment implementation issues.

For all other active pretreatment programs, the Permittee shall submit two copies of a Pretreatment Annual Report (PAR) describing its pretreatment activities over the previous twelve months to the Division at the following address:

NC DENR / DWQ / Pretreatment Unit
1617 Mail Service Center
Raleigh, NC 27699-1617

These reports shall be submitted according to a schedule established by the Director and shall contain the following:

a.) Narrative
A brief discussion of reasons for, status of, and actions taken for all Significant Industrial Users (SIUs) in Significant Non-Compliance (SNC);

b.) Pretreatment Program Summary (PPS)
A pretreatment program summary (PPS) on specific forms approved by the Division;

c.) Significant Non-Compliance Report (SNCR)
The nature of the violations and the actions taken or proposed to correct the violations on specific forms approved by the Division;

d.) Industrial Data Summary Forms (IDSF)
Monitoring data from samples collected by both the POTW and the Significant Industrial User (SIU). These analytical results must be reported on Industrial Data Summary Forms (IDSF) or other specific format approved by the Division;

e.) Other Information
Copies of the POTW's allocation table, new or modified enforcement compliance schedules, public notice of SIUs in SNC, and any other information, upon request, which in the opinion of the Director is needed to determine compliance with the pretreatment implementation requirements of this permit;

11. Public Notice
The Permittee shall publish annually a list of Significant Industrial Users (SIUs) that were in Significant Non-Compliance (SNC) as defined in the Permittee's Division-approved Sewer Use Ordinance with applicable pretreatment requirements and standards during the previous twelve month period. This list shall be published within four months of the applicable twelve-month period.

12. Record Keeping
The Permittee shall retain for a minimum of three years records of monitoring activities and results, along with support information including general records, water quality records, and records of industrial impact on the POTW.

13. Funding and Financial Report
The Permittee shall maintain adequate funding and staffing levels to accomplish the objectives of its approved pretreatment program.

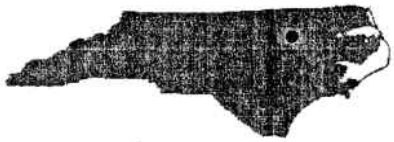
14. Modification to Pretreatment Programs
Modifications to the approved pretreatment program including but not limited to local limits modifications, POTW monitoring of their Significant Industrial Users (SIUs), and Monitoring Plan modifications, shall be considered a permit modification and shall be governed by 15 NCAC 2H .0114 and 15A NCAC 2H .0907.

FEB 15 08
RECD BY CENTRAL FILES

DENR/DWQ
FACT SHEET FOR NPDES PERMIT DEVELOPMENT
NPDES No. NC0088285

Facility Information	
Applicant/Facility Name:	City of Raleigh/ Dempsey E. Benton WTP
Applicant Address:	City of Raleigh, One Exchange Plaza, 219 Fayetteville Street Mall, Suite Raleigh NC, 27601
Facility Address:	2315 Benson Road (NC Hwy 50), Garner, North Carolina
Permitted Flow:	4.0 MGD
Type of Waste:	Water Treatment
Other Permit(s):	N/A
Facility / Permit Status:	Class IV / New
County:	Wake County

Miscellaneous			
Receiving Stream:	Lake Benson	Regional Office:	Raleigh
Stream Classification:	WS-III, NSW, CA	USGS Topo Quad:	E 24NE
303(d) Listed?	No	Permit Writer:	Sergei Chernikov
Subbasin:	03-04-02	Date:	October 14, 2007
Drainage Area (mi^2):	N/A		
Summer 7Q10 (cfs) :	N/A		
Winter 7Q10 (cfs):	N/A		
30Q2 (cfs) :	N/A		
Average Flow (cfs):	N/A		
IWC (%):	N/A		



Lat. 35° 39' 45.79" N Long. 78° 36' 41.63" W

BACKGROUND:

This is the renewal of the recently issued permit, the facility has not been constructed. Dempsey E. Benton WTP is a Class IV, conventional water treatment plant that will provide 20 MGD of drinking water for the City of Raleigh, Town of Garner, and Town of Rolesville. The wastewater generated on-site will be reused to the maximum extent possible on site. Some of it will be land applied, and some of it will be conveyed to the existing WWTP. The facility will discharge only the treated filter backwash.

Speculative limits for the proposed facility were calculated by DWQ on June 17, 2004, the FONSI was issued on June 13, 2006, and the EEA has been approved on July 26, 2006. Effluent limitations are implemented based on the new policy for Conventional Water Treatment Plants.

The Division has determined that the proposed Water Treatment Plant is necessary to accommodate social and economic growth in the area and that it will not result in contravention of surface water quality standards or loss of designated uses in the receiving stream.

PROPOSED SCHEDULE FOR PERMIT ISSUANCE:

Draft Permit to Public Notice: October 24, 2007 (est.)
Permit Scheduled to Issue: December 17, 2007 (est.)

TOXICITY TESTING:

Type of Toxicity Test: Chronic P/F
Recommended Limit: 001: Chronic P/F @ 90%
Monitoring Schedule: January, April, July, October

NPDES CONTACT:

If you have questions regarding any of the above information or on the attached permit, please contact Sergei Chernikov at (919) 733-5083 ext. 594.

CHANGES TO THE FINAL PERMIT:

- A weekly Total Coliform monitoring has been added at the insistence of the Division of Environmental Health, Public Water Supply Section

North Carolina
Division of Environmental Health

Division of Environmental Health
Terry L. Pierce, Director

Public Water Supply Section
Jessica G. Miles, Section Chief

State of North Carolina
Michael F. Easley, Governor

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

RECEIVED
NOV 22 2007
DENR - WATER QUALITY
POINT SOURCE BRANCH

MEMORANDUM

TO: Sergei Chernikov
NPDES-West
Division of Water Quality

FROM: Jessica G. Miles, P.E., C.P.M., Section Chief
Public Water Supply Section

SUBJECT: Draft National Pollutant Discharge Elimination System Permit NC0088285
Dempsey E. Benton WTP, City of Raleigh
Benson Road (NC Hwy 50), Garner, NC
Wake County

DATE: November 15, 2007

Reference is made to the above-mentioned Draft National Pollutant Discharge Elimination System Permit. Upon review of this permit application for the proposed discharge of 4.0 MGD (monthly average) of treated filter backwash from the proposed Dempsey E. Benton Water Treatment Plant at Benson Road (NC Hwy 50), it appears no adverse effect on water quality will occur to the existing public water supply intakes.

The proposed point of discharge will be located less than 5 miles upstream of intake for the proposed Dempsey E. Benton Water Treatment Plant. However, we concur with the issuance of this permit provided this facility is operated and maintained properly; the stated effluent limits are met prior to discharge; **at least weekly monitoring for coliform is conducted**; and the discharge does not contravene the designated water quality standards.

If we can be of further assistance, please contact Michael L. Douglas, P.E., at 919-791-4200.

JGM/MLD

Public Water Supply Section
1634 Mail Service Center, Raleigh, North Carolina 27699-1628
Telephone 919-791-4200 ▲ Main Fax 919-571-4718 ▲ PWS Fax 919-788-5349
http://ncdrinkingwater.state.nc.us/

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The City of Raleigh, Raleigh Convention Center Groundwater Remidiation Site, Permit NC0088137, has applied for a renewal of the permit discharge treated groundwater to the Ready Branch in the Neuse River Basin. Toluene is water quality limited parameter. The discharge may affect future allocations to this portion of the receving stream.

The City of Raleigh (One Exchange Plaza, 219 Fayetteville Street Mall, Suite 620, Raleigh, NC 27601) has applied for a renewal of its NPDES permit NC0088285 for the Dempsey E. Benton WTP in Wake County. This permitted facility will discharge treated filter backwash to Lake Benson in the Neuse River Basin. Currently total suspended solids, total settleable solids, and total residual chlorine are water quality limited. This discharge may affect future allocations in this portion of the Neuse River Basin.

The Town of Creswell (P.O. Box 68, Creswell NC, 27928) has applied for renewal of NPDES permit NC0027600 for the Creswell Water Treatment Plant, Washington County. This facility is permitted to discharge 0.011 MGD of treated wastewater to an unnamed tributary to Scuppernong River in the Pasquotank River Basin. Currently, TSS, TRC, pH are water quality limited. This discharge may affect future allocations in this portion of the Pasquotank River Basin.

The Town of Roper (P.O. Box 217, Roper, NC 27970) has applied for renewal of NPDES permit NC0031925 for the Roper WTP, Washington County. This permitted facility discharges chlorinated filter backwash to an unnamed tributary to the Main Canal into Kendrick Creek in the Pasquotank River Basin. Currently , TSS, TRC, and pH are water quality limited. This discharge may affect future allocations in this portion of the Pasquotank River Basin.

Michael F. Easley, Governor
State of North Carolina

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

Coleen H. Sullins, Director
Division of Water Quality

Wednesday, October 24, 2007

TO: **News And Observer**
Fax#: **919-829-4824**
Legal Advertisements Desk
Billing Department

From: Dina Sprinkle
(919) 733-5083, extension 363

Subject: Publication of Legal Advertisement (3 pages including this cover sheet)

Please publish the attached public notice as a line advertisement in the legal section of your paper ONE TIME as soon as possible and fax a proof to me at (919) 733-0719 for final approval prior to publication. If you do not receive a response regarding the proof, no changes are needed.

BILLING INFORMATION

Within 10 days after the publish date, please send the invoice and 2 copies of the original affidavit to:

NCDENR/DWQ/NPDES
ATTN: Dina Sprinkle
1617 Mail Service Center
Raleigh, NC 27699-1617

Please Note: Both an invoice and original affidavit are required for payment. Please call (919) 733-5083 extension 363 as soon as possible if other arrangements need to be made before publication.

Thank you for your assistance.

DWQ POINT SOURCE Fax:9197330719

** Transmit Conf. Report **

P.1 Oct 24 2007 14:16

Fax/Phone Number	Mode	Start	Time	Page	Result	Note
98294824	S-FINE	24,14:16	1'35"	3	# O K	

DIVISION OF WATER QUALITY DWQ

Michael F. Easley, Governor
State of North Carolina

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

Coleen H. Sullins, Director
Division of Water Quality

Wednesday, October 24, 2007

TO: **News And Observer**
Fax#: 919-829-4824
Legal Advertisements Desk
Billing Department

From: Dina Sprinkle
(919) 733-5083, extension 363

Subject: Publication of Legal Advertisement (3 pages including this cover sheet)

Please publish the attached public notice as a line advertisement in the legal section of your paper ONE TIME as soon as possible and fax a proof to me at (919) 733-0719 for final approval prior to publication. If you do not receive a response regarding the proof, no changes are needed.

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Raleigh, NC 27699-1617

Please Note: Both an invoice and original affidavit are required for payment. Please call (919) 733-5083 extension 363 as soon as possible if other arrangements need to be made before publication.

Thank you for your assistance.

FEB 15 08
FROM MY GENERAL FILES

Subject: [Fwd: Public Notices 102407.xls]
From: Mike Templeton <Mike.Templeton@ncmail.net>
Date: Thu, 25 Oct 2007 17:36:16 -0400
To: Sergei Chernikov <Sergei.Chernikov@ncmail.net>

Sergei - Sorry I didn't catch this before you left today. I'll be out tomorrow so will leave this note and we can talk on Monday if we need to. These two permits are scheduled to have effective dates of 3/1/08, to keep them in synch with the basin schedule. Just wanted to mention it since you got the drafts out already. Enjoy the weekend, see you next week. - Mike T

NC0088137 Raleigh Convention Center GW
NC0088285 Dempsey E. Benton WTP

-------- Original Message --------
Subject: Public Notices 102407.xls
Date: Wed, 24 Oct 2007 14:26:54 -0400
From: Dina.Sprinkle <Dina.Sprinkle@NCMail.net>
To:DENR.PSB.DWQ <DENR.PSB.DWQ@ncmail.net>

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

Michael F. Easley, Governor
William G. Ross, Jr., Secretary
Coleen H. Sullins,, Director

NCDENR
NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES

October 24, 2006

Mr. Dale Crisp, P.E.
Director of Public Utilities
City of Raleigh
One Exchange Plaza
219 Fayetteville Street Mall, Suite 620
Raleigh, North Carolina 27601

Subject: Draft NPDES Permit
Permit **NC0088285**
Dempsey E. Benton WTP
Wake County

Dear Mr. Crisp,

Enclosed with this letter is a copy of the draft permit for your facility. Please review the draft very carefully to ensure thorough understanding of the conditions and requirements it contains.

Please submit any comments to me no later than thirty days following your receipt of the draft. Comments should be sent to the address listed at the bottom of this page. If no adverse comments are received from the public or from you, this permit will likely be issued in late January, with an effective date of March 1, 2008.

If you have any questions or comments concerning this draft permit, contact me at the telephone number or e-mail address listed at the bottom of this page.

Sincerely,

Sergei Chernikov, Ph.D.
Environmental Engineer II
NPDES-West

cc: NPDES Files
Raleigh Regional Office / Surface Water Protection
DEH
Mr. Roosevelt Childress, EPA Region IV

1617 Mail Service Center, Raleigh, North Carolina 27699-1617
An Equal Opportunity Affirmative Action Employer
919 733-5083, extension 594 (fax) 919 733-0719
sergei.chernikov@ ncmail.net

Permit No. NC0088285

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER QUALITY

Draft PERMIT

TO DISCHARGE WASTEWATER UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provision of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended,

City of Raleigh

is hereby authorized to discharge wastewater from a facility located at

Dempsey E. Benton
Water Treatment Plant
Benson Road (NC Hwy 50)
Garner
Wake County

to receiving waters designated as an unnamed tributary to the Lake Benson in the Neuse River Basin in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, and IV hereof.

This permit shall become effective

This permit and authorization to discharge shall expire at midnight on February 28, 2013.

Signed this day

Coleen H. Sullins, Director
Division of Water Quality
By Authority of the Environmental Management Commission

Permit No. NC0088285

SUPPLEMENT TO PERMIT COVER SHEET

All previous NPDES Permits issued to this facility, whether for operation or discharge are hereby revoked. As of this permit issuance, any previously issued permit bearing this number is no longer effective. Therefore, the exclusive authority to operate and discharge from this facility arises under the permit conditions, requirements, terms, and provisions included herein.

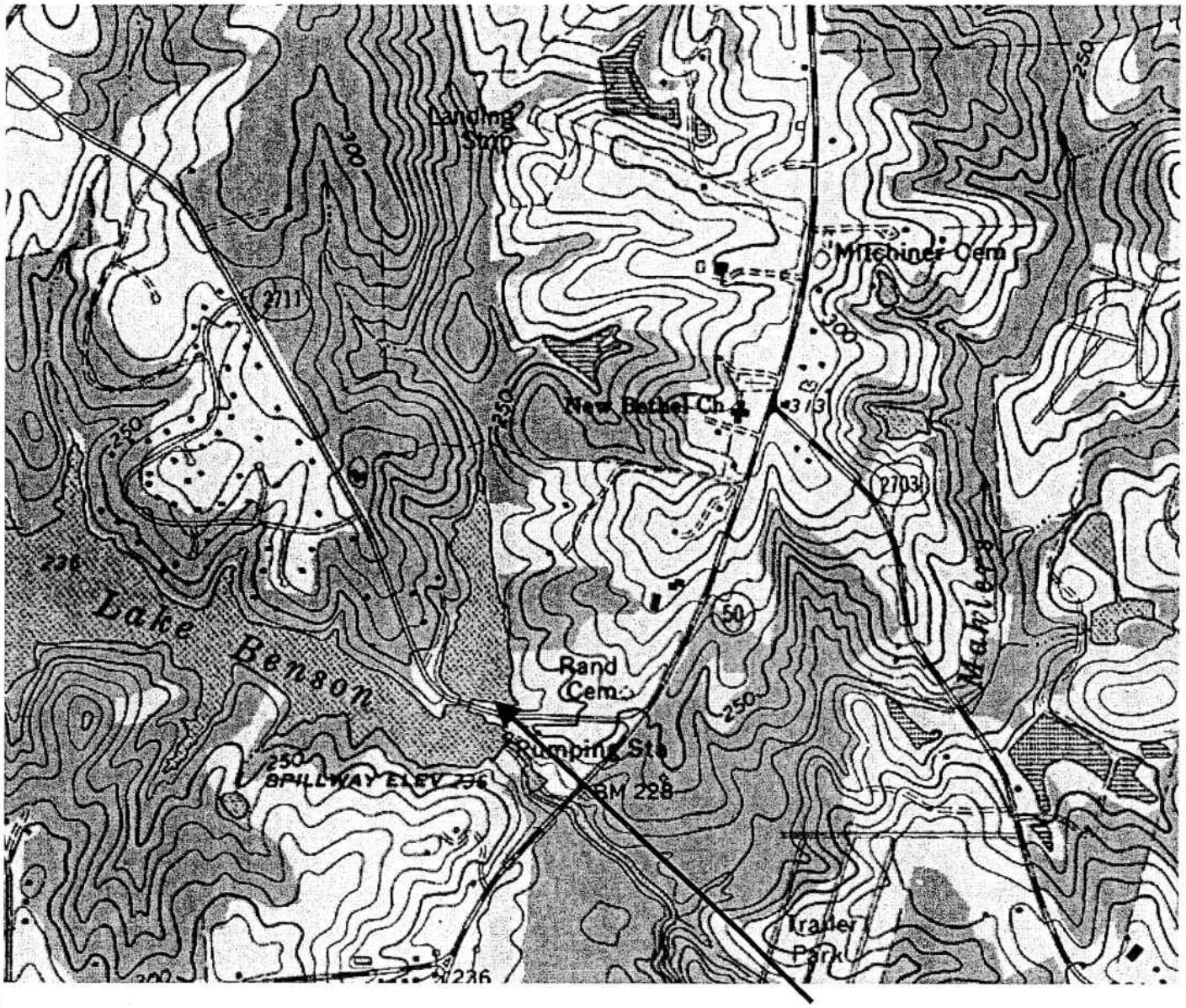
City of Raleigh

is hereby authorized to:

1. Discharge treated filter backwash from the Dempsey E. Benton Water Treatment Plant at Benson Road (NC Hwy 50), Garner, Wake County.

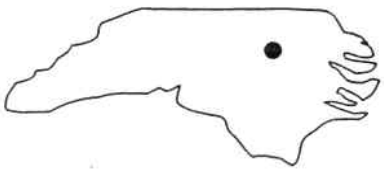
2. After receiving an Authorization to Construct permit from the Division, construct facilities for the treatment of wastewater resulting from water treatment.

3. After submitting an Engineer's Certification, discharge from said treatment works at the location specified on the attached map into Lake Benson, a class WS-III, NSW, CA water in the Neuse River Basin.



Latitude: _____	35° 39′ 45.79″
Longitude:	78° 36′ 41.63″
USGS Quad #:____	E24NE
River Basin #:____	03-04-02
Receiving Stream:	Lake Benson
Stream Class:_____	WS-III, NSW, CA

N



City of Raleigh
Dempsey E. Benton
Water Treatment Plant
Wake County
NC0088285

A (1). EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning upon the effective date of the permit and lasting until expiration, the Permittee is authorized to discharge from outfall(s) serial number 001. Such discharges shall be limited and monitored by the Permittee as specified below:

EFFLUENT CHARACTERISTICS	LIMITS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location[1]
Flow	4.0 MGD			Continuous	Recording	E
Total Suspended Solids	30.0 mg/L		45.0 mg/L	Weekly	Composite	E
pH[2]				Weekly	Grab	E
Total Residual Chlorine			17 µg/L	Weekly	Grab	E
NH_3-N				Monthly	Grab	E
Total Iron				Quarterly	Grab	E
Total Aluminum				Quarterly	Grab	E
Total Calcium				Quarterly	Grab	E
Total Copper				Quarterly	Grab	E
Total Fluoride				Quarterly	Grab	E
Total Magnesium				Quarterly	Grab	E
Total Manganese				Quarterly	Grab	E
Total Zinc				Quarterly	Grab	E
Total Phosphorus				Monthly	Grab	E
Total Nitrogen				Monthly	Grab	E
Settleable Solids	0.1 mL/L		0.2 mL/L	2/Month	Grab	E
Whole Effluent Toxicity[3]				Quarterly	Composite	E

Notes:

1. Sample locations: E – Effluent.

2. The pH shall not be less than 6.0 standard units or greater than 9.0 standard units.

3. Chronic Toxicity (Ceriodaphnia) P/F @ 90%; January, April, July, and October; See condition A(2) of the Supplement to Effluent Limitations and Monitoring Section of this permit.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

A. (2) CHRONIC TOXICITY PERMIT LIMIT (QUARTERLY)

The effluent discharge shall at no time exhibit observable inhibition of reproduction or significant mortality to *Ceriodaphnia dubia* at an effluent concentration of **90%.**

The permit holder shall perform at a minimum, *quarterly* monitoring using test procedures outlined in the "North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure," Revised February 1998, or subsequent versions or "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions. The tests will be performed *during the months of* **January, April, July and October**. Effluent sampling for this testing shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

If the test procedure performed as the first test of any single quarter results in a failure or ChV below the permit limit, then multiple-concentration testing shall be performed at a minimum, in each of the two following months as described in "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

The chronic value for multiple concentration tests will be determined using the geometric mean of the highest concentration having no detectable impairment of reproduction or survival and the lowest concentration that does have a detectable impairment of reproduction or survival. The definition of "detectable impairment," collection methods, exposure regimes, and further statistical methods are specified in the "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the months in which tests were performed, using the parameter code TGP3B for the pass/fail results and THP3B for the Chronic Value. Additionally, DWQ Form AT-3 (original) is to be sent to the following address:

Attention: North Carolina Division of Water Quality
Environmental Sciences Section
1621 Mail Service Center
Raleigh, North Carolina 27699-1621

Completed Aquatic Toxicity Test Forms shall be filed with the Environmental Sciences Branch no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete, accurate, include all supporting chemical/physical measurements and all concentration/response data, and be certified by laboratory supervisor and ORC or approved designate signature. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the Permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of

"No Flow" in the comment area of the form. The report shall be submitted to the Environmental Sciences Branch at the address cited above.

Should the Permittee fail to monitor during a month in which toxicity monitoring is required, monitoring will be required during the following month.

Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Quality indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

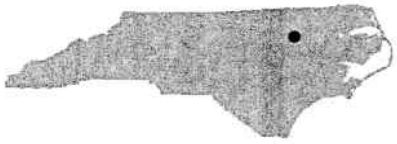
NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an invalid test and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

FEB 15 08

FILED BY CENTRAL FILES

DENR/DWQ
FACT SHEET FOR NPDES PERMIT DEVELOPMENT
NPDES No. NC0088285

Facility Information	
Applicant/Facility Name:	City of Raleigh/ Dempsey E. Benton WTP
Applicant Address:	City of Raleigh, One Exchange Plaza, 219 Fayetteville Street Mall, Suite Raleigh NC, 27601
Facility Address:	2315 Benson Road (NC Hwy 50), Garner, North Carolina
Permitted Flow:	4.0 MGD
Type of Waste:	Water Treatment
Other Permit(s):	N/A
Facility / Permit Status:	Class IV / New
County:	Wake County

Miscellaneous			
Receiving Stream:	Lake Benson	Regional Office:	Raleigh
Stream Classification:	WS-III, NSW, CA	USGS Topo Quad:	E 24NE
303(d) Listed?	No	Permit Writer:	Sergei Chernikov
Subbasin:	03-04-02	Date:	October 14, 2007
Drainage Area (mi^2):	N/A		
Summer 7Q10 (cfs) :	N/A		
Winter 7Q10 (cfs):	N/A		
30Q2 (cfs) :	N/A		
Average Flow (cfs):	N/A		
IWC (%):	N/A	Lat. 35° 39' 45.79" N	Long. 78° 36' 41.63" W

BACKGROUND:

This is the renewal of the recently issued permit, the facility has not been constructed. Dempsey E. Benton WTP is a Class IV, conventional water treatment plant that will provide 20 MGD of drinking water for the City of Raleigh, Town of Garner, and Town of Rolesville. The wastewater generated on-site will be reused to the maximum extent possible on site. Some of it will be land applied, and some of it will be conveyed to the existing WWTP. The facility will discharge only the treated filter backwash.

Speculative limits for the proposed facility were calculated by DWQ on June 17, 2004, the FONSI was issued on June 13, 2006, and the EEA has been approved on July 26, 2006. Effluent limitations are implemented based on the new policy for Conventional Water Treatment Plants.

The Division has determined that the proposed Water Treatment Plant is necessary to accommodate social and economic growth in the area and that it will not result in contravention of surface water quality standards or loss of designated uses in the receiving stream.

PROPOSED SCHEDULE FOR PERMIT ISSUANCE:

Draft Permit to Public Notice: October 24, 2007 (est.)
Permit Scheduled to Issue: December 17, 2007 (est.)

TOXICITY TESTING:

Type of Toxicity Test: Chronic P/F
Recommended Limit: 001: Chronic P/F @ 90%
Monitoring Schedule: January, April, July, October

NPDES CONTACT:

If you have questions regarding any of the above information or on the attached permit, please contact Sergei Chernikov at (919) 733-5083 ext. 594.

October 24, 2007

MEMORANDUM

To: Michael Douglass, Regional Engineer
NC DENR / DEH / Public Water Supply Section
Raleigh Regional Office

From: Sergei Chernikov, Environmental Engineer II, NPDES-West,
Division of Water Quality (fax-919-733-0719)

Subject: Review of the discharge locations for the following:

Depsey E. Benton WTP
NC0088285
Wake County

Please indicate below by **November 26, 2007** your agency's position or viewpoint on the facility listed above. We cannot issue the permit without your concurrence. Please return this form at your earliest convenience.

RESPONSE:

_____ This agency has reviewed the draft permit and determined that the proposed discharge will not be sufficiently close to any existing or known proposed public water supply intake so as to create an adverse effect on water quality. We concur with the issuance of this permit provided the facility is operated and maintained properly, the stated effluent limits are met prior to discharge, and the discharge does not contravene the designated water quality standards.

_____ Concurs with issuance of the above permit, provided the following conditions are met:

_____
_____
_____

_____ Opposes the issuance of the above permit, based on reasons stated below, or attached:

_____
_____
_____

Signed_____ Date:_____

cc: **file**

NPDES PERMIT APPLICATION - SHORT FORM C - WTP

For discharges associated with water treatment plants

Mail the complete application to:
N. C. Department of Environment and Natural Resources
Division of Water Quality / NPDES Unit
1617 Mail Service Center, Raleigh, NC 27699-1617

NPDES Permit Number NC0088285

If you are completing this form in computer use the TAB key or the up – down arrows to move from one field to the next. To check the boxes, click your mouse on top of the box. Otherwise, please print or type.

1. Contact Information:

Owner Name	City of Raleigh
Facility Name	Demspey E. Benton Water Treatment Plant
Mailing Address	One Exchange Plaza, Suite 620
City	Raleigh
State / Zip Code	NC, 27602
Telephone Number	(919)857-4540
Fax Number	(919)857-4545
e-mail Address	Dale.Crisp@ci.raleigh.nc.us

2. Location of facility producing discharge:

Check here if same as above ☐

Street Address or State Road	2315 Benson Road (NC Hwy 50)
City	Garner
State / Zip Code	NC, 27529
County	Wake

3. Operator Information:

Name of the firm, consultant or other entity that operates the facility. (Note that this is not referring to the Operator in Responsible Charge or ORC)

Name	City of Raleigh, Public Utilities
Mailing Address	One Exchange Plaza, Suite 620
City	Raleigh
State / Zip Code	NC, 27602
Telephone Number	(919)857-4540
Fax Number	(919)857-4545

4. Ownership Status:

Federal ☐ State ☐ Private ☐ Public ☒

5. Type of treatment plant:

☒ **Conventional** (Includes coagulation, flocculation, and sedimentation, usually followed by filtration and disinfection)

☐ **Ion Exchange** (Sodium Cycle Cationic ion exchange)

☐ **Green Sand Filter** (No sodium recharge)

☐ **Membrane Technology** (RO, nanofiltration)

Check here if the treatment process also uses a water softener ☐

6. **Description of source water(s)** *(i.e. groundwater, surface water)*
Surface Water - Lake Benson

7. **Describe the treatment process(es) for the raw water:**
Raw water is pumped from the Lake Benson pump station to the plant, where it first undergoes chemical pretreatment. The chemical pretreatment system consist of ozone, potassium permanganate, and powder activated carbon (PAC). Water then enters a flash mixing system, where ferric sulfate and sodium hydroxide (caustic soda) are added. Coagulated water is then split between two Superpulsater clarification units. Each Superpulsater is equipped with nine sludge concentrators, which remove solids to be sent to the solids dewatering process. Water then flows first to the granulated activated carbon (GAC) filters and then to dual-media (Conventional) filters. Backwash from these filters is sent to a dissolved air floatation clarification process. Sodium Hypochlorite (for primary disinfection and iron and manganese control) and Sodium Hydroxide (for pH adjustment) are added between filter sets. Finally, the water is disinfected using an ultraviolet disinfection system. Sodium Hydroxide, Sodium Silicate (for corrosion control), Fluoride (for dental care), and Ammonium Hydroxide (for chloramination are added prior to storage and distribution.
(See attached pages for schematic.)

8. **Describe the wastewater and the treatment process(es) for wastewater generated by the facility:**
Backwash waste will be produced from the GAC and dual media filters. All of the filter backwash waste will be discharged to a 1 MG backwash waste equilization/storage tank. This tank will provide interim storage of filter backwashes prior to clarification. The backwash waste storage tank is capable of storing up to three GAC and Final Filter backwashes and is sized to provide 24 hours of storage. Effluent from the storage tank will be dechlorinated using sodium bisulfite and polymer will be added prior to entering the dissolved air floatation (DAF) clarification system. Two DAF units are provided for backwash waste clarification. The clarified effluent will be disinfected via a UV disinfection system before discharge into Outfall 001 to Lake Benson. The float solids will be pumped to sludge holding tanks prior to dewatering. The dewatering system is described in Item 15.

9. **Number of separate discharge points:** 1

Outfall Identification number(s) 001

10. **Frequency of discharge:** **Continuous** ☐ **Intermittent** ☒

If intermittent:
Days per week discharge occurs: 7 **Duration:** unrestricted

NPDES PERMIT APPLICATION - SHORT FORM C - WTP

For discharges associated with water treatment plants

11. **Plant design potable flowrate** 20 **MGD**

    Backwash or reject flow 2 **MGD**

12. **Name of receiving stream(s)** *(Provide a map showing the exact location of each outfall, including latitude and longitude)*:

    Lake Benson

13. **Please list all water treatment additives, including cleaning chemicals or disinfection treatments, that have the potential to be discharged.**

    Potassium Permanganate, Ferric Sulfate, Sodium Hydroxide or liquid lime,
    Coagulant Polymer, Filter Aid Polymer, Sodium Hypochlorite, Sodium Bisulfite,
    Chloramines

14. **Is this facility located on Indian country?** *(check one)*

    Yes ☐ **No** ☒

15. **Additional Information:**
    - **Provide a schematic of flow through the facility, include flow volumes at all points in the treatment process, and point of addition of chemicals.**
    - **Solids Handling Plan**

16. **NEW Applicants**
    Information needed in addition to items 1-15:
    - **New applicants must contact a permit coordinator with the NCDENR Customer Service Center.**
      Was the Customer Service Center contacted? ☐ **Yes** ☐ **No**
    - **Analyses of source water collected**
    - **Engineering Alternative Analysis**
    - **Discharges from Ion Exchange and Reverse Osmosis plants shall be evaluated using a water quality model.**

17. **Applicant Certification**

I certify that I am familiar with the information contained in the application and that to the best of my knowledge and belief such information is true, complete, and accurate.

NPDES PERMIT APPLICATION - SHORT FORM C - WTP

For discharges associated with water treatment plants

H. Dale Crisp, P.E. — Director of Public Utilities

Printed name of Person Signing — Title

7/30/07

Signature of Applicant — Date

North Carolina General Statute 143-215.6 (b)(2) provides that: Any person who knowingly makes any false statement representation, or certification in any application, record, report, plan, or other document files or required to be maintained under Article 21 or regulations of the Environmental Management Commission implementing that Article, or who falsifies, tampers with, or knowingly renders inaccurate any recording or monitoring device or method required to be operated or maintained under Article 21 or regulations of the Environmental Management Commission implementing that Article, shall be guilty of a misdemeanor punishable by a fine not to exceed $25,000, or by imprisonment not to exceed six months, or by both. (18 U.S.C. Section 1001 provides a punishment by a fine of not more than $25,000 or imprisonment not more than 5 years, or both, for a similar offense.)

RECD IN CENTRAL FILES

FEB 15 08

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WATER QUALITY

PERMIT

TO DISCHARGE WASTEWATER UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of North Carolina General Statute 143-215.1, other lawful standards and regulations promulgated and adopted by the North Carolina Environmental Management Commission, and the Federal Water Pollution Control Act, as amended, the

City of Raleigh

is hereby authorized to discharge wastewater from a facility located at the

Smith Creek Wastewater Treatment Plant
Off NCSR 2044 southwest of Wake Forest
Wake County

to receiving waters designated as the Neuse River in the Neuse River Basin

in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, and IV hereof.

The permit shall become effective ..... **March 1, 2008.**

This permit and the authorization to discharge shall expire at midnight on ..... **February 29, 2013**.

Signed this day ..... **January 8, 2008.**

Coleen H. Sullins, Director
Division of Water Quality
By Authority of the Environmental Management Commission

SUPPLEMENT TO PERMIT COVER SHEET

All previous NPDES Permits issued to this facility, whether for operation or discharge are hereby revoked, and as of this issuance, any previously issued permit bearing this number is no longer effective. Therefore, the exclusive authority to operate and discharge from this facility arises under the permit conditions, requirements, terms, and provisions included herein.

The City of Raleigh

is hereby authorized to:

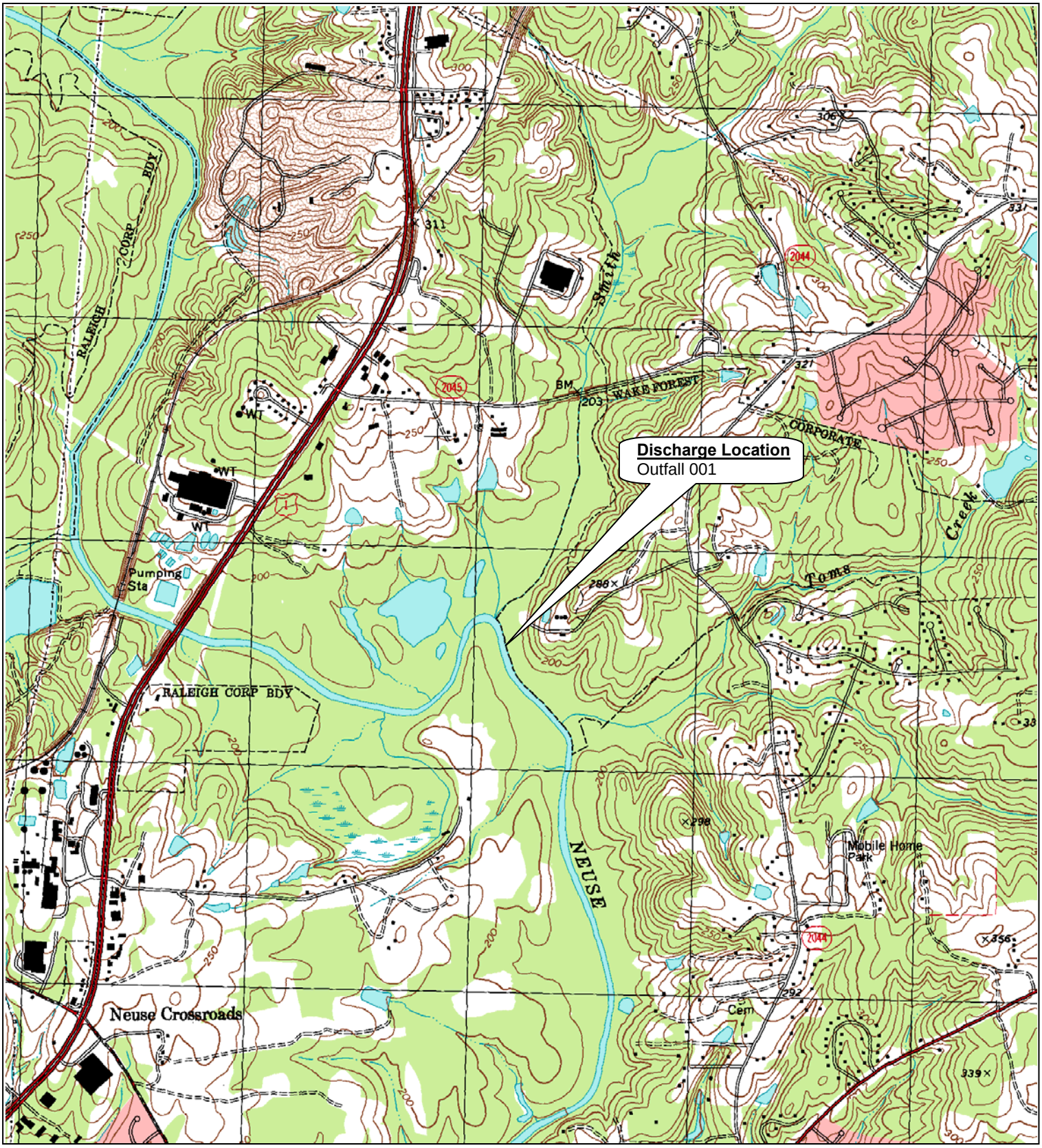
1. Continue operation of an existing 2.4 MGD wastewater treatment system, located at the Smith Creek Wastewater Treatment Plant, off of NCSR 2044, southwest of Wake Forest in Wake County. The system referenced herein consists of the following treatment units:
   - Mechanical bar screens;
   - Influent flume;
   - Continuous recording flow measurement;
   - Aerated grit removal;
   - Dual oxidation ditches;
   - Anaerobic/anoxic treatment basins;
   - Dual final clarifiers;
   - Tertiary filters;
   - Ultraviolet disinfection;
   - Cascade aeration;
   - Automatic sampler;
   - Chemical feed system;
   - Sludge thickening;
   - Diffused-air digestion; and
   - Sludge stabilization tanks.

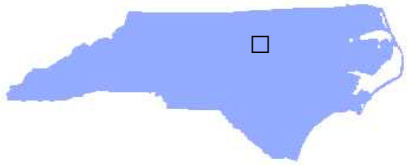
2. Reuse non-potable treated effluent, in an amount up to 0.01 MGD of the total permitted flow, for irrigation and dust control on the property of the Smith Creek Wastewater Treatment Plant in accordance with condition A. (10.) of this permit;

3. After receiving an Authorization to Construct from the Division of Water Quality, construct and operate facilities giving the system an ultimate treatment capacity of 3.0 MGD; and,

4. After receiving an Authorization to Construct from the Division of Water Quality, construct and operate facilities giving the system an ultimate treatment capacity of 6.0 MGD; and,

5. Discharge treated wastewater from said treatment works at the location specified on the attached map through outfall 001 into the Neuse River, a class C-NSW water in the Neuse River Basin.





USGS Quad #: D24NE, Wake Forest

N

SCALE
1:24,000
(1" = 2000')

City of Raleigh - Smith Creek WWTP
NC0030759

Receiving Stream:	Neuse River
Stream Classification:	C-NSW
River Basin:	Neuse
Sub-Basin #:	03-04-02

A.(1.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (2.4 MGD)

(a.) Beginning on the effective date of this permit and lasting until expansion above 2.4 MGD or permit expiration, the Permittee is authorized to discharge treated wastewater from Outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

PARAMETER	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location [1]
Flow (MGD)	2.4			Continuous	Recording	Influent or Effluent
Total Monthly Flow (MG)	Monitor & Report			Monthly	Recorded or Calculated	Influent or Effluent
BOD_5 (Summer) [2,3]	5.0 mg/L	7.5 mg/L		Daily	Composite	Influent and Effluent
BOD_5 (Winter) [2,3]	10.0 mg/L	15.0 mg/L		Daily	Composite	Influent and Effluent
Total Suspended Solids [2]	30.0 mg/L	45.0 mg/L		Daily	Composite	Influent and Effluent
NH_3 as N (Summer) [3]	2.0 mg/L	6.0 mg/L		Daily	Composite	Effluent
NH_3 as N (Winter) [3]	4.0 mg/L	12.0 mg/L		Daily	Composite	Effluent
Dissolved Oxygen	Daily average not less than 5.0 mg/L			Daily	Grab	Effluent
Fecal Coliform	200/100 mL	400/100 mL		Daily	Grab	Effluent
Total Residual Chlorine [4]			28 ug/L	Daily	Grab	Effluent
Temperature				Daily	Grab	Effluent
TKN (mg/L)	Monitor & Report			Weekly	Composite	Effluent
NO_3-N + NO_2-N (mg/L)	Monitor & Report			Weekly	Composite	Effluent
TN (mg/L) [5]	Monitor & Report			Weekly	Composite	Effluent
TN Load [6,7]	Monitor & Report			Monthly	Calculated	Effluent
	70,814 pounds/year			Annually	Calculated	Effluent
Total Phosphorus	2.0 mg/L (quarterly average) [8]			Weekly	Composite	Effluent
pH	Between 6.0 and 9.0 Standard Units			Daily	Grab	Effluent
Chronic Toxicity [9]				Quarterly	Composite	Effluent

Footnotes:

1. I: Influent. E: Effluent. See condition A. (4.) of this permit for instream monitoring requirements.
2. The monthly average BOD_5 and Total Suspended Solids concentrations shall not exceed 15% of the respective influent value (85% removal).
3. Summer shall be defined as April 1 – October 31 with winter defined as the balance of the year.
4. Effluent monitoring and limitation only apply if chlorine or a chlorine derivative is added to the waste stream during treatment.
5. For a given wastewater sample, TN = TKN + NO_3-N + NO_2-N, where TN is total nitrogen, TKN is total Kjeldahl Nitrogen, and NO_3-N and NO_2-N are nitrate and nitrite nitrogen, respectively.
6. TN load is the mass quantity of total nitrogen discharged in a given time period. See condition A. (5.) of this permit.
7. Compliance with the TN Load limit shall be determined in accordance with condition A. (6.) of this permit.
8. The quarterly average for total phosphorus shall be the average of composite samples collected during each calendar quarter (January - March, April - June, July - September, October - December).
9. Chronic Toxicity (Ceriodaphnia) @ 5.3%, February, May, August, November; see special condition A. (7.) of this permit.

(b.) There shall be no discharge of floating solids or visible foam in other than trace amounts.

A.(2.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (3.0 MGD)

(a.) Beginning upon expansion above 2.4 MGD and lasting until expansion above 3.0 MGD or permit expiration, the Permittee is authorized to discharge treated wastewater from Outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

PARAMETER	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location [1]
Flow (MGD)	3.0			Continuous	Recording	Influent or Effluent
Total Monthly Flow (MG)	Monitor & Report			Monthly	Recorded or Calculated	Influent or Effluent
BOD_5 (Summer) [2,3]	5.0 mg/L	7.5 mg/L		Daily	Composite	Influent and Effluent
BOD_5 (Winter) [2,3]	10.0 mg/L	15.0 mg/L		Daily	Composite	Influent and Effluent
Total Suspended Solids [2]	30.0 mg/L	45.0 mg/L		Daily	Composite	Influent and Effluent
NH_3 as N (Summer) [3]	1.0 mg/L	3.0 mg/L		Daily	Composite	Effluent
NH_3 as N (Winter) [3]	2.0 mg/L	6.0 mg/L		Daily	Composite	Effluent
Dissolved Oxygen	Daily average not less than 5.0 mg/L			Daily	Grab	Effluent
Fecal Coliform	200/100 mL	400/100 mL		Daily	Grab	Effluent
Total Residual Chlorine [4]			28 ug/L	Daily	Grab	Effluent
Temperature				Daily	Grab	Effluent
TKN (mg/L)	Monitor & Report			Weekly	Composite	Effluent
NO_3-N + NO_2-N (mg/L)	Monitor & Report			Weekly	Composite	Effluent
TN (mg/L) [5]	Monitor & Report			Weekly	Composite	Effluent
TN Load [6,7]	Monitor & Report			Monthly	Calculated	Effluent
	70,814 pounds/year			Annually	Calculated	Effluent
Total Phosphorus	2.0 mg/L (quarterly average) [8]			Weekly	Composite	Effluent
pH	Between 6.0 and 9.0 Standard Units			Daily	Grab	Effluent
Chronic Toxicity [9]				Quarterly	Composite	Effluent

Footnotes:

1. I: Influent. E: Effluent. See condition A. (4.) of this permit for instream monitoring requirements.
2. The monthly average BOD_5 and Total Suspended Solids concentrations shall not exceed 15% of the respective influent value (85% removal).
3. Summer shall be defined as April 1 – October 31 with winter defined as the balance of the year.
4. Effluent monitoring and limitation only apply if chlorine or a chlorine derivative is added to the waste stream during treatment.
5. For a given wastewater sample, TN = TKN + NO_3-N + NO_2-N, where TN is total nitrogen, TKN is total Kjeldahl Nitrogen, and NO_3-N and NO_2-N are nitrate and nitrite nitrogen, respectively.
6. TN load is the mass quantity of total nitrogen discharged in a given time period. See condition A. (5.) of this permit.
7. Compliance with the TN Load limit shall be determined in accordance with condition A. (6.) of this permit.
8. The quarterly average for total phosphorus shall be the average of composite samples collected during each calendar quarter (January - March, April - June, July - September, October - December).
9. Chronic Toxicity (Ceriodaphnia) @ 6.5%, February, May, August, November; see special condition A. (8.) of this permit.

(b) There shall be no discharge of floating solids or visible foam in other than trace amounts.

A.(3.) EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

(a.) Beginning upon expansion above 3.0 MGD and lasting until expiration, the Permittee is authorized to discharge treated wastewater from Outfall 001. Such discharges shall be limited and monitored by the Permittee as specified below:

PARAMETER	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS		
	Monthly Average	Weekly Average	Daily Maximum	Measurement Frequency	Sample Type	Sample Location [1]
Flow (MGD)	6.0			Continuous	Recording	Influent or Effluent
Total Monthly Flow (MG)	Monitor & Report			Monthly	Recorded or Calculated	Influent or Effluent
BOD_5 (Summer) [2,3]	5.0 mg/L	7.5 mg/L		Daily	Composite	Influent and Effluent
BOD_5 (Winter) [2,3]	10.0 mg/L	15.0 mg/L		Daily	Composite	Influent and Effluent
Total Suspended Solids [2]	30.0 mg/L	45.0 mg/L		Daily	Composite	Influent and Effluent
NH_3 as N (Summer) [3]	1.0 mg/L	3.0 mg/L		Daily	Composite	Effluent
NH_3 as N (Winter) [3]	2.0 mg/L	6.0 mg/L		Daily	Composite	Effluent
Dissolved Oxygen	Daily average not less than 5.0 mg/L			Daily	Grab	Effluent
Fecal Coliform	200/100 mL	400/100 mL		Daily	Grab	Effluent
Total Residual Chlorine [4]			28 ug/L	Daily	Grab	Effluent
Temperature				Daily	Grab	Effluent
TKN (mg/L)	Monitor & Report			Weekly	Composite	Effluent
NO_3-N + NO_2-N (mg/L)	Monitor & Report			Weekly	Composite	Effluent
TN (mg/L) [5]	Monitor & Report			Weekly	Composite	Effluent
TN Load [6,7]	Monitor & Report			Monthly	Calculated	Effluent
	70,814 pounds/year			Annually	Calculated	Effluent
Total Phosphorus	2.0 mg/L (quarterly average) [8]			Weekly	Composite	Effluent
pH	Between 6.0 and 9.0 Standard Units			Daily	Grab	Effluent
Chronic Toxicity [9]				Quarterly	Composite	Effluent

Footnotes:

1. I: Influent. E: Effluent. See condition A. (4.) of this permit for instream monitoring requirements.
2. The monthly average BOD_5 and Total Suspended Solids concentrations shall not exceed 15% of the respective influent value (85% removal).
3. Summer shall be defined as April 1 – October 31 with winter defined as the balance of the year.
4. Effluent monitoring and limitation only apply if chlorine or a chlorine derivative is added to the waste stream during treatment.
5. For a given wastewater sample, TN = TKN + NO_3-N + NO_2-N, where TN is total nitrogen, TKN is total Kjeldahl Nitrogen, and NO_3-N and NO_2-N are nitrate and nitrite nitrogen, respectively.
6. TN load is the mass quantity of total nitrogen discharged in a given time period. See condition A. (5.) of this permit.
7. Compliance with the TN Load limit shall be determined in accordance with condition A. (6.) of this permit.
8. The quarterly average for total phosphorus shall be the average of composite samples collected during each calendar quarter (January - March, April - June, July - September, October - December).
9. Chronic Toxicity (Ceriodaphnia) @ 12%, February, May, August, November; see special condition A. (9.) of this permit.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

A.(4.) INSTREAM MONITORING REQUIREMENTS

Instream monitoring is required for the following parameters at the locations specified:

PARAMETER	SAMPLE TYPE	LOCATION[1]
Dissolved Oxygen	Grab	U, D1, D2
Temperature	Grab	U, D1, D2

Footnotes:

1. Sample Locations: U – Upstream at least 100 feet from the outfall. D1: Downstream at U.S. Highway 401. D2: Downstream at NCSR 2215. Stream samples shall be collected three times per week during the months of June, July, August, and September and weekly during the remainder of the year. These instream monitoring requirements are waived so long as the Permittee maintains full and active member ship in the Lower Neuse Basin Association, Inc. (LNBA) for the subject facility. Upon termination or cessation of its membership in the LNBA, these instream monitoring requirements are reinstated immediately, and the Permittee must notify the Division within five (5) business days.

A.(5.) CALCULATION OF TOTAL NITROGEN LOADS

The Permittee shall calculate the monthly and annual discharge TN loads from the WWTP as follows:

(i.) Monthly TN Load (pounds/month) = TN x TMF x 8.34

where:

TN = the average total nitrogen concentration (mg/L) of the composite samples collected during the calendar month

TMF = the Total Monthly Flow of wastewater discharged during the month (MG/month)

8.34 = conversion factor, from (mg/L x MG) to pounds

(ii.) Annual TN Load (pounds/yr) = Sum of Monthly TN Loads (12) for the calendar year

A.(6.) ANNUAL LIMITS FOR TOTAL NITROGEN

(a.) Total Nitrogen (TN) allocations and TN Load limits for NPDES dischargers in the Neuse River basin are annual limits and are applied for the calendar year.

(b.) For any given calendar year, the Permittee shall be in compliance with the annual TN Load limit in this Permit if:

(i.) the Permittee's annual TN Load is less than or equal to said limit, or

(ii.) the Permittee is a Co-Permittee Member of a compliance association.

(c.) The TN Load limit in this Permit (if any) may be modified as the result of allowable changes in the Permittee's TN allocation.

(i.) Allowable changes include those resulting from purchase of TN allocation from the Wetlands Restoration Fund; purchase, sale, trade, or lease of allocation between the Permittee and other dischargers; regionalization; and other transactions approved by the Division.

(ii.) The Permittee may request a modification of the TN Load limit in this Permit to reflect allowable changes in its TN allocation. Upon receipt of timely and proper application, the

Division will modify the permit as appropriate and in accordance with state and federal program requirements.

(iii.) Changes in TN limits become effective on January 1 of the year following permit modification. The Division must receive application no later than August 31 for changes proposed for the following calendar year.

(iv.) Application shall be sent to:

NCDWQ / NPDES Unit
Attn: Neuse River Basin Coordinator
1617 Mail Service Center
Raleigh, NC 27699-1617

(d.) If the Permittee is a member and Co-Permittee of an approved compliance association, its TN discharge is governed by that association's group NPDES permit and the TN limits therein.

(i.) The Permittee shall be considered a Co-Permittee Member for any given calendar year in which it is identified as such in Appendix A of the association's group NPDES permit.

(ii.) Association roster(s) and members' TN allocations will be updated annually and in accordance with state and federal program requirements.

(iii.) If the Permittee intends to join or leave a compliance association, the Division must be notified of the proposed action in accordance with the procedures defined in the association's NPDES permit.

(A) Upon receipt of timely and proper notification, the Division will modify the permit as appropriate and in accordance with state and federal program requirements.

(B) Membership changes in a compliance association become effective on January 1 of the year following modification of the association's permit.

(e.) The TN monitoring and reporting requirements in this individual Permit remain in effect until expiration of this Permit and are not affected by the Permittee's membership in a compliance association.

A.(7.) CHRONIC TOXICITY PERMIT LIMIT (Quarterly at 2.4 MGD)

The effluent discharge shall at no time exhibit observable inhibition of reproduction or significant mortality to *Ceriodaphnia dubia* at an effluent concentration of **5.3%.**

The permit holder shall perform at a minimum, quarterly monitoring using test procedures outlined in the "North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure," Revised February 1998, or subsequent versions or "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions. The tests will be performed during the months of **February, May, August, and November**. Effluent sampling for this testing shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

If the test procedure performed as the first test of any single quarter results in a failure or ChV below the permit limit, then multiple-concentration testing shall be performed at a minimum, in each of the two following months as described in "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

The chronic value for multiple concentration tests will be determined using the geometric mean of the highest concentration having no detectable impairment of reproduction or survival and the lowest concentration that does have a detectable impairment of reproduction or survival. The definition of "detectable impairment," collection methods, exposure regimes, and further statistical methods are

specified in the "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the months in which tests were performed, using the parameter code **TGP3B** for the pass/fail results and **THP3B** for the Chronic Value. Additionally, DWQ Form AT-3 (original) is to be sent to the following address:

Attention: Environmental Sciences Section
North Carolina Division of Water Quality
1621 Mail Service Center
Raleigh, North Carolina 27699-1621

Completed Aquatic Toxicity Test Forms shall be filed with the Environmental Sciences Section no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete, accurate, include all supporting chemical/physical measurements and all concentration/response data, and be certified by laboratory supervisor and ORC or approved designate signature. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Environmental Sciences Section at the address cited above.

Should the permittee fail to monitor during a month in which toxicity monitoring is required, monitoring will be required during the following month.

Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Quality indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an invalid test and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

A.(8.) CHRONIC TOXICITY PERMIT LIMIT (Quarterly at 3.0 MGD)

The effluent discharge shall at no time exhibit observable inhibition of reproduction or significant mortality to *Ceriodaphnia dubia* at an effluent concentration of **6.5%.**

The permit holder shall perform at a minimum, quarterly monitoring using test procedures outlined in the "North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure," Revised February 1998, or subsequent versions or "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions. The tests will be performed during the months of **February, May, August, and November**. Effluent sampling for this testing shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

If the test procedure performed as the first test of any single quarter results in a failure or ChV below the permit limit, then multiple-concentration testing shall be performed at a minimum, in each of the two following months as described in "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

The chronic value for multiple concentration tests will be determined using the geometric mean of the highest concentration having no detectable impairment of reproduction or survival and the lowest concentration that does have a detectable impairment of reproduction or survival. The definition of

"detectable impairment," collection methods, exposure regimes, and further statistical methods are specified in the "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the months in which tests were performed, using the parameter code **TGP3B** for the pass/fail results and **THP3B** for the Chronic Value. Additionally, DWQ Form AT-3 (original) is to be sent to the following address:

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Test data shall be complete, accurate, include all supporting chemical/physical measurements and all concentration/response data, and be certified by laboratory supervisor and ORC or approved designate signature. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Environmental Sciences Section at the address cited above.

Should the permittee fail to monitor during a month in which toxicity monitoring is required, monitoring will be required during the following month.

Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Quality indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an invalid test and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

A.(9.) CHRONIC TOXICITY PERMIT LIMIT (Quarterly at 6.0 MGD)

The effluent discharge shall at no time exhibit observable inhibition of reproduction or significant mortality to *Ceriodaphnia dubia* at an effluent concentration of **12%.**

The permit holder shall perform at a minimum, quarterly monitoring using test procedures outlined in the "North Carolina *Ceriodaphnia* Chronic Effluent Bioassay Procedure," Revised February 1998, or subsequent versions or "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions. The tests will be performed during the months of **February, May, August, and November**. Effluent sampling for this testing shall be performed at the NPDES permitted final effluent discharge below all treatment processes.

If the test procedure performed as the first test of any single quarter results in a failure or ChV below the permit limit, then multiple-concentration testing shall be performed at a minimum, in each of the two following months as described in "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

The chronic value for multiple concentration tests will be determined using the geometric mean of the highest concentration having no detectable impairment of reproduction or survival and the lowest

concentration that does have a detectable impairment of reproduction or survival. The definition of "detectable impairment," collection methods, exposure regimes, and further statistical methods are specified in the "North Carolina Phase II Chronic Whole Effluent Toxicity Test Procedure" (Revised-February 1998) or subsequent versions.

All toxicity testing results required as part of this permit condition will be entered on the Effluent Discharge Monitoring Form (MR-1) for the months in which tests were performed, using the parameter code **TGP3B** for the pass/fail results and **THP3B** for the Chronic Value. Additionally, DWQ Form AT-3 (original) is to be sent to the following address:

Attention: Environmental Sciences Section
North Carolina Division of Water Quality
1621 Mail Service Center
Raleigh, North Carolina 27699-1621

Completed Aquatic Toxicity Test Forms shall be filed with the Environmental Sciences Section no later than 30 days after the end of the reporting period for which the report is made.

Test data shall be complete, accurate, include all supporting chemical/physical measurements and all concentration/response data, and be certified by laboratory supervisor and ORC or approved designate signature. Total residual chlorine of the effluent toxicity sample must be measured and reported if chlorine is employed for disinfection of the waste stream.

Should there be no discharge of flow from the facility during a month in which toxicity monitoring is required, the permittee will complete the information located at the top of the aquatic toxicity (AT) test form indicating the facility name, permit number, pipe number, county, and the month/year of the report with the notation of "No Flow" in the comment area of the form. The report shall be submitted to the Environmental Sciences Section at the address cited above.

Should the permittee fail to monitor during a month in which toxicity monitoring is required, monitoring will be required during the following month.

Should any test data from this monitoring requirement or tests performed by the North Carolina Division of Water Quality indicate potential impacts to the receiving stream, this permit may be re-opened and modified to include alternate monitoring requirements or limits.

NOTE: Failure to achieve test conditions as specified in the cited document, such as minimum control organism survival, minimum control organism reproduction, and appropriate environmental controls, shall constitute an invalid test and will require immediate follow-up testing to be completed no later than the last day of the month following the month of the initial monitoring.

A.(10.) SPRAY IRRIGATION CONDITION

The spray irrigation of tertiary treated effluent around the existing wastewater treatment facilities is authorized by the Division under the following conditions:

- The irrigation water will supplement rainfall during dry periods of the year only;
- The effluent applied will be quantified by a meter;
- The maximum application rate shall not exceed 0.25-inch/hour or 1.0-inch/day;
- No runoff shall occur from the irrigated areas;
- Appropriate notice shall be supplied at the entrance of the facility indicating that the area is being irrigated with reclaimed water that should not be used for drinking; and
- Irrigation shall occur within the fenced perimeter of the wastewater treatment plant with controlled public access.

A.(11.) EFFLUENT POLLUTANT SCAN

(a.) The Permittee shall perform an annual Effluent Pollutant Scan for the following parameters. Samples shall represent seasonal variations over the permit term and shall be analyzed in accordance with 40 CFR Part 136. Unless otherwise indicated, metals shall be analyzed as "total recoverable."

Ammonia (as N)	Trans-1,2-dichloroethylene	Bis (2-chloroethyl) ether
Chlorine (total residual, TRC)	1,1-dichloroethylene	Bis (2-chloroisopropyl) ether
Dissolved oxygen	1,2-dichloropropane	Bis (2-ethylhexyl) phthalate
Nitrate/Nitrite	1,3-dichloropropylene	4-bromophenyl phenyl ether
Kjeldahl nitrogen	Ethylbenzene	Butyl benzyl phthalate
Oil and grease	Methyl bromide	2-chloronaphthalene
Phosphorus	Methyl chloride	4-chlorophenyl phenyl ether
Total dissolved solids	Methylene chloride	Chrysene
Hardness	1,1,2,2-tetrachloroethane	Di-n-butyl phthalate
Antimony	Tetrachloroethylene	Di-n-octyl phthalate
Arsenic	Toluene	Dibenzo(a,h)anthracene
Beryllium	1,1,1-trichloroethane	1,2-dichlorobenzene
Cadmium	1,1,2-trichloroethane	1,3-dichlorobenzene
Chromium	Trichloroethylene	1,4-dichlorobenzene
Copper	Vinyl chloride	3,3-dichlorobenzidine
Lead	***Acid-extractable compounds:***	Diethyl phthalate
Mercury	P-chloro-m-cresol	Dimethyl phthalate
Nickel	2-chlorophenol	2,4-dinitrotoluene
Selenium	2,4-dichlorophenol	2,6-dinitrotoluene
Silver	2,4-dimethylphenol	1,2-diphenylhydrazine
Thallium	4,6-dinitro-o-cresol	Fluoranthene
Zinc	2,4-dinitrophenol	Fluorene
Cyanide	2-nitrophenol	Hexachlorobenzene
Total phenolic compounds	4-nitrophenol	Hexachlorobutadiene
Volatile organic compounds:	Pentachlorophenol	Hexachlorocyclo-pentadiene
Acrolein	Phenol	Hexachloroethane
Acrylonitrile	2,4,6-trichlorophenol	Indeno(1,2,3-cd)pyrene
Benzene	***Base-neutral compounds:***	Isophorone
Bromoform	Acenaphthene	Naphthalene
Carbon tetrachloride	Acenaphthylene	Nitrobenzene
Chlorobenzene	Anthracene	N-nitrosodi-n-propylamine
Chlorodibromomethane	Benzidine	N-nitrosodimethylamine
Chloroethane	Benzo(a)anthracene	N-nitrosodiphenylamine
2-chloroethylvinyl ether	Benzo(a)pyrene	Phenanthrene
Chloroform	3,4 benzofluoranthene	Pyrene
Dichlorobromomethane	Benzo(ghi)perylene	1,2,4-trichlorobenzene
1,1-dichloroethane	Benzo(k)fluoranthene	
1,2-dichloroethane	Bis (2-chloroethoxy) methane	

(b.) Test results shall be reported to the Division within 90 days of sampling in DWQ Form- A MR-PPA1 or in a form approved by the Director. The report shall be submitted to the following address: North Carolina Division of Water Quality

Water Quality Section, Central Files
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

A. (12.) TOTAL NITROGEN ALLOCATIONS

a. The following table lists the Total Nitrogen (TN) allocation(s) assigned to, acquired by, or transferred to the Permittee in accordance with the Neuse River nutrient management rule (T15A NCAC 02B .0234) and the status of each as of permit issuance. For compliance purposes, this table does not supercede any TN limit(s) established elsewhere in this permit or in the NPDES permit of a compliance association of which the Permittee is a Co-Permittee Member.

ALLOCATION TYPE	SOURCE	DATE	ALLOCATION AMOUNT (1)		STATUS
			Estuary (lb/yr)	Discharge (lb/yr)	
Base	Assigned by Rule (T15A NCAC 02B .0234)	12/7/97; 4/1/03	33,790	67,579	Active
Supplemental	Jones Dairy Farm Corporation NC0064149		1,618	3,235	Active
		TOTAL		**70,814**	Active

Footnote:

(1) Transport Factor = 50%

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

May 26, 2006

Dale Crisp, Public Utilities Director
City of Raleigh
P.O. Box 590
Raleigh, NC 27602

Subject: Permit No. WQ0002708
Wrenn Road Spray Irrigation Facility
Wastewater Surface Irrigation
Wake County

Dear Mr. Crisp:

In accordance with your permit renewal application received January 12, 2006, we are forwarding herewith Permit No. WQ0002708, dated May 26, 2006, to the City of Raleigh for the continued operation of the subject wastewater treatment and surface irrigation facilities.

This permit shall be effective from the date of issuance until April 30, 2011; shall void Permit No. WQ0002708 issued August 13, 2001, and shall be subject to the conditions and limitations as specified therein. Please note Permit Condition I.2, which requires the establishment of a spray buffer zone around the existing water supply well. Please also pay particular attention to the monitoring requirements in this permit. Failure to establish an adequate system for collecting and maintaining the required operational information will result in future compliance problems.

If any parts, requirements, or limitations contained in this permit are unacceptable, you have the right to request an adjudicatory hearing upon written request within thirty (30) days following receipt of this permit. This request must be in the form of a written petition, conforming to Chapter 150B of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. Unless such demands are made this permit shall be final and binding.

If you need additional information concerning this matter, please contact David Goodrich at (919) 715-6162.

Sincerely,

Alan W. Klimek, P.E.

cc: Wake County Health Department
Raleigh Regional Office, Aquifer Protection Section
Technical Assistance and Certification Unit
APS Central Files
LAU Files

NORTH CAROLINA

ENVIRONMENTAL MANAGEMENT COMMISSION

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

RALEIGH

WASTEWATER TREATMENT AND SURFACE IRRIGATION SYSTEM PERMIT

In accordance with the provisions of Article 21 of Chapter 143, General Statutes of North Carolina as amended, and other applicable Laws, Rules, and Regulations

PERMISSION IS HEREBY GRANTED TO

City of Raleigh

Wake County

FOR THE

continued operation of a 1.54-million gallon per day (GPD) (i.e., only up to 1.29 million gallons per day may be irrigated onto the wetted area of the spray irrigation facilities, while at least 250,000 gallons per day may be diverted to the Permittee's Neuse River Wastewater Treatment Plant) wastewater treatment and spray irrigation facilities, consisting of the following minimum components: dual 25-acre stabilization/storage lagoons with a minimum of 30 days detention, an additional storage capacity of 46 days, and a liner of natural clay material with a minimum compacted thickness of one foot and a maximum hydraulic conductivity of 10^{-6} centimeters per second; a system using calcium hypochlorite for wastewater effluent disinfection; an irrigation pump station with four 2,750-gallon per minute pumps; a solid set irrigation system covering approximately 269.72 acres of wetted area; and all associated piping, valves, instrumentation, controls, and other appurtenances necessary to make complete and operational wastewater treatment and spray irrigation facilities. The above-described facilities are intended to serve the City of Raleigh and its wastewater customers (i.e., including the Town of Garner) with no discharge of wastes to the surface waters, pursuant to the permit renewal application received January 12, 2006, and subsequent additional information received by the Division, and in conformity with the project plan, specifications, and other supporting data subsequently filed and approved by the Department of Environment and Natural Resources and considered a part of this permit.

This permit shall be effective from the date of issuance until April 30, 2011, shall void Permit No. WQ0002708 issued August 13, 2001, and shall be subject to the following specified conditions and limitations:

I. PERFORMANCE STANDARDS

1. The wastewater treatment and surface irrigation facilities shall be effectively maintained and operated at all times so that there is no discharge to the surface waters, nor any contamination of ground waters, which will render them unsatisfactory for normal use. In the event that the facilities fail to perform satisfactorily, including the creation of nuisance conditions or failure of the irrigation area to adequately assimilate the wastewater, the Permittee shall take immediate corrective actions including those actions that may be required by the Division of Water Quality, such as the construction of additional or replacement wastewater treatment and disposal facilities.

2. Within ninety (90) days of permit issuance, all spray irrigation taking place within two hundred and fifty (250) feet from the water supply well near the office building will cease, and the sprinklers spraying within that area will be re-directed. Alternatively, the water supply well may be abandoned in accordance with 15A NCAC 15C .0113. This is being required to comply with current Division policies regarding active water supply wells that are situated inside of compliance boundaries and are in violation of NCAC 2L .0107 (d).

3. The issuance of this permit shall not relieve the Permittee of the responsibility for damages to surface or groundwaters resulting from the operation of this facility.

4. The residuals generated from these treatment facilities must be disposed in accordance with General Statute §143-215.1 and in a manner approved by the Division.

5. Diversion or bypassing of the untreated wastewater from the treatment facilities is prohibited. The Permittee shall, however, maintain the capability to divert a minimum of 250,000 gallons per day of wastewater flow that would typically be tributary to the wastewater treatment and spray irrigation facilities to the Permittee's Neuse River Wastewater Treatment Plant (i.e., NPDES Permit No. NC0029033) at all times. Alternate treatment and /or disposal facilities may be designated to receive this influent wastewater flow after approval has been applied for and granted by the Division.

6. The following buffers shall be maintained:

   a) 400 feet between wetted area and any residence or places of public assembly under separate ownership,
   b) 150 feet between wetted area and property lines,
   c) 100 feet between wetted area and wells,
   d) 100 feet between wetted area and drainage ways or surface water bodies,
   e) 50 feet between wetted area and public right of ways,
   f) 100 feet between treatment/storage units and any wells, and
   g) 50 feet between treatment units and property lines.

   Some of the buffers specified above may not have been included in previous permits for this waste treatment and disposal system. These buffers are not intended to prohibit or prevent modifications, which are required by the Division, to improve performance of the existing treatment facility. These buffers do, however, apply to modifications of the treatment and disposal facilities that are for the purpose of increasing the flow that is tributary to the facility. These buffers do apply to any expansion or modification of the irrigation areas and apply in instances in which the sale of property would cause any of the buffers now complied with, for the treatment and disposal facilities, to be violated. The applicant is advised that any modifications to the existing facilities will require a permit modification.

II. PRETREATMENT REQUIREMENTS

A. Requirements for Control of Pollutants Attributable to Industrial Users

1. Pollutants attributable to inputs from industries using the municipal system may be present in the Permittee's discharge. At such time as sufficient information becomes available to establish limitations for such pollutants, this permit may be revised to specify effluent limitations for any or all of such other pollutants.

2. Under no circumstances shall the Permittee allow introduction of the following wastes in the waste treatment system:

   a. Pollutants which create a fire or explosion hazard in the publicly-owned treatment works (POTW), including, but not limited to, waste streams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;

   b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works is specifically designed to accommodate such discharges;

   c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW resulting in interference;

   d. Any pollutant, including oxygen-demanding pollutants (i.e., BOD, etc.) released in a discharge at a flow rate and/or pollutant concentration with will cause interference with the POTW;

   e. Heat in amounts which will inhibit biological activity in the POTW resulting in interference, but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees C (104 degrees F) unless the Division, upon request of the POTW, approves alternate temperature limits;

   f. Petroleum oil, non-biodegradable cutting oil, or products of mineral origin in amounts that will cause interference or pass through;

   g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems;

   h. Any trucked or hauled pollutants, except at discharge points designed by the POTW.

3. It may be necessary for the Permittee to supplement the requirements of 15A NCAC 2H .0900 to ensure compliance by the Permittee with all applicable limitations. Such actions by the Permittee may be necessary regarding some or all of the industries discharging to the municipal system.

4. The Permittee shall require any industrial discharges into the permitted system to meet the regulations of 15A NCAC 2H .0900. Prior to accepting wastewater from any significant industrial user, the Permittee shall either develop and submit to the Division a Pretreatment Program for approval per 15A NCAC 2H .0907(a) or modify an existing Pretreatment Program per 15A NCAC 2H .0907(b).

5. This permit shall be modified or, alternatively, revoked and reissued, to incorporate or modify an approved POTW Pretreatment Program or to include a compliance schedule for the development of a POTW Pretreatment Program as required under the 15A NCAC 2H .0900 regulations by the requirements of the approved State pretreatment program, as appropriate.

B. Pretreatment Program Requirements

Under authority of North Carolina General Statute §143-215.3 (14) and implementing regulations 15A NCAC 2H .0900, and in accordance with the approved pretreatment program, all provisions and regulations contained and referenced in the Pretreatment Program Submittal are an enforceable part of this permit.

The Permittee shall operate its approved pretreatment program in accordance with the State Pretreatment Regulations 15A NCAC 2H .0900 and the legal authorities, policies, procedures, and financial provisions contained in its pretreatment program submission and Division-approved modifications thereof. Such operation shall include but is not limited to the implementation of the following conditions and requirements:

1. Sewer Use Ordinance (SUO): The Permittee shall maintain adequate legal authority to implement its approved pretreatment program;

2. Industrial Waste Survey (IWS): The Permittee shall update its IWS of all users of the sewer collection system at least once every five years;

3. Monitoring Plan: The Permittee shall implement a Division-approved Monitoring Plan for the collection of facility specific data to be used in a wastewater treatment plant Headworks Analysis (HWA) for the development of specific pretreatment local limits;

4. HWA and Local Limits: The Permittee shall obtain Division approval of a HWA at least once every five years and as required by the Division. The Permittee shall develop, in accordance with 15A NCAC 2H .0900, specific Local Limits to implement the prohibitions listed in 15A NCAC 2H .0909;

5. Industrial User Pretreatment Permits (IUP) and Allocation Tables: In accordance with North Carolina General Statute §143-215.1, the Permittee shall issue to all significant industrial users, permits for operation of pretreatment equipment and discharge to the Permittee's treatment works. These permits shall contain limitations, sampling protocols, reporting requirements, appropriate standard and special conditions, and compliance schedules as necessary for the installation of treatment and control technologies to assure that their wastewater discharge will meet all applicable pretreatment standards and requirements. The Permittee shall maintain current Allocation Table (AT) which summarizes the results of the HWA and the limits from all Industrial User Pretreatment Permits (IUP). Permitted IUP loadings for each parameter cannot exceed the treatment capacity of the POTW as determined by the HWA;

6. Authorization to Construct (A to C): The Permittee shall ensure that an A to C is issued to all applicable industrial users for the construction or modification of any pretreatment facility. Prior to the issuance of an A to C, the proposed pretreatment facility and treatment process must be evaluated for its capacity to comply with all IUP limitations;

7. POTW Inspection and Monitoring of their Significant Industrial Users (SIUs): The Permittee shall conduct inspection, surveillance, and monitoring activities as described in

its Division-approved Pretreatment Program in order to determine, independent of information supplied by industrial users, compliance with applicable pretreatment standards. The Permittee shall:

a. Inspect all SIUs at least once per calendar year; and

b. Sample all SIUs at least twice per calendar year for all permit-limited pollutants, once during the period from January 1st through June 30th and once during the period from July 1st through December 31st, except for organic compounds which shall be sampled once per calendar year;

8. SIU Self Monitoring and Reporting: The Permittee shall require all industrial users to comply with the applicable monitoring and reporting requirements outlined in the Division-approved Pretreatment Program, the industry's pretreatment permit, or in 15A NCAC 2H .0908;

9. Enforcement Response Plan (ERP): The Permittee shall enforce and obtain appropriate remedies for violations of all pretreatment standards promulgated pursuant to section 307(b) and (c) of the Clean Water Act (i.e., 40 CFR 405 et seq.), prohibitive discharge standards as set forth in 15A NCAC 2H .0909, and specific local limitations. All enforcement actions shall be consistent with the ERP approved by the Division;

10. Pretreatment Annual Reports (PAR): The Permittee shall report to the Division in accordance with 15A NCAC 2H .0908. In lieu of submitting annual reports, Modified Pretreatment Programs developed under 15A NCAC 2H .0904 (b) may be required to meet with Division personnel periodically to discuss enforcement of pretreatment requirements and other pretreatment implementation issues.

For all other active pretreatment programs, the Permittee shall submit two copies of a PAR describing its pretreatment activities over the previous 12 months to the Division at the following address:

NCDENR-DWQ
PERCS Unit
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

These reports shall be submitted according to a schedule established by the Director and shall contain the following minimum information:

a. Narrative: A brief discussion of reasons for, status of , and actions taken for all SIUs in Significant Non-Compliance (SNC);

b. Pretreatment Program Summary (PPS): A PPS on specific forms approved by the Division;

c. Significant Non-Compliance Report (SNCR): The nature of the violations and the actions taken or proposed to correct the violations on specific forms approved by the Division;

d. Industrial Data Summary Forms (IDSF): Monitoring data from samples collected by both the POTW and the SIU. These analytical results shall be reported on IDSF or other specific format approved by the Division;

e. Other Information: Copies of the POTW's allocation table, new or modified enforcement compliance schedules, public notice of SIUs in SNC, and any other

information, upon request, which, in the opinion of the Director, is needed to determine compliance with the pretreatment implementation requirements of this permit;

11. Public Notice: The Permittee shall publish annually a list of SIUs that were in SNC as defined by the Permittee's Division-approved SUO with applicable pretreatment requirements and standards during the previous 12-month period. This list shall be published within two months of the applicable 12-month period.

12. Record keeping: The Permittee shall retain, for a minimum of three years, records of monitoring activities and results, along with support information including general records, water quality records, and records of industrial impact on the POTW;

13. Funding and Financial Report: The Permittee shall maintain adequate funding and staffing levels to accomplish the objectives of the Division-approved Pretreatment Program;

14. Modification to Pretreatment Programs: Modifications to the approved pretreatment program, including, but not limited to, local limits modifications, POTW monitoring of the SIUs, and Monitoring Plan modifications, shall be considered a permit modification and shall be governed by 15 NCAC 2H .0200 and 15A NCAC 2H .0907.

III. OPERATION AND MAINTENANCE REQUIREMENTS

1. The facilities shall be properly maintained and operated at all times.

2. Upon classification of the wastewater treatment and irrigation facilities by the Water Pollution Control System Operators Certification Commission (WPCSOCC), the Permittee shall designate and employ a certified operator to be in responsible charge (ORC) and one or more certified operator(s) to be back-up ORC(s) of the facilities in accordance with 15A NCAC 8G .0201. The ORC shall visit the facilities in accordance with 15A NCAC 8G .0204 or as specified in this permit and shall comply with all other conditions specified in these rules.

3. A suitable year round vegetative cover shall be maintained on the wetted area of the spray irrigation facilities.

4. Irrigation shall not be performed during inclement weather or when the ground is in a condition that will cause runoff.

5. Adequate measures shall be taken to prevent wastewater runoff from the irrigation field.

6. The facilities shall be effectively maintained and operated as a non-discharge system to prevent the discharge of any wastewater resulting from the operation of this facility.

7. The application rate onto the wetted area of the spray irrigation facilities shall not exceed a cumulative loading of 72.8 inches over any twelve (12) month period at an instantaneous application rate not to exceed 0.3 inches per hour.

8. No type of wastewater other than that from the City of Raleigh's Wrenn Road Spray Irrigation Facility shall be sprayed onto the wetted area of the spray irrigation facilities.

9. No traffic or equipment shall be allowed on the disposal area except while installation occurs or while normal maintenance is being performed.

10. Public access to the land application sites shall be controlled during active site use. Such controls may include the posting of signs showing the activities being conducted at each site.

11. Freeboard in either of the treatment/storage lagoons shall not be less than two feet at any time.

IV. MONITORING AND REPORTING REQUIREMENTS

1. Any monitoring (including groundwater, surface water, soil or plant tissue analyses) deemed necessary by the Division to insure surface and ground water protection will be established and an acceptable sampling reporting schedule shall be followed.

2. Influent flow shall be continuously monitored and recorded. Daily flow values shall be reported on Form NDMR.

   The flow measurement device shall be accurately calibrated at a minimum of once per year, and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of the device. The Permittee shall keep records of flow measurement device calibration on file for a period of at least three years. At a minimum, data to be included in this documentation shall be:

   a. Date of flow measurement device calibration
   b. Name of person performing calibration
   c. Percent from true flow

3. The wastewater effluent from the wastewater treatment facilities shall be monitored by the Permittee at a point following all wastewater treatment processes (i.e., including disinfection) and prior to irrigation every March, July, and November for the following parameters:

NH_3 as N	NO_2-NO_3	Total Coliform
BOD_5	TKN	Total Phosphorous
TSS	Sodium	Magnesium
PH	Calcium	Sodium Adsorption Ratio by Calculation

4. The Permittee tracking the amount of wastewater disposed shall maintain adequate records. These records shall include, but are not necessarily limited to, the following information:

   a. Date of irrigation,
   b. Volume of wastewater irrigated,
   c. Field irrigated,
   d. Wetted area irrigated;
   e. Length of time field is irrigated,
   f. Continuous weekly, monthly, and year-to-date hydraulic (inches/acre) loadings for each field,
   g. Weather conditions, and
   h. Maintenance of cover crops.

5. Freeboard in the storage lagoons shall be recorded weekly.

6. Three (3) copies of all monitoring data [as specified in Conditions IV(2) and IV(3)] on Form NDMR-1 and three (3) copies of all operation and disposal records [as specified in Conditions IV(4) and IV(5)] on Form NDAR-1 shall be submitted on or before the last day of the following month. All information shall be submitted to the following address:

   Division of Water Quality
   Information Processing Unit
   1617 Mail Service Center
   Raleigh, North Carolina 27699-1617

7. An annual representative soils analysis (Standard Soil Fertility Analysis) shall be conducted on each irrigation field and the results maintained on file by the Permittee for a minimum of five years. The Standard Soil Fertility Analysis shall include, but is not necessarily limited to, the following parameters:

Acidity	Manganese	Potassium
Calcium	Percent Humic Matter	Sodium
Copper	PH	Zinc
Magnesium	Base Saturation (by calculation)	Phosphorus
Cation Exchange Capacity	Exchangeable Sodium Percentage	

8. **Noncompliance Notification:**

The Permittee shall report by telephone to the Raleigh Regional Office, telephone number (919) 791-4200, as soon as possible, but in no case more than 24 hours or on the next working day following the occurrence or first knowledge of the occurrence of any of the following:

a. Any occurrence at the wastewater treatment facility which results in the treatment of significant amounts of wastes which are abnormal in quantity or characteristic, such as the dumping of the contents of a sludge digester; the known passage of a slug of hazardous substance through the facility; or any other unusual circumstances.

b. Any process unit failure, due to known or unknown reasons, that render the facility incapable of adequate wastewater treatment such as mechanical or electrical failures of pumps, aerators, compressors, etc.

c. Any failure of a pumping station, sewer line, or treatment facility resulting in a by-pass directly to receiving waters without treatment of all or any portion of the influent to such station or facility.

d. Any time that self-monitoring information indicates that the facility has gone out of compliance with its permit limitations.

e. Any time that monitoring or other information indicates that an exceedance of the groundwater quality standards, as specified by regulations in 15A NCAC 2L (i.e., "Groundwater Classifications and Standards"), is likely to occur.

Occurrences outside normal business hours may also be reported to the Division's Emergency Response personnel at telephone number (800) 662-7956, (800) 858-0368, or (919) 733-3300. Persons reporting such occurrences by telephone shall also file a written report in letter form within five (5) days following first knowledge of the occurrence. This report must outline the actions taken or proposed to be taken to ensure that the problem does not recur.

V. <u>GROUNDWATER REQUIREMENTS</u>

1. If not already adjusted, sprinklers that are within 100 feet of existing groundwater monitoring well MW-3 (i.e., formerly identified as B-3) shall be adjusted such that they irrigate only in a direction away from the well.

2. The three existing groundwater monitoring wells, MW-3, MW-8, and MW-9 shall be sampled every March, July, and November for the following parameters:

Chlorides	Total Ammonia Nitrogen (NH_2-N)
Fecal Coliform	Total Dissolved Solids (TDS)
Nitrate Nitrogen (NO_3-N)	Total Organic Carbon (TOC)
pH	Water Level

Volatile Organic Compounds (VOCs) in November only

Water levels in the groundwater monitoring wells shall be measured prior to sampling the groundwater for the remaining parameters. The depth to water in each well shall be measured from the surveyed point on the top of the casing, which shall be surveyed relative to a common datum.

3. Volatile Organic Compounds (VOCs) shall be analyzed using one of the following methods:

   i. Standard Method 6230D (PQL at 0.5 ug/L or less),

   ii. Standard Method 6210D (PQL at 0.5 ug/L or less),

   iii. EPA Method 8021 (Low Concentration, PQL at 0.5 ug/L or less),

   iv. EPA Method 8260 (Low Concentration, PQL at 0.5 ug/L or less), or

   v. Another method with prior approval by the Division.

   Any of the referenced methods used for VOCs shall, at a minimum, include all of the constituents listed in Table VIII of Standard Methods 6230D. The method used shall provide a PQL at 0.5 ug/L or less, which shall be supported by laboratory proficiency studies as required by the Division's Laboratory Certification Unit. Any constituents detected above the MDL, but below the PQL at 0.5 ug/L, shall be qualified (i.e., estimated) and reported.

4. If total organic carbon (TOC) concentrations greater than 10 milligrams per liter are detected in any downgradient groundwater monitoring well, additional sampling and analysis shall be conducted to identify the individual constituents comprising this TOC concentration. If the TOC concentration as measured in the background well exceeds 10 milligrams per liter, this concentration shall be taken to represent the naturally-occurring TOC concentration. Any exceedances of this naturally-occurring TOC concentration in downgradient wells shall be subject to the additional sampling and analysis as described in this permit.

5. Any laboratory selected to analyze parameters shall be Division-certified for those parameters required.

6. The results of the sampling and analysis shall be received on the most-recent version of "Groundwater Quality Monitoring: Compliance Report Form" (i.e., GW-59 Form) with copies of the laboratory analyses attached by the Division's Groundwater Section on or before the last working day of the month following the sampling month.

7. All reports, maps, and other documents required in the "Groundwater Requirements" section of this permit shall be mailed to the following address:

   NCDENR-DWQ
   Information Processing Unit
   1617 Mail Service Center
   Raleigh, NC 27699-1617

   Updated blank reporting and other forms may be downloaded from the web site for the Division's Aquifer Protection Section at http://h2o.enr.state.nc.us/aps/ or requested from the address listed above.

8. The COMPLIANCE BOUNDARY for the disposal system is specified by regulations in 15A NCAC 2L, Groundwater Classifications and Standards. The Compliance Boundary is for the disposal system constructed after December 31, 1983 is established at either (1) 250 feet from the waste disposal area, or (2) 50 feet within the property boundary, whichever is closer to the waste disposal area. An exceedance of Groundwater Quality Standards at or beyond the Compliance Boundary is subject to remediation action according to 15A NCAC 2L .0106(d)(2).

9. A REVIEW BOUNDARY is established around the disposal system midway between the Compliance Boundary and the perimeter of the waste disposal area. Any exceedance of standards at the Review Boundary shall require action in accordance with 15A NCAC .0106(d)(1).

10. Any additional groundwater quality monitoring, as deemed necessary by the Division, shall be provided.

VI. INSPECTIONS

1. Adequate inspection, maintenance, and cleaning shall be provided by the Permittee to insure proper operation of the subject facilities.

2. The Permittee or his designee shall inspect the wastewater treatment and disposal facilities to prevent malfunctions and deterioration, operator errors and discharges which may cause or lead to the release of wastes to the environment, a threat to human health, or a nuisance. The Permittee shall keep an inspection log or summary including at least the date and time of inspection, observations made, and any maintenance, repairs, or corrective actions taken by the Permittee. This log of inspections shall be maintained by the Permittee for a period of three years from the date of the inspection and shall be made available upon request to the Division or other permitting authority.

3. Any duly authorized officer, employee, or representative of the Division may, upon presentation of credentials, enter and inspect any property, premises or place on or related to the disposal site or facility at any reasonable time for the purpose of determining compliance with this permit; may inspect or copy any records that must be maintained under the terms and conditions of this permit, and may obtain samples of groundwater, surface water, or leachate.

VII. GENERAL CONDITIONS

1. This permit shall become voidable unless the facilities are constructed in accordance with the conditions of this permit, the approved plans and specifications, and other supporting data.

2. This permit is effective only with respect to the nature and volume of wastes described in the application and other supporting data.

3. This permit is not transferable. In the event there is a desire for the facilities to change ownership, or there is a name change of the Permittee, a formal permit request must be submitted to the Division accompanied by an application fee, documentation from the parties involved, and other supporting materials as may be appropriate. The approval of this request will be considered on its merits and may or may not be approved.

4. Failure to abide by the conditions and limitations contained in this permit may subject the Permittee to an enforcement action by the Division in accordance with North Carolina General Statute 143-215.6A to 143-215.6C.

5. The issuance of this permit does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances which may be imposed by other government agencies (local, state, and federal) which have jurisdiction, including but not limited to applicable river buffer rules in 15A NCAC 2B .0200, erosion and sedimentation control requirements in 15A NCAC Chapter 4 and under the Division's General Permit NCG010000, and any requirements pertaining to wetlands under 15A NCAC 2B .0200 and 2H .0500.

6. The Permittee shall retain a set of approved plans and specifications for the wastewater treatment and spray irrigation facilities for 20 years from March 25, 1991.

7. The Permittee must pay the annual administering and compliance fee within thirty (30) days after being billed by the Division. Failure to pay the fee accordingly may cause the Division to initiate action to revoke this permit as specified by 15A NCAC 2H .0205 (c)(4).

8. The Permittee, at least six (6) months prior to the expiration of this permit, shall request its extension. Upon receipt of the request, the Commission will review the adequacy of the facilities described therein, and if warranted, will extend the permit for such period of time and under such conditions and limitations as it may deem appropriate.

Permit issued this the 26th day of May 2006

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

_____

Alan W. Klimek, P.E., Director
Division of Water Quality
By Authority of the Environmental Management Commission

Permit Number WQ0002708

Permit No. WQ00#####
MM/DD/YYYY

ENGINEER'S CERTIFICATION

_____ Partial _____ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project,

_____, _____
Project Name *Location and County*

for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of this permit, the approved plans and specifications, and other supporting materials.

Signature _____ Registration No. _____

Date _____

City of Raleigh Public Utility CIP Projects

Public Utilities

The public utilities program includes projects for the treatment and distribution of the city's drinking water supply; projects associated with the collection and treatment of wastewater; projects associated with the extension of both water and sewer service for service area growth; maintenance projects involving water and sewer mains, elevated water storage tanks, and pumping stations; and projects for the delivery of reused water that has been processed by the wastewater treatment plant. Phase I cost projections for all such projects totals $374,903,500.

The Phase I public utilities program includes improvements to the various components of each of the program's delivery systems. Funding for public utilities capital projects is primarily provided through the issuance of revenue bonds. Additional funding is provided by the Public Utilities operating fund, which also supports all debt service requirements for revenue bonds issued.

The table below provides a summary of utility costs for this Capital Improvement Program. A listing and brief description of the projects proposed for the five years following Phase I are provided at the end of the Public Utilities section. The Phase II funding shown below is described in the section immediately following the descriptions for Phase I projects.

Ten-Year Summary of the Public Utility Program

	PHASE I	PHASE II	TOTAL
Water Projects	$ 99,338,500	$ 315,221,000	$ 414,559,500
Wastewater Projects	276,065,000	236,755,000	512,820,000
TOTAL	**$ 375,403,500**	**$ 551,976,000**	**$ 927,379,500**

Project Costs for Public Utilities

	Water Projects	2009-10	2010-11	2011-12	2012-13	2013-14	Phase I Summary
1	3 MGD pump addition to Shelly Road PS (A303)	$ -	$ 276,000	$ -	$ -	$ -	$ 276,000
2	Benson Road Transmission Main 16-inch (A502)	620,000	-	-	-	-	620,000
3	DEBWTP Backwash Waste Recycle Facility	6,800,000	-	-	-	-	6,800,000
4	DEBWTP Settling Tank Waste Dewatering Facility	-	6,800,000	-	-	-	6,800,000
5	Elevated Water Tank Rehabilitation and Maintenance	500,000	500,000	500,000	500,000	500,000	2,500,000
6	Emergency Water Interconnections	1,000,000	-	-	-	-	1,000,000
7	EMJ WTP DAF Pilot Plant Facility	-	-	1,000,000	-	-	1,000,000
8	EMJ WTP High Service Pump No. 1 Upgrade (B301)	-	-	-	690,000	-	690,000
9	EMJ WTP Sodium Permanganate Facility	600,000	-	-	-	-	600,000
10	EMJ WTP Wastewater Facilities Expansion	2,500,000	-	-	-	-	2,500,000
11	EMJWTP Clearwell Rehabilitation	350,000			-	-	350,000
12	EMJWTP Facility/Equipment Rehabilitation	500,000	500,000	500,000	500,000	500,000	2,500,000
13	EMJWTP Spill Containment Improvements	500,000	-	-	-	-	500,000
14	Falls Lake Initiative	1,500,000	-	-	-	-	1,500,000
15	Falls Lake RWPS Improvements	2,400,000	-	-	-	-	2,400,000
16	Garner Road Transmission line 16-inch (B504)	600,000	-	-	-	-	600,000
17	Lake Glad Road Waterline Extension	-	-	325,000	-	-	325,000
18	Little River Res.Wetland Mitig. Property Acquis.	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	12,500,000
19	Little River Reserv Wake City Land Acqu Reimbursement	500,000	500,000	500,000	500,000	500,000	2,500,000
20	Little River Reservoir	-	-	-	-	6,000,000	6,000,000
21	Little River Reservoir Environmental Impact Statement	2,100,000	1,225,000	1,000,000	1,000,000	800,000	6,125,000
22	New Rand Road Transmission Main 16-in (A503)	300,000	-	-	-	-	300,000
23	Oak Forest 30" Water Main (Atlantic Ave. to Capital Blvd.)	-	2,900,000	-	-	-	2,900,000
24	Poole Road Booster Pump Station (B102)	-		-		500,000	500,000
25	Property Acquisitions	1,300,000	-	-	-	-	1,300,000
26	Remote Operations Center	575,000		-	-	-	575,000
27	Service Area Growth (Annex- Water)	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
28	Telemetry Upgrades	1,250,000	-	-	-	-	1,250,000
29	Thoroughfare Mains	400,000	400,000	400,000	400,000	400,000	2,000,000
30	Water Booster Pump Station Rehabilitation	500,000	500,000	200,000	200,000	200,000	1,600,000

Project Costs for Public Utilities

		2009-10	2010-11	2011-12	2012-13	2013-14	Phase I Summary
31	Water Distribution WQ Program,Study, Eval. & Design	150,000	150,000	150,000	150,000	150,000	750,000
32	Water Main Replacement/Rehab	4,000,000	4,000,000	4,000,000	4,000,000	4,000,000	20,000,000
33	Water Plant Settling Basin Rehabilitation	-	-	800,000	400,000	-	1,200,000
34	Water Service Replacement	250,000	250,000	250,000	250,000	250,000	1,250,000
35	Wendell Boulevard Transmission Extension (A901)	225,000	-	-	-	-	225,000
36	Wendell Water Distribution Improvements	1,000,000	-	-	-	-	1,000,000
37	Zebulon Water Booster PS Generator	350,000	-	-	-	-	350,000
38	Zebulon Water Distribution Improvements	695,000	-	-	-	-	695,000
39	Zebulon Water Tank Rehabilitation	-	220,000	-	137,500	-	357,500
Subtotal, Water Projects		**$ 34,965,000**	**$ 21,721,000**	**$ 13,125,000**	**$ 12,227,500**	**$ 17,300,000**	**$ 99,338,500**

Wastewater Projects

1	Cemetary Sewer Main Replacement	$ 800,000	$ -	$ -	$ -	$ -	$ 800,000
2	Conversion of Garner 201 Facility	-	-	4,200,000	-	-	4,200,000
3	Crabtree Interceptor Siphons *(C23)*	-	900,000	9,600,000	-	-	10,500,000
4	Crabtree Lift Station Improvements	-	-	100,000	1,000,000	-	1,100,000
5	Crabtree Valley Sewer Replacement *(C14)*	-	-	-	1,600,000	3,000,000	4,600,000
6	Dunn Road Sewer Replacement	2,000,000	-	-	-	-	2,000,000
7	East Neuse Regional Pump Station & Force Main (W16A&17A)	-	-	1,500,000	2,200,000	11,200,000	14,900,000
8	Lower Crabtree North Sewer Main	-	-	500,000	-	-	500,000
9	Main Replacement	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000	25,000,000
10	Neuse River East Parallel Interceptor Phase II	8,000,000	-	-	-	-	8,000,000
11	Neuse River Off-site Reuse System Expansion	500,000	500,000	500,000	500,000	500,000	2,500,000
12	Neuse River Pump Station Pump Addition	-	-	-	-	2,000,000	2,000,000
13	North Bank Crabtree Creek Replacement	-	-	4,000,000	300,000	3,250,000	7,550,000
14	NW Crabtree Creek Pump Station & Equalization (C21&C22)	2,000,000	8,800,000	17,000,000	39,000,000	-	66,800,000
15	NPDES Permit Renewals	-	-	150,000	-	-	150,000
16	NRWWTP 15 MGD Capacity Expansion *(Includes W15A)*	-	-	-	66,200,000	-	66,200,000
17	NRWWTP Electrical Improvements	7,000,000	-	-	-	-	7,000,000
18	Poplar Creek Interceptor	-	-	-	600,000	6,000,000	6,600,000
19	Sanitary Sewer Pump Station Removal/Rehab/Repl	500,000	500,000	500,000	500,000	500,000	2,500,000
20	Service Area Growth	2,500,000	2,000,000	2,000,000	2,000,000	2,000,000	10,500,000

Project Costs for Public Utilities

		2009-10	2010-11	2011-12	2012-13	2013-14	Phase I Summary
21	Sewer System Capacity	200,000	200,000	200,000	200,000	200,000	1,000,000
22	Upper Pigeon House Rehabilitation *(Portion of C8)*	-	-	-	-	7,500,000	7,500,000
23	Walnut Creek/NRWWTP Influent Lift Station Improvmts	-	-	2,500,000	-	-	2,500,000
24	Wendell Buffalo Creek Basin Sewer Imps.	-	-	800,000	-	-	800,000
25	Wendell East Wake Sewer Costshare	-	-	-	-	3,300,000	3,300,000
26	Wendell Lake Glad Rd. Demolition	-	-	-	165,000	-	165,000
27	Wendell Marshburn Road Sewer Improvements	-	-	2,000,000	-	-	2,000,000
28	Wendell Various Gravity Sewer Projects	-	-	150,000	250,000	900,000	1,300,000
29	Zebulon LCWWTP Biosolids Improvements	-	-	2,900,000	-	-	2,900,000
30	Zebulon LCWWTP Expansion/Improvements (Phase I)	-	-	11,200,000	-	-	11,200,000
Subtotal, Wastewater Projects		**$ 28,500,000**	**$ 17,900,000**	**$ 64,800,000**	**$ 119,515,000**	**$ 45,350,000**	**$ 276,065,000**
	Total Projects Costs, Public Utilities	**$ 63,465,000**	**$ 39,621,000**	**$ 77,925,000**	**$ 131,742,500**	**$ 62,650,000**	**$ 375,403,500**

Funding Plan for Public Utilities

	2009-10	2010-11	2011-12	2012-13	2013-14	Phase I Summary
Public Utility Fund	$ 3,500,000	$ 5,000,000	$ 15,000,000	$ 30,000,000	$ 30,000,000	$ 83,500,000
Public Utilities Capital Reserves	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000
Interest Income	2,750,000	-	-	-	-	2,750,000
Revenue Bonds	56,215,000	33,621,000	61,925,000	100,742,500	31,650,000	284,153,500
Total Funding Plan, Public Utilities	**$ 63,465,000**	**$ 39,621,000**	**$ 77,925,000**	**$ 131,742,500**	**$ 62,650,000**	**$ 375,403,500**

Phase I – Public Utilities

Water Projects

1. 3 MGD Pump Addition to Shelly Road PS: $276,000
The water distribution system has nine separate pressure zones. Growth in water demand in these pressure zones necessitate upgrades to the pump stations that support these pressure zones. This project will provide an additional large service pump to address growth needs in the 605 pressure zone.

2. Benson Road Transmission Main 16-inch: $620,000
Transmission main to be installed on Benson Road from Foxbury Drive to Timber Drive for a length of 1,980 feet to allow the new water treatment plant to provide adequate water transmission main capacity size from the DEB WTP through critical locations within the 532 pressure zone.

3. DEBWTP Backwash Waste Recycle Facility: $6,800,000
This project will develop a backwash recycle facility to clarify the backwash water from the treatment process using diffused air filtration (DAF) and UV disinfection. The newly cleaned recycle water, which represents approximately 868,000 in average daily flow, will be returned to Lake Benson for future use in the treatment process.

4. DEBWTP Settling Tank Waste Dewatering Facility: $6,800,000
This project will develop a settling tank waste dewatering facility to handle all industrial wastes produced by the potable water treatment process. The resulting dewatered sludge will be trucked in thickened form to final disposal through composting or other environmentally beneficial uses

5. Elevated Water Tank Rehabilitation and Maintenance: $2,500,000
Elevated water storage tanks throughout the utility system need refurbishment and maintenance because of storage tank age and service life projections.

6. Emergency Water Interconnections: $1,000,000
This project will provide addition emergency connections to Johnston County and Durham County. As a response to the record drought of 2007-08, Governor Easley asked all community water systems to pursue all emergency interconnections possible to insure available water supplies could be provided to drought stressed communities.

7. EM Johnson WTP DAF Pilot Plant Facility: $1,000,000
Construction and operation of a permanent pilot testing facility to demonstrate high rate coagulation for future plant upgrades to 120 MGD. The pilot evaluations are required to demonstrate that performance of high rate coagulation (DAF or Plate Settling) and associated processes will provide for water quality that will consistently meet SDWA standards for future plant upgrades.

8. EMJohnson WTP High Service Pump No. 1 Upgrade: $690,000
This project would upgrade pump number one on the high service (605 Zone) at E.M. Johnson Water Treatment Plant. This upgrade would install a 15 MGD pump to support greater demand in the high service zone.

9. EM Johnson WTP Sodium Permanganate Facility: $600,000
The project would construct a new building to house four metering pumps and associated piping, valves and flow measurement meters. Two new 10,000-gallon liquid storage tanks, spill containment and transfer pumping for the sodium permanganate would also be constructed.

10. EMJ WTP Wastewater Facilities Expansion: $2,500,000
This project will expand, replace and modify the wastewater solids handling capacity at the E.M. Johnson Water Treatment Plant to maintain waste disposal standards for compliance.

11. E.M. Johnson WTP Clearwell Rehabilitation: $350,000
Clean and repair the clearwells and construct baffles in the existing clearwells.

12. E. M. Johnson WTP Facility and Equipment Rehabilitation: $2,500,000
Rehabilitation and/or replacement of major equipment and associated facilities at the EM Johnson Water Treatment Plant. This includes the conversion of the old generator building to a training facility and 3rd floor expansion for additional office space.

13. E. M. Johnson WTP Spill Containment Improvements: $500,000
Construct spill containment structures at the chemical and fuel storage facilities.

14. Falls Lake Initiative: $1,500,000
Funding to provide monetary resources to help support water quality initiatives and the Conservation Trust of North Carolina for expanding land protection in the Falls Lake watershed.

15. Falls Lake RWPS Improvements: $2,400,000
Installation of a new utility sub-station and 5kV switchgear and replacement of existing 25 MGD Raw Water Pump. The existing pump has reached its service life and additional pumping capacity is required to provide for future demands.

16. Garner Road Transmission Line: $600,000
This project would install a new transmission main along Garner Road from New Rand Road to Jones Sausage Road for a distance of 3,800 linear feet.

17. Lake Glad Road Waterline Extension: $325,000
This funding is for construction of 4,300 LF of 6" and 8" water line along Lake Glad Road. This item was identified in the merger document.

18. Little River Reservoir Wetland Mitigation Property Acquisition: $12,500,000
Wetland Mitigation through property or conservation easement purchases

19. Little River Reservoir County Reimbursement: $2,500,000
Wake County, in partnership with the City of Raleigh and the utility merger municipalities, has worked for many years to acquire the land necessary for the construction of the Little River Reservoir in Eastern Wake County. Because of the jurisdictional issues, Wake County has managed all land acquisition. This line item is an annual repayment of 500,000 until the land acquisition costs are repaid.

20. Little River Reservoir: $6,000,000
Design of the Little River Dam and associated reservoir as a new water supply for the City of Raleigh.

21. Little River Reservoir Environmental Impact Statement: $6,125,000
An Environmental Impact Statement (EIS) is required for obtaining state permits for the design and construction of an impoundment for a new raw water supply for the City of Raleigh. Due to the projected population growth in the service area, an additional water supply is needed.

22. New Rand Road Transmission Main 16-inch: $300,000
Project will install a new 16-inch transmission main in New Rand Road form US 70 to Wakeland Drive for a distance of 3, 586 feet.

23. Oak Forest 30” Water Main (Atlantic Ave. to Capital Blvd.): $2,900,000
Installation of approximately 6,700 LF of 30-inch water main from Atlantic Avenue to Capital Boulevard for the purpose of meeting addition water flow demands based upon growth in the potable water distribution system.

24. Poole Road Booster Pump Station: $500,000
The project would construct a regional water booster station to replace the existing aging or undersized booster stations within the Wendell and Zebulon service areas. The project is a component of Wendell merger project and Zebulon merger project. Cost will be divided between the City of Raleigh, Town of Wendell and the Town of Zebulon based upon the cost share memo provided by CH2M Hill as part of the Merger Document.

25. Property Acquisitions: $1,300,000
Purchasing property for future water main easements, booster pump stations, elevated tank sites, and additional land at the E.M. Johnson WTP.

26. Remote Operations Center: $575,000
To develop a remote operations center for the Operating Divisions of Maintenance, Construction and Meters. The center will consist of office and crew rooms, as well as material and equipment storage areas for the divisions.

27. Service Area Growth: $5,000,000
The city annexes areas that reach levels of development appropriate for municipal services when authorized by City Council. This funding pays for extending water service to households and businesses in newly annexed areas and is estimated for the next five year period.

28. Telemetry Upgrades: $1,250,000
The existing remote telemetry system needs to be upgraded to accommodate future growth in the City's service area. New "High Speed" Ethernet radio network will allow for faster communications, radios will be able select the quickest path for transferring information and there will be no limitations on the number of remote sites.

29. Thoroughfare Mains: $2,000,000
This funding will continue the program to install water mains in construction of new thoroughfare projects and adjustment to existing water mains in thoroughfare widening projects. (Projects include Tryon Road, US Hwy 401, Perry Creek Road, NC 98 Bypass, TW Alexander Road, Leesville Road, etc.)

30. Water Booster Pump Station Rehabilitation: $1,600,000
Install weatherproof enclosure for existing MCC, provide enclosure and maintenance platform for existing generator and extend access road at Shelley Road Booster Pump Station. Replace existing gas operated pump, associated underground fuel storage tank and install emergency generator at North Hills Booster Pump Station. Replace 9 MGD pump at Pullen Park Booster Pump Station and complete misc. facility upgrades at Wade Avenue Booster Pump Station.

31. Water Distribution Water Quality Program, Study, Evaluation & Design: $750,000
Conducting corrosion control, nitrification and nutrient reduction studies, developing a water line rehabilitation/replacement program, preliminary design for elevated storage tank mixing improvements and development of a uniform directional flushing program.

32. Water Main Replacements and Rehabilitation: $20,000,000
This funding will continue the program to replace undersized mains, existing transit mains and other older water mains.

33. EMJ Water Plant Settling Basin Rehabilitation: $1,200,000
Re-grout and repair deteriorated concrete in the remaining three settling and flocculation basins that were built in the second expansion of the water plant 20 years ago.

34. Water Service Replacement: $1,250,000
This project would focus on the rehabilitation of service lines that are in need of replacement but the water distribution mains they are connected to do not need immediate replacement. Staff estimates that 6,000 service lines are comprised of older material such as galvanized iron and are in need of replacement to preserve water quality.

35. Wendell Boulevard Transmission Extension: $225,000
This project will install a 12 inch water line along Wendell Boulevard from North Cypress Steeet to North Selma Road for a distance of 2,708 linear feet, to accommodate additional growth of the water system.

36. Wendell Water Distribution Improvements: $1,000,000
Modeling study of the Wendell service area distribution system, including investigation of chlorine residual issues and the resulting project to address deficiencies found by the study.

37. Zebulon Water Booster Generator: $350,000
Installation of a new, larger generator for the water booster pump station sized to run both pumps at the facility. This item was identified in the merger document.

38. Zebulon Water Distribution Improvements: $695,000
Potable water distribution lines have a finite service life. Failure to establish and maintain a replacement schedule would lead to increase service interruptions, escalating maintenance costs and compounding capital replacement costs as failing water mains accumulate, requiring immediate action.

39. Zebulon Water Tank Rehabilitation: $357,500
This CIP item is for the cleaning and inspection of the Greenpace Road one million gallon elevated storage tank in FY08 and the exterior painting of that tank in FY10.

Wastewater Projects

1. Cemetery Branch Sewer Main Replacement: $800,000
Replacement of 5,000 LF of 12-inch and 18-inch sanitary sewer line along Cemetery Branch from Pigeon House Creek at Capital Boulevard to the Oakwood Cemetery.

2. Conversion of the Garner 201 Facility: $4,200,000
The project will convert the wastewater treatment plant to an irrigation site to allow for the disposal of process reject water from the D.E. Benton water treatment plant. Conversion may include the installation of high density Polyethylene lagoon liner and clearing and grubbing the wooded spray field area to facilitate spray irrigation of process reject water.

3. Crabtree Interceptor Siphons: $10,500,000
This project involves the upgrade of eight wastewater collection system inverted siphons on both the North and South Bank Crabtree Creek Interceptors. Siphons allow gravity sewer lines to cross under creeks, rivers and streams. This project will reduce flow restrictions at these eight locations.

4. Crabtree Lift Station Improvements: $1,100,000
Rehabilitate the augers to extend the life and maintain efficiency of the lift station.

5. Crabtree Valley Sewer Replacement: $4,600,000
Repair and replace 6,000 LF of sanitary sewer main because of age and hydraulic constraints. This line runs from Glenwood Avenue to Hare Snipe Creek.

6. Dunn Road Sewer Replacement: $2,000,000
Replace about 6,000 LF of 8-inch sewer main with a new 18-inch sewer main from the existing 18-inch sewer main at the end of Dunn Road west toward Falls of Neuse Road.

7. East Neuse Regional Pump Station and Force Main: $14,900,000
Construction of a new pump station on the east bank of the Neuse River at the confluence of Poplar Creek and the Neuse River across from the Neuse River WWTP. This new pump station will pump a peak one hour flow rate of 89 MGD with five 20 MGD pumps. The purpose of this pump station will convey flow from the Neuse basin and Walnut Creek basin to the Neuse River WWTP. This construction will require a new force main. This force main will consist of 2,500 linear feet of 48-inch parallel lines that will convey 107 MGD peak flow.

8. Lower Crabtree Creek North Sewer Main: $500,000
Installation of approximately 6,300 LF of 8-in sewer main from the Turf Grass and Kingsborough Pump Stations to the Neuse River Interceptor on the north side of Crabtree through Anderson Point Park. This will provide gravity service to other areas along north side of Crabtree Creek.

9. Main Replacement: $25,000,000
This funding will continue the program to replace under-sized and deteriorated sanitary sewer collection mains and services. The program will concentrate on rehabilitation or replacement in older areas of the city, such as inside the beltline.

10. Neuse River East Parallel Interceptor Phase II: $8,000,000
Construction of a new interceptor along the east side of the Neuse River from just south of Buffaloe Road to Harris Creek.

11. Neuse River Off-site Reuse System Expansion: $2,500,000
Continued expansion of the Neuse River Wastewater Treatment Plant off-site reuse system expansion. Project scope includes reuse distribution mains, pump stations, and other reuse distribution components necessary for the expansion of the system in accordance with the Reuse Master Plan.

12. Neuse River Pump Station and Pump Addition: $2,000,000
Installation of a fourth pump and replacement of the existing generator to accommodate the added load due to the fourth pump. This will provide for future growth in this portion of the service area.

13. North Bank Crabtree Creek Interceptor Replacement: $7,550,000
This project is currently planned to be implemented over four phases. This project involves the replacement or rehabilitation of approximately 29,500 LF of 30 and 36-inch sanitary sewer line between Raleigh Boulevard and Glenwood Avenue along the north bank of Crabtree Creek because of age and Hydraulic loading.

14. NW Crabtree Creek Pump Station & Equalization: $66,800,000
This project will construction a new 20-MGD liftstation upstream of the confluence of Mine Branch and Crabtree Creek to pump all flow from the upper basin to the Neuse River pumpstation. The project also includes 51,800 feet of 36-inch forcemain from the new station to the Neuse River liftstation and a 4 million gallon equalization storage tank.

15. NPDES Permit Renewals: $150,000
Permitting the discharges associated with the EM Johnson WTP, Neuse River WWTP, Smith Creek WWTP and Little Creek WWTP. The City's water and wastewater treatment plants utilize a NPDES (National Pollutant Discharge Elimination System) permit to discharge process wastewater. This project would engage engineering services to seek renewal of this permit.

16. Neuse River WWTP 15 million gallons per day Capacity Expansion: $66,200,000
Construction of additional waste treatment facilities at the Neuse River WWTP that will increase the treatment capacity of the facility from 60 MGD to 75 MGD, this is necessary due to anticipated growth in the service area.

17. Neuse River WWTP Electrical Improvements: $7,000,000
Installation of a fourth 3 Megawatt emergency standby generator, parallel 25kV switchgear, and parallel 25kV splitter switchgear at the Neuse River Wastewater Treatment Plant.

18. Poplar Creek Interceptor / Regional Pump Station: $6,600,000
Construct a new 36/42 inch interceptor from the East Neuse Regional Pump Station located near the confluence of the Neuse River and Poplar Creek to the Knightdale Poplar Creek interim pump station at Poole Road in FY12.

19. Sanitary Sewer Pump Station Removal, Repair, and Replacement: $2,500,000
Extension of gravity sanitary sewer mains to eliminate sanitary sewer pump stations. This item also include rehabilitation or replacement of deteriorated pump station facilities.

20. Service Area Growth: $10,500,000
The city annexes areas that reach levels of development appropriate for municipal services when authorized by City Council. This funding reflects the sewer service extensions associated with the annexation plan for the next five years.

21. Sewer System Capacity Analysis: $1,000,000
This funding will continue the program to collect data and model the sanitary sewer collection system. A system-wide capacity analysis is currently under contract w/ CDM. This analysis provides information on the existing sewer collection system which is utilized to evaluate available system capacity and to guide future system improvements. This is a Capacity, Management, Operations, and Maintenance recommendation.

22. Upper Pigeon House Rehabilitation/Replacement: $7,500,000
Pigeon House Creek has been listed as "impaired" for fecal coliform bacteria. One possible source could be the deteriorated Pigeon House Creek sewer line, herein targeted for repair. The age and condition of this line indicates the need for replacement. This project also conforms with City Council goals as set forth in Chapter 4, part 2 of the Comprehensive Plan.

23. Walnut Creek/Influent Lift Station Pumps: $2,500,000
Installation of the 4th VT pump and replacing the drive units and augers at the Walnut Creek Lift Station in FY10.

24. Wendell Buffalo Creek Basin Sewer Improvements: $800,000
Construction of a new pump station and force main along Buffalo Creek near the county line to discharge into the Lake Glad Road facility. The proposed pump station size was 1220 GPM pumping through 6,200 LF of new 12" force main. This was listed as a Wendell CIP item adopted in the merger agreement.

25. Wendell East Wake Sewer Cost Share: $3,300,000
This is Wendell's portion of the cost share for the Wendell Falls pump station and force main along Poole Road from Lake Myra to the Poplar Creek interceptor. Also included in this estimate is for 5,760 LF of 12" gravity sewer extension in the upper Marks Creek basin and upsizing of 16,400 LF of gravity interceptor through Wendell Falls. This was listed as a Wendell project adopted in the merger agreement.

26. Wendell Lake Glad Road Demolition: $165,000
Demolition of the Lake Glad Road Aeration basins (2) and extension of the aerial gravity sewer line and splitter box. This was listed as a Wendell project adopted in the merger agreement.

27. Wendell Marshburn Road Sewer Improvements: $2,000,000
Construction of a new pump station along Marshburn Road near Little River discharging to the gravity sewer at Hanor Lane. The proposed pump station was sized at 700 GPM pumping through 5,000 LF of new 10" force main. This was listed as a Wendell CIP item adopted in the merger agreement.

28. Wendell Various Gravity Sewer Projects: $1,300,000
Gravity sewer extensions were identified in the merger agreement over the next several years. They are the Wendell Park gravity sewer to the Buffalo Interceptor in '10 (1,000 LF of 8" gravity sewer), the Lake Glad Road sewer extension from Wellington Pump Station in '11 (2,000 LF of 8" gravity sewer), the Old Wilson Road extension (3,035 LF of 8" gravity sewer), the Lizard Lick Interchange sewer (1,700 LF of 8" gravity sewer), and the Old Zebulon Road sewer extensions (3,000 LF of 8" gravity sewer) in '12.

29. Zebulon Little Creek WWTP Bio-solids Improvements: $2,900,000
This project would add an additional digester for batching the aerobically digested bio-solids and then sending to the bio-solids to the holding tank for post digestion thickening. This would allow staff to complete a 30 day VSR test prior to sending bio-solids to the holding tanks where it will be blended with other batches. Project would also include the replacement of the existing bar screen system with fine screen (3-5 mm) technology that will fit into the existing influent structure and work with existing hydraulics. Discharge into a new compactor to dry grit prior to discharge into dumpster.

30. Little Creek WWTP Expansion/Improvements (Phase I): $11,200,000
The project is a re-rating of the Little Creek Wastewater Treatment Plant from 1.85 MGD to 2.2 MGD and is phase I of the planned expansion of this facility. The project includes improvements to influent lift pumps, grit removal system, bio-solids removal, anoxic mixed liquor suspension units and odor control systems. New filters to remove nutrients and covers for the aerobic digesters, sludge holding tanks and influent structure are also included in the project. A new generator will be added that will accept the entire plant load and a new aerobic digester for batch processing will be added. The project is a composite of merger projects.

Phase II – Public Utilities Projects

Water Projects

Water Main Replacements: $25,000,000
Continuation of the program to replace and/or rehab undersized and deteriorated water mains in Raleigh.

Service Area Growth: $5,000,000
Estimated cost of extending water lines for projected annexation and service growth.

Water Storage Tank Rehabilitation/Replacement: $5,000,000
Rehabilitation or replacement of water storage tanks.

Water Booster Station Rehabilitation/Replacement: $2,000,000
Rehabilitate or replace existing water booster pumping stations.

E.M. Johnson WTP Facility & Equipment Rehabilitation: $3,750,000
Rehabilitation and/or replacement of major equipment and associated facilities at the EM Johnson WTP.

Remote Operations Center: $900,000
To develop a satellite Operations Center site in the North Raleigh area.

Thoroughfare Mains: $2,000,000
Continuation of currently funded program to install water mains in the construction of new thoroughfare projects and make adjustments to existing water mains in thoroughfare widening projects.

E.M. Johnson WTP Chemical Storage Tank Replacement: $250,000
Due to the corrosive nature of chemicals in storage, periodic replacement of aged bulk chemical storage tanks is required.

E.M. Johnson WTP Clearwell Addition: $1,100,000
To meet future water supply demands, an additional clearwell will be required at the water treatment plant. An additional clearwell facility will be designed, permitted, and constructed.

Water Distribution System Plan Update: $500,000
Engineering field study of the existing water system performance, hydraulics, and related water quality modeling issues as well as subsequent computer modeling of the distribution system.

Property Acquisitions: $1,000,000
Acquire property for water main easements, booster pump stations, and elevated water tanks.

Little River Reservoir: $51,000,000
Design and construction of the Little River Reservoir as a new raw water supply for the City of Raleigh.

Little River Reservoir Wake County Land Acquisition Reimbursement: $2,500,000
Wake County purchased approximately 2,050 acres for approximately $15,000,000 for the construction of the Little River Reservoir and Dam. The City of Raleigh plans to reimburse Wake County for the land acquisition with annual payments of $500,000.

Little River Reservoir Wetland Mitigation (property acquisition): $12,500,000
As part of the State and Federal permit for the Little River Reservoir existing wetlands will be removed or otherwise impacted. This project will purchase additional property for the purpose of remediation and/or replacement of these wetlands.

Little River Reservoir Wetland Mitigation (construction): $15,600,000
As part of the State and Federal permit for the Little River Reservoir, existing wetlands will be removed or otherwise impacted. This project will utilize the land purchase under to construct replacement wetlands.

Little River Mitigation Monitoring: $300,000
As part of the State and Federal permit for the Little River Reservoir, a monitoring program will be used to quantify the impact of mitigation associated with the reservoir construction.

E.M. Johnston WTP Ozone Expansion: $24,500,000
As the water plant expands to its maximum capacity, an additional Ozone generator will be required to maintain proper treatment levels. Includes Installation of a 4th Ozone Generator and an associated Destructor.

Water Services Replacement: $1,250,000
Continuation of the program to replace old existing water services that have deteriorated over time.

Bethlehem Road Transmission Main 16-inch: $839,000
Install approximately 6,930 linear feet of 16-inch water transmission main along Bethlehem Road from Poole Road to Cross Cut Place.

EMJ WTP Flocculation Sedimentation Basin Improvements: 42,900,000
This project is Phase 2 of the E.M. Johnson Water Treatment Plant expansion to 120 MGD. This project involves flocculation and sedimentation basin improvements to the existing basins and the installation of new rapid mix basins. Additionally, new raw water yard piping, chemical injection, site electrical and instrumentation/controls are needed as part of this project.

EMJ WTP UV/Solids Handling: $35,100,000
This project is Phase 3 of the E.M. Johnson Water Treatment Plant expansion to 120 MGD. This project includes the construction of a new ultraviolet radiation disinfection facility, improved solids handling facilities to address higher waste flows from an expanded plant capacity, and miscellaneous civil engineering work.

EMJ WTP Filter/Sed/Floc Basin Additions: $38,500,000
This project is part of Phase 1 of the E.M. Johnson Water Treatment Plant expansion to 120 MGD. As the initial phase of the plant expansion, this project will incorporate new high rate filters, an additional flocculation and sedimentation basin with plate settlers, improvements to the raw water transmission lines to the site and to the reservoirs, various chemical improvements, and the installation of miscellaneous electrical/instrumentation/controls.

Auburn Church Rd Transmission Line 16-inch (B505): $150,000
Install approximately 14,840 linear feet of 16-inch water transmission line along Auburn Church Road.

DEBWTP Water Transmission Main: $12,000,000
Construction of approximately 41,594 linear feet of 30-inch diameter water transmission main along Walnut Creek from the old EB Bain WTP to Poole Road.

VA Security Improvements: $1,000,000
Improvements to security measures at EMJ WTP, elevated water tanks sites and other remote water facilities.

EMJWTP New Laboratory Facility: $4,500,000
Construct a new facility for the laboratory operations.

EMJWTP Sludge Storage Canopy: $400,000
Design and construction of a canopy to cover the existing sludge storage thus reducing the overall transportation costs of the sludge disposal.

EMJWTP Reservoir and Lagoon Sludge Removal: $1,600,000
Design and construction of a canopy to cover the existing sludge storage area located at the EMJ waste treatment facility.

Wake Forest WTP Decommissioning: $ 345,000
Project Description: Demolition, waste disposal and other miscellaneous cost associated with the closing of the GG Hill WTP in Wake Forest.

EMJWTP Warehouse Expansion: $3,000,000
Expansion of the existing EMJ WTP warehouse by approximately 8,000 square feet.

Pullen Park Discharge Transmission Upgrade (B202): $ 2,078,000
Upgrade of the transmission main for the Pullen Park Booster Pump Station in order to accommodate the larger volumes generated by project B201.

EMJWTP Additional High Service Discharge Pipe (B302): $359,000
Installation of 1,300 linear feet of 30-inch transmissiom main on the E.M. Johnson Water Treatment Plant site to convey the higher flows generated by project B301.

1 MGD Pump Upgrade at Mt. Herman PS (B401): $280,000
Installation of a 1 MGD pump at the Mt. Herman Road Water Booster Pump Station to accommodate the additional water demand in the 655 Pressure Zone.

Replace Springdale Tank (B402): $1,650,000
This project will replace the current Springdale Tank, which is a 100,000 gallon pedisphere tank that is nearing the end of its service life. The new tank will be relocated within the 655 pressure zone and will be a 500,000 gallon elevated tank.

Ten Ten Road Water Tank (B503): $3,000,000
Construction of a new 1.0 MG elevated water storage tank in the vicinity of Ten Ten Road and Old Stage Road to support the increasing water demand of the 532 pressure zone.

Jones Sausage Road Upgrade Under I-40 (B512): $850,000
Install a 16-inch water line along Jones Sausage Road at the intersection of I-40.

Control Valve Installation at Wendell Blvd (B901): $130,000
Install a Control Valve at the existing connection between the 462 pressure zone and the 497 pressure zone to allow limited water transfer for water quality purposes.

Rand Road Transmission Line 12-inch (B513): $1,029,000
Installation of approximately 12,400 linear feet of 12-inch water line along Rand Road in Garner from NC 50 to Ten Ten Road.

Ten Ten Road Transmission Line 12-inch (B514): $432,000
Installation of approximately 5,200 linear feet of 12-inch water line along Ten Ten Road in Garner from Rand Road to Old Stage Road.

Bain Pump Station Upgrade (B103): $70,000
Replacement of existing water booster pumps.

Oregon Trail Road Transmission Main 24-inch (B509): $1,219,000
Install approximately 5,670 linear feet of 24-inch water transmission main from the D.E. Benton WTP along Oregon Trail to New Bethel Church Road.

Clifford Road Transmission Main 24-inch (B510): $1,189,000
Install approximately 5,530 linear feet of 24-inch water transmission main along Clifford Road from New Bethel Church Road to Hebron Church Road.

Hebron Church Road Transmission Main 24-inch (B511): $970,000
Install approximately 4,510 linear feet of 24-inch water transmission main along Hebron Church Road from Clifford Road to White Oak Road.

Franklin Street Waterline 12-inch (B602): $133,000
Install approximately 1,600 linear feet of 12-inch waterline along Franklin Street from Friendship Chapel Road to NC 98 Bypass.

NC 98 Bypass Waterline 12-inch (B603) : $493,000
Install approximately 5,940 linear feet of 12-inch waterline along NC 98 Bypass from Jones Dairy Road to Franklin Street.

Ligon Mill Road Waterline 12-inch (B604): $430,000
Install approximately 5,180 of 12-inch waterline along Ligon Mill Road from Margots Avenue to Burlington Mills Road.

Poole Road Booster Pump Station (B102): $2,800,000
Construction of a regional water booster pump station to replace the existing aging/undersized booster stations within the Wendell and Zebulon services areas.

Wendell Blvd Water line from NC 97 to Cypress St (B902): $1,449,000
Install approximately 11,978 linear feet of 16-inch water transmission line along Wendell Blvd. from NC 97 to Cypress Street.

Zebulon Water line on NC 97 (B903): $2,176,000
Install approximately 17,985 linear feet of 16-inch water transmission line along NC 97 from the intersection of Wendell Boulevard to Riverview Drive.

Wastewater Projects

Sewer Main Replacements: $35,000,000
Continuation of the program to replace undersized and deteriorated sanitary sewer collections mains and eliminate sewer pump stations.

Service Area Growth: $10,000,000
Projected cost to the City to provide for the extension of sewer lines into projected annexation areas during the period encompassed by Phase II of the Capital Improvement Program.

Sewer System Capacity: $750,000
This project will continue to collect data and model the sanitary sewer collection system. This analysis provides information on the existing sewer collection system which is utilized to evaluate available system capacity and to guide future system improvements.

Neuse River Off-site Reuse System Expansion: $10,000,000
Continued expansion of the Neuse River Wastewater Treatment Plant off-site reuse system expansion. Project scope includes reuse distribution mains, pump stations, and other reuse distribution components necessary for the expansion of the system in accordance with the Reuse Master Plan.

NRWWTP Land Purchase: $1,000,000
Purchase of additional property adjacent to the NRWWTP for biosolids application and additional buffers.

Sewer Pump Station Removal/Rehabilitation/Replacement: $5,000,000
The planned removal of sewer pump stations by extending gravity sewer lines reduces operational and maintenance costs to the utility system. Routine repair and upgrading of necessary pump stations reduces the utility's exposure to sanitary sewer overflows. This project extends gravity sewer lines and removes, repairs, and replaces pump stations throughout the utility system.

Access to Sanitary Sewer Mains: $1,000,000
This project will clear easements, install driveways and purchase access easements throughout the system.

Crabtree Valley Sewer Replacement: $18,000,000
Repair and replace 6,000 LF of sanitary sewer main from Glenwood Avenue to Hare Snipe Creek.

North Bank Crabtree Creek SS Rehabilitation: $5,250,000
Continuation of the four phased replacement/repair/rehabilitation of the North Bank Crabtree Creek Sanitary Sewer Interceptor. This project represents phases three and four ending at Glenwood Avenue.

NRWWTP Facilities Improvements: $2,050,000
Renovate the existing filter and administrative building at the NRWWTP. Renovation will include the replacement of windows, HVAC system, ceiling, instrumentation, and several other items that are in dire need of renovating.

NRWWTP Dewatering and Sludge Dryer: $35,000,000
Expansion of the NRWWTP Biosolids Dewatering Facilities and the addition of a Sludge Dryer. The new dewatering facilities and sludge dryer will be fed from the new anaerobic digesters that will be installed at the plant in 2015.

NRWWTP Onsite Reuse Improvements: $5,000,000
Installation of additional spray irrigation facilities for the NRWWTP farm agricultural fields.

NRWWTP Pump Station Shop/Warehouse/Farm Equipment Storage: $1,000,000
Construct a pump station maintenance shop, warehouse, and farm equipment storage shelter. All buildings are pre-engineered metal.

Residential Backflow: $500,000
Install backwater valves on residential sewer services that meet the established requirements in order to avoid property damage and the resulting insurance claims caused by sewer back-ups into homes.

NRWWTP Lab Improvements: $600,000
Expansion and upgrading the laboratory facility at the NRWWTP in accordance with the Hazen & Sawyer lab study.

Zebulon LCWWTP Lab/Office Renovations: $55,000
Renovation to the Office and Laboratory building, required by building age and wear.

Neuse River WWTP Instrumentation Improvements: $500,000
Annual replacement of aging and obsolete electronic process control equipment. The vast majority of plant process controls are monitored and maintained by digital electronic equipment. All electronics have a fixed operational life and must be upgraded or replaced on a regular basis.

East Neuse Regional Pump Station: $22,500,000
Construction of a new pump station on the east bank of the Neuse River at the confluence of Poplar Creek and the Neuse River across from the Neuse River WWTP. This new pump station will pump a peak one hour flow rate of 89 MGD with five 20 MGD pumps. The purpose of this pump station will convey flow from the Neuse basin and Walnut Creek basin to the Neuse River WWTP. Phase II improvements provide additional wet well and pump capacity.

Neuse River WWTP Anaerobic Digesters: $52,000,000
Construction of new anaerobic digester at the Neuse River WWTP. This will provide a fuel source (methane gas) for the thermal sludge dryer while simultaneously digesting sludge.

Lower Walnut Creek Interceptor Parallel: $25,000,000
This project includes installation of a new junction box to divert flow from existing interceptors to new parallel pipe. The project also includes installation of 17,000 feet of 48-inch parallel pipe (or 72-inch replacement pipe) from the softball field junction box (MH 106042) to the siphon junction box upstream of Walnut Creek PS (MH 106337).

Walnut Creek Interceptor Tributaries Rehabilitation/Replacement: $2,500,000
To prevent instances of overflows, existing sewer mains that warrant maintenance will be repaired or replaced. Project provides for maintenance work on sewer lines along major tributaries of Walnut Creek.

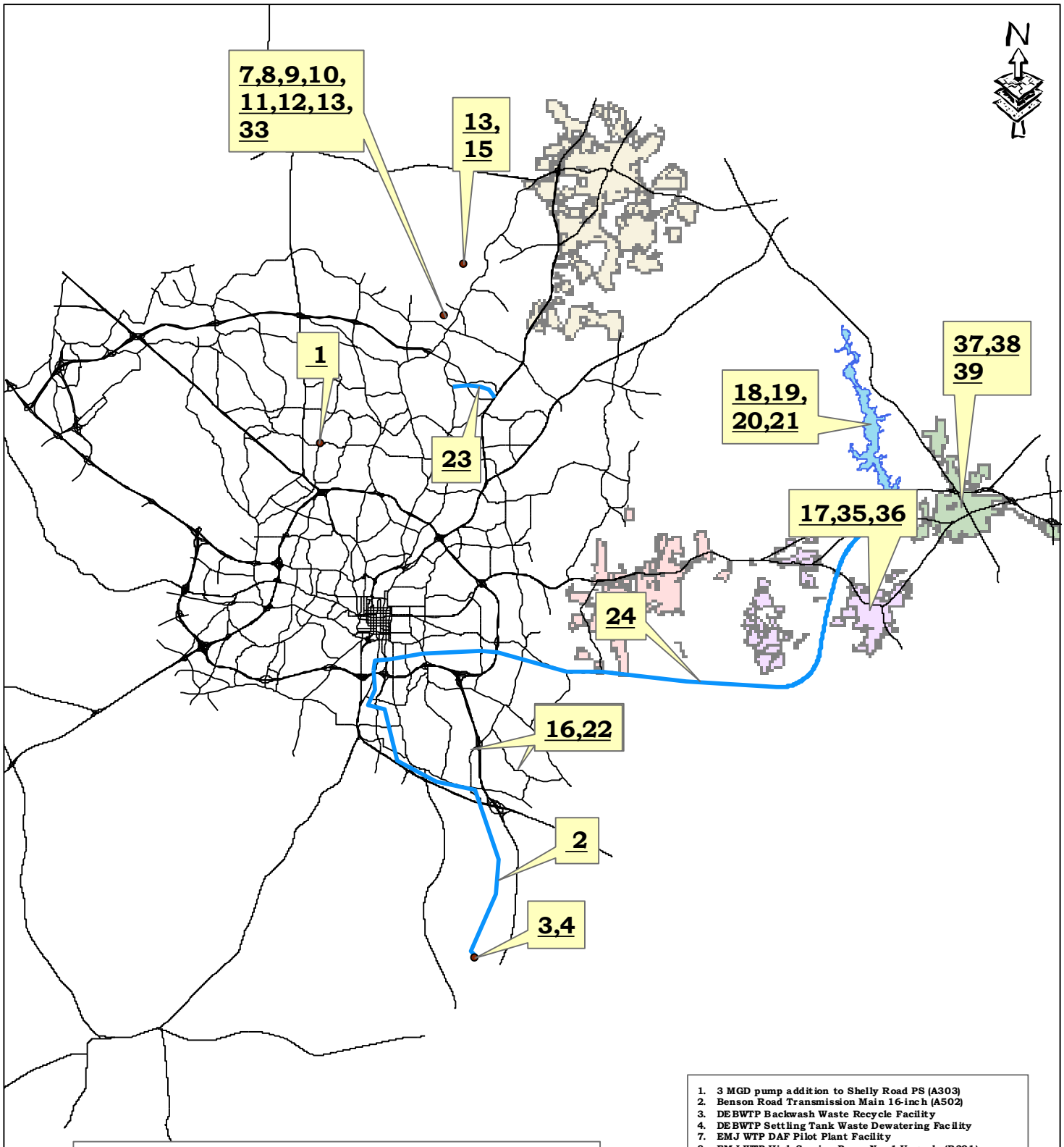
Wendell Highway NC 97 Gravity Sanitary Sewer: $700,000
Extension of 6,300 LF of gravity sewer along NC Highway 97 northeast to the Lizard Lick Area. This project is identified in the Raleigh/Wendell Utility Merger agreement.

Wendell Green Willow Pump Station Upgrade: $200,000
This project would increase the pump capacity to 285 GPM and rehabilitate the wet well. It is also identified in the Raleigh/Wendell Utility Merger agreement.

Wendell Whitley Way Pump Station and Force Main Improvements: $750,000
Upgrade the existing Whitley Way pump station to deliver 430 GPM through 10,200 LF of new 8-inch force main. This project is identified in the Raleigh/Wendell Utility Merger agreement.

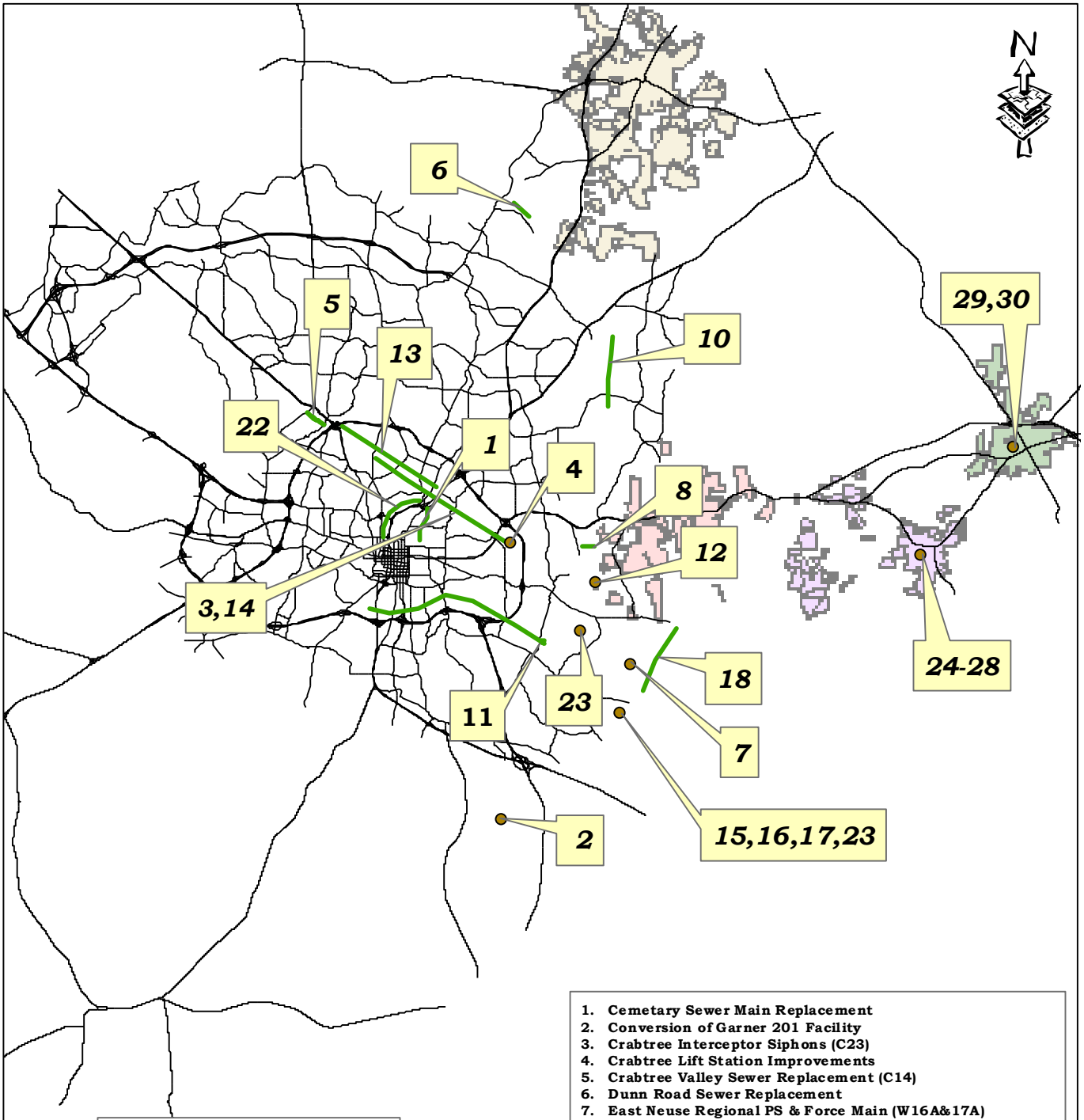
Wendell Wellington Sewer Basin Improvements: $1,400,000
Construction of 5,100 LF of 12" gravity sewer, elimination of the Deerfield and Selma pump station and upgrade to the Wellington pump station. Project identified in Raleigh/Wendell Utility Merger agreement.

Debris Drying Pads: $1,000,000
Expansion of the existing debris drying pad facility located off of Old Williams Rd. in Raleigh, NC and construction of a new debris drying facility in Wake Forest, NC.



City of Raleigh
Public Utilities Department
Water Projects
2010-2014

1. 3 MGD pump addition to Shelly Road PS (A303)
2. Benson Road Transmission Main 16-inch (A502)
3. DEBWTP Backwash Waste Recycle Facility
4. DEBWTP Settling Tank Waste Dewatering Facility
7. EMJ WTP DAF Pilot Plant Facility
8. EMJ WTP High Service Pump No. 1 Upgrade (B301)
9. EMJ WTP Sodium Permanganate Facility
10. EMJ WTP Wastewater Facilities Expansion
11. EMJWTP Clearwell Rehabilitation
12. EMJWTP Facility/Equipment Rehabilitation
13. EMJWTP Spill Containment Improvements
15. Falls Lake RWPS Improvements
16 Garner Road Transmission line 16-inch (B504)
17. Lake Glad Road Waterline Extension
18. Little River Res.Wetland Mitig. Property Acquis.
19. Little River Reserv Wake City Land Acqu Reimbursement
20. Little River Reservoir
21. Little River Reservoir Environmental Impact Statement
22. New Rand Road Transmission Main 16-in (A503)
23. Oak Forest 30" Water Main (Atlantic Ave. to Capital Blvd.)
24. Poole Road Booster Pump Station (B102)
33. Water Plant Settling Basin Rehabilitation
35. Wendell Boulevard Transmission Extension (A901)
36. Wendell Water Distribution Improvements
37. Zebulon Water Booster PS Generator
38. Zebulon Water Distribution Improvements
39. Zebulon Water Tank Rehabilitation



CITY OF RALEIGH PUBLIC UTILITIES DEPARTMENT SEWER PROJECTS 2010-2014

1. Cemetary Sewer Main Replacement
2. Conversion of Garner 201 Facility
3. Crabtree Interceptor Siphons (C23)
4. Crabtree Lift Station Improvements
5. Crabtree Valley Sewer Replacement (C14)
6. Dunn Road Sewer Replacement
7. East Neuse Regional PS & Force Main (W16A&17A)
8. Lower Crabtree North Sewer Main
10. Neuse River East Parallel Interceptor Phase II
11. Neuse River Off-site Reuse System Expansion
12. Neuse River Pump Station Pump Addition
13. North Bank Crabtree Creek Replacement
14. NW Crabtree Creek Pump Station & Equalization (C21&C22)
15. NPDES Permit Renewals
16. NRWWTP 15 MGD Capacity Expansion (Includes W15A)
17. NRWWTP Electrical Improvements
18. Poplar Creek Interceptor
22. Upper Pigeon House Rehabilitation (Portion of C8)
23. Walnut Creek/NRWWTP Influent Lift Station Improvements
24. Wendell Buffalo Creek Basin Sewer Imps.
25. Wendell East Wake Sewer Costshare
26. Wendell Lake Glad Rd. Demolition
27. Wendell Marshburn Road Sewer Improvements
28. Wendell Various Gravity Sewer Projects
29. Zebulon LCWWTP Biosolids Improvements
30. Zebulon LCWWTP Expansion/Improvements (Phase I)

CITY OF RALEIGH

NORTH CAROLINA

CIP Account Codes for Capital Projects

TRANSPORTATION			
Major Streets		**Fund**	**Org**
1	Falls of Neuse Road Realign and Widen (*)	531	9455
3	Rock Quarry Road Widening, Part B (*)	531	9458
7	Wade Avenue Improvements (*)	531	9899
Street Improvements			
1	Street Resurfacing	525/531	8380
6	Traffic Engineering Center Improvements	525	9775
8	Repair and Maintenance City Bridges	525	9449
Bicycle, Pedestrian and Planning Improvements			
3	Sidewalk Repairs	515	8298
11	SSDA Handbook Update	515	8029
12	Advanced Planning Feasibility Studies	515	9904
13	Wetland Mitigation & Delineation	515	9905
Transit Projects			
1	Transit Equipment and Facilities	525	8420
2	Bus and Van Replacement	525	8420
3	Preventive Maintenance	525	8420
4	Design/Engineering/Construction	525	8420
5	Maintenance Operations Facility Construction	525	8420
Parking Improvement Program			
1	Parking Deck Maintenance & Imps	446	9277

PUBLIC UTILITIES			
Water Projects		**Fund**	**Org**
2	Benson Road Transmission Main 16-inch (A502)	348	9367
3	DEBWTP Backwash Waste Recycle Facility	348	8030
5	Elevated Water Tank Rehabilitation and Maintenance	348	9026
6	Emergency Water Interconnections	348	9939
9	EMJ WTP Sodium Permanganate Facility	348	9778
10	EMJ WTP Wastewater Facilities Expansion	348	9777
11	EMJWTP Clearwell Rehabilitation	348	9285
12	EMJWTP Facility/Equipment Rehabilitation	348	9207
13	EMJWTP Spill Containment Improvements	348	9574
14	Falls Lake Initiative	348	9937
15	Falls Lake RWPS Improvements	348	9490
16	Garner Road Transmission line 16-inch (B504)	348	8037
18	Little River Res.Wetland Mitig. Property Acquis.	348	9940
19	Little River Reserv Wake City Land Acqu Reimbursement	348	9782
21	Little River Reservoir Environmental Impact Statement	348	9491
22	New Rand Road Transmission Main 16-in (A503)	348	8035
25	Property Acquisitions	348	9282
26	Remote Operations Center	320	9396
27	Service Area Growth (Annex- Water)	320	8010
28	Telemetry Upgrades	348	9776
29	Thoroughfare Mains	320	8337
30	Water Booster Pump Station Rehabilitation	348	9019
31	Water Distribution WQ Program,Study, Eval. & Design	348	9487

CIP Account Codes for Capital Projects

PUBLIC UTILITIES (continued)			
		Fund	Org
32	Water Main Replacement/Rehab	348	8468
34	Water Service Replacement	348	8031
35	Wendell Boulevard Transmission Extension (A901)	348	8036
36	Wendell Water Distribution Improvements	348	9787
37	Zebulon Water Booster PS Generator	348	9792
38	Zebulon Water Distribution Improvements	348	9789
Wastewater Projects			
1	Cemetary Sewer Main Replacement	349	9028
6	Dunn Road Sewer Replacement	349	9411
9	Main Replacement	349	8468
10	Neuse River Off-site Reuse System Expansion	349	8530
13	NW Crabtree Creek PS & Equalization (C21&C22)	349	8040
16	NRWWTP Electrical Improvements	349	9302
18	Sanitary Sewer Pump Station Removal/Rehab/Repl	349	9030
19	Service Area Growth	325/349	8011
20	Sewer System Capacity	325	8039
43	Neuse River East Parallel Interceptor Phase II	349	9983

COMMUNITY DEVELOPMENT			
Community Development		Fund	Org
1	First Time Home Ownership	724	8666
2	Homelessness Plan and Support	724	7589
3	Homeowner Repair Loan Program	723	7593
4	Joint Venture Rental	724	8667
5	Limited Repair Program	724	7587
6	Loan Servicing	720	7501
7	Neighborhood Revitalization	724	7588
8	Rehab/ Purchase of Housing Units and Land	724	8668

PARKS AND RECREATION			
Parks and Recreation Acquisition		Fund	Org
2	Greenway Acquisition	636	8431
Development Projects			
4	Building Improvements	636	9138
5	Park Site Improvements	625	8232
7	Tennis Court Upgrades	625	8334
8	Roof Repairs	625	8237
9	Paving Improvements	625	8236
10	Park Fencing	625	8106
14	Community Facility Upgrades	636	8574
15	Picnic Shelters	636	8847
16	Aquatic Improvements	625/636	8849
17	Greenway Trail Resurfacing	625	8124
18	Field Upgrades	625	8939
19	Electrical - Fields/Courts	625	8942
20	Street Tree Replacement	625	9037
21	Lead Paint/Asbestos Abatement	625	8851
23	Carousel Animal Restoration	625	9040
24	Multipurpose Field Renovation	625	9548

CIP Account Codes for Capital Projects

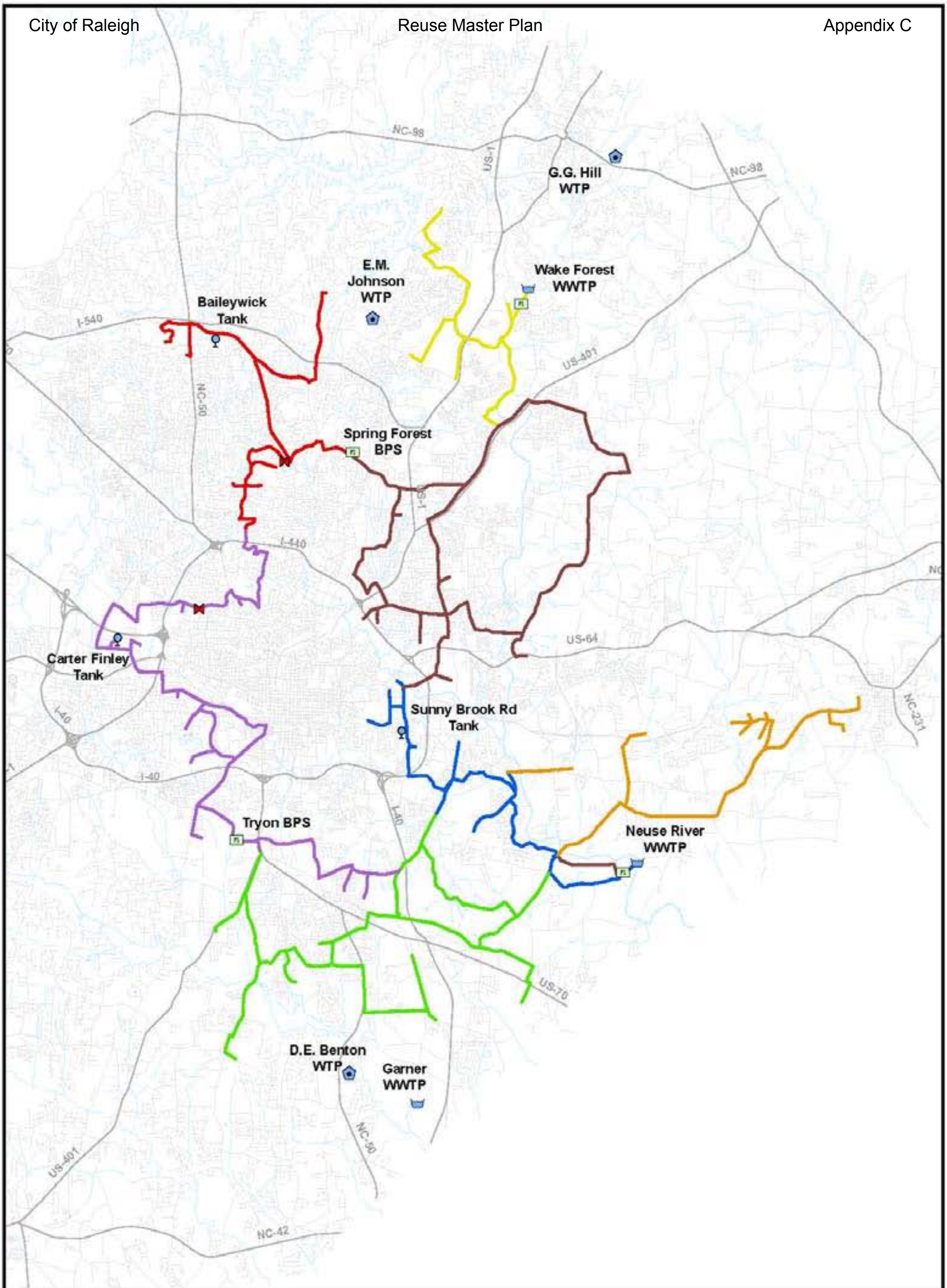
PARKS AND RECREATION (continued)			
		Fund	**Org**
25	Safety Compliance	625	9812
27	Raleigh Little Theatre Improvements	625	9041
30	Theater in the Park (TIP)	625	8335
32	Volunteerism and Partnership	625	9385
35	Fayetteville Street Renovation Impacts	625	9386
39	Moore Square Improvements	625	9820?
40	Maintenance Operations Facilities	625	9821
43	Camp Durant Nature Park Improvements	625	9922
44	Greenway Bridge/Boardwalk Repairs	625	9923
52	Structure Repair and Replacement	625	9925
53	Walnut Creek Softball Complex Improve	636	8366
54	Wooten Meadows Master Plan	625	8606
68	Site Security	625	8028
2007 Park Bond Projects			
B52	Halifax Center Improvements	636	9928
B53	Jaycee Center Expansion	636	9929
B55	Neuse River Greenway Completion	636	9930
B73	Land Acquisition	636	9932
B59	Carolina Pines Community Center Expansion	636	8533
B62	Raleigh Senior Center	636	9482
B63	Wilkerson Nature Preserve	636	9933
B64	Mordecai Park Interpretive Center	636	8198
B65	Randleigh Farm	636	9825
B66	Aquatic Facility	636	8012
B74	NE Raleigh Community Center	636	9881
B69	Lake Johnson Facility	636	8491

STORMWATER			
Stormwater Program		**Fund**	**Org**
4	Drainage System Inventory	470	9685
8	Grist Mill Northwest Drainage	470	8022
9	Grist Mill/ Harps Mill Drainage	470	8023
10	Harps Mill Road/ Haymarket Drainage	470	8027
20	Stormwater Petition Projects	470	9139
21	Stormwater System Repairs	470	8659
Neuse Basin Enviornmental Program			
1	City Facility Water Quality Retrofit Projects	470	8018
2	City Hall Water Quality Retrofit Projects	470	8019
5	Rainwater Harvesting	470	8021
9	Water Quality Cost Share	470	8371

GENERAL PUBLIC IMPROVEMENT			
General Public Improvement		**Fund**	**Org**
New Facilities and Major Renovation Construction			
B-1	CEL Public Safety Center w/ Office or Parking	507	9908
B-2	Remote Operations Facility, Downtown	506	9396
B-3	Remote Operations Facility, Mt. Herman	506	9912
B-5	Remote Operations Facility, Wilder's Grove	506	9915
B-6	Marsh Creek Maintenance Facility	506	9914

CIP Account Codes for Capital Projects

GENERAL PUBLIC IMPROVEMENT (continued)			
New Facilities and Major Renovation Planning		**Fund**	**Org**
1	Fire Station 29 (completion of project)	505	8990
Facility Improvements, Maintenance & Systems			
1	Air Handler Unit Variable Speed Drive	505	8042
5	Fire Station Backflow Prevention Devices	505	8961
6	Fire Station Backup Generators	505	9694
7	Fire Station Improvements	505	9512
8	Fire Station Roof Repair & Replacement	505	9842
Technology, Equipment, Other			
1	Fire 800 MHz Radios	505	9438
3	Alliance Medical Ministries	505	9921
4	Contemporary Art Museum	505	9470
6	Hospice Capital	505	9860
7	Interact Capital	505	9859
8	Walnut Creek Amphitheater Improvements	650	8361
Economic Development			
1	Downtown Wayfinding Program	505	9703
3	Façade Grant Program	505	9209
5	Moore Square Implementation Strategy	505	8043
6	Peace Street Streetscapes	505	9093



LEGEND

- East Wake
- Garner
- Northeast Raleigh
- Northwest Raleigh
- Southeast Raleigh
- Wake Forest
- West Raleigh

N

0 5 Miles

1 inch equals 2.5 miles

BLACK & VEATCH
International Company

City of Raleigh
Reuse Master Plan

Reuse Distribution System Phasing

Figure 4-4

B&V Project: 98149.220

Phasing.mxd 7/17/05 hesses