



February 22, 2007

H. Dale Crisp, PE, Public Utilities Director
 City of Raleigh
 PO Box 590
 Raleigh, NC 276020590

Subject: Permit No. WQCS00002
 City of Raleigh
 Raleigh Collection System
 Wake County

Dear H. Dale Crisp, PE:

In accordance with your application received on September 21, 2006, we are forwarding herewith Permit No. WQCS00002, dated February 22, 2007, to City of Raleigh for the operation and maintenance of the subject wastewater collection system.

This permit shall be effective from the date of issuance until January 31, 2012. This permit shall be subject to the conditions and limitations specified herein. It is your responsibility to thoroughly review this permit. Please pay particular attention to the monitoring and reporting requirements in this permit and any compliance schedules shown in **bold**.

For purposes of permitting, the collection system is considered to be any existing or newly installed system extension up to the wastewater treatment facility property or point of connection with a separately owned sewer system. The collection system is considered all gravity lines, pump stations, force mains, low pressure sewer systems, STEP systems, vacuum systems, etc. and associated piping, valves and appurtenances that help to collect, manage and transport wastewater to a wastewater treatment plant under the Permittee's ownership or maintained and operated by the Permittee through a perpetual legal agreement. Satellite systems are systems tributary to the Permittee's collection system but those collection systems are not owned or maintained by the Permittee. The system description provided on Page 1 of this permit is meant to provide a general idea about the size of the system and may not be all inclusive of the collection system at the time of permit issuance or afterward.

A release of wastewater from the wastewater collection system is referred to herein as a Sanitary Sewer Overflow (SSO). The evaluation of enforcement options after a SSO will be determined considering the criteria listed in condition I(2)(a) and I(2)(b) of the permit and all other relevant information available or requested of the Permittee. Compliance with all conditions of the permit as well as all statutes and regulations pertaining to the collection system must be maintained or appropriate enforcement actions may be taken as noted in Condition VI(2).

A reportable SSO is a SSO greater than 1,000 gallons to the ground or a SSO of any amount that reaches surface water (including through ditches, storm drains, etc.) Below is the procedure to use for reporting SSOs to the Division:

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1. Report by telephone to a Division of Water Quality staff member (not facsimile) or visit your regional DWQ office during regular business hours (Monday to Friday, 8AM to 5PM) as soon as possible, but in no case more than 24 hours after the SSO is known or discovered. To report outside of regular business hours, call (800) 858-0368.



2. Follow up the verbal report by sending a completed written report on the most current Division approved form within five days.

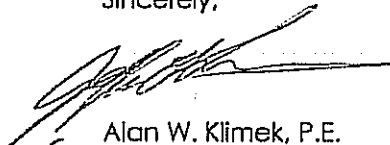
To provide a uniform method for all systems covered under this permit and to provide useful and consistent information pertaining to SSOs, a new spill reporting form has been developed (October 2003). Form CS-SSO consists of two parts. Part I serves to provide to the Division the required information that has always been necessary. Part II serves as an area to provide a justification for the spill, as optional under Condition I(2) of your permit. Form CS-SSO can be downloaded from <http://h2o.enr.state.nc.us/percs/Collection%20Systems/CollectionSystemsHome.html> from the SSO Reporting area.

An NOV, civil penalty, and/or a moratorium on the addition of waste to the system may be issued if adequate justification for an SSO is NOT submitted to the regional office. In order to submit a claim for justification of an SSO, you must use the Form CS-SSO with additional documentation as necessary. DWQ staff will review the justification claim and determine if enforcement action is appropriate. Please be advised that the information needed to justify a spill is very comprehensive. Begin using this form immediately to report SSOs from the collection system. Continue to use our old form for reporting bypasses at the wastewater treatment plant until further notice. The time frame for submittal of both Part I and Part II, if pertinent, is five days.

Failure to abide by the conditions in this permit may subject the Permittee to enforcement action. 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 days following the 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 have questions regarding compliance contact your regional office or Jeff Poupart of the Pretreatment, Emergency Response and Collection Systems Unit of the North Carolina Division of Water Quality at (919) 733-5083 extension 527. If you need additional information concerning this permit, please contact Daryl Merritt in the Pretreatment, Emergency Response and Collection Systems Unit at (919) 733-5083 extension 554.

Sincerely,



for Alan W. Klimek, P.E.

cc: Wake County Health Department
Wastewater Collection System ORC/PUD, City of Raleigh
Raleigh Regional Office, Surface Water Protection Section
Technical Assistance and Certification Unit
Water Quality Central Files
PERCS Files

NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
RALEIGH
SYSTEM-WIDE WASTEWATER COLLECTION 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

operation and maintenance of a wastewater collection system consisting of, at the time of permit issuance, approximately 1846 miles of gravity sewer, approximately 20 miles of pressure sewer, approximately 87.55 miles of force main, 369 simplex pump stations that discharge to a pressure sewer and serve a single building, and 106 duplex pump stations, and all associated piping, valves, and appurtenances required to make a complete and operational wastewater collection system to serve the City of Raleigh, Garner, Wake Forest, Rolesville, Knightdale, Wendell, Zebulon and the tributary wastewater collection system serving the Town of Apex subject to their own individual collection system permit and any deemed permitted satellite communities, pursuant to the application received on September 21, 2006, and in conformity with the documents referenced therein 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 January 31, 2012, and shall be subject to the following specified conditions and limitations:

I. PERFORMANCE STANDARDS

1. The sewage and wastewater collected by this system shall be treated in the Neuse River Wastewater Treatment Facility (NC0029033) or the Wrenn Road Spray Irrigation Facility (WQ0002708) prior to being disposed into the receiving stream or spray irrigation system. This collection system permit will be referenced upon renewal or modification of your NPDES permit(s).

2. The wastewater collection system shall be effectively managed, maintained and operated at all times so that there is no discharge to land or surface waters, nor any contamination of groundwater. Discharges from the wastewater collection system are referred to herein as Sanitary Sewer Overflows (SSOs). In the event that the wastewater collection system fails to perform satisfactorily, including the creation of nuisance conditions, the Permittee shall take immediate corrective actions, including actions that may be required by the Division of Water Quality (Division), such as the construction of additional or replacement sewer lines and/or equipment.

The Director may take enforcement action against the Permittee for SSOs that must be reported to the Division as stipulated in Condition IV(2) unless the Permittee demonstrates through properly signed, contemporaneous operating logs, or other relevant evidence that the SSO was caused by severe natural conditions; there were no feasible alternatives to the SSO, such as the use of auxiliary treatment facilities, retention of untreated wastewater, reduction of inflow and infiltration, use of adequate back-up equipment, or an increase in the capacity of the system. This provision is not satisfied if, in the exercise of reasonable engineering judgment, the Permittee should have installed auxiliary or additional collection system components, wastewater retention or treatment facilities, adequate back-up equipment or should have reduced inflow and infiltration.

In addition, the Permittee may establish an affirmative defense to any action brought for an SSO if the Permittee demonstrates through properly signed, contemporaneous operating logs, or other relevant evidence the cause of the SSO and that the SSO was exceptional, unintentional, temporary and caused by factors beyond the reasonable control of the Permittee; the SSO could not have been prevented by the exercise of reasonable control, such as proper management, operation and maintenance; adequate treatment facilities or collection system facilities or components (e.g., adequately enlarging treatment or collection facilities to accommodate growth or adequately controlling and preventing infiltration and inflow); preventive maintenance; or installations of adequate back-up equipment; and the Permittee took all reasonable steps to stop, and mitigate the impact of, the discharge as soon as possible.

Where the Permittee believes that SSO meets the criteria of either of the preceding paragraphs, the Permittee shall so inform the Division Regional Office and submit written justification for its position. The Permittee may make this submittal together with the report required by Condition IV(2) (i.e., within five working days), but in all instances must make the submittal to the appropriate Division Regional Office within 10 business days (i.e., Monday through Friday, excluding State holidays) of the date of the SSO in order to be considered for immunity from enforcement action or eligible for the affirmative defense. The Permittee has the burden of proof that one of the above conditions has been met.

3. The Permittee shall establish by ordinance its legal authority to require new sewers be properly constructed; to ensure proper inspection and testing of sewer mains and service laterals; to address flows from satellite systems and to take enforcement action as required by Condition I(4).
4. The Permittee shall develop and implement an educational fats, oils and grease program targeted at both residential and non-residential users. The Permittee shall also develop and implement an enforceable fats, oils and grease program for non-residential users under which the Permittee can take enforcement against users who have not properly installed, operated and maintained grease traps or grease interceptors as directed or otherwise violated the terms of the local ordinance pertaining to fats, oils and grease.
5. The Permittee shall adopt and implement a Capital Improvement Plan (CIP) to designate funding for reinvestment into the wastewater collection system infrastructure. The CIP should address the short-term needs and long-term "master plan" concepts. The CIP should typically cover a three to five year period and include a goal statement, description of the project area, description of the existing facilities, known deficiencies (over a reasonable period) and forecasted future needs. Cost analysis is integral to the CIP.

6. Existing overflow piping from manholes and pump stations, excluding piping to approved equalization structures, known or discovered after permit issuance shall be immediately removed or permanently capped. Plugged emergency pumping connections are allowable for portable pumping or rerouting without intentionally bypassing the wastewater treatment facility.
7. The Permittee shall maintain a contingency plan for pump failure at each pump station. If one of the pumps in a pump station containing multiple pumps fails, the process of repairing or replacing the pump shall be initiated immediately and the new parts or pump shall be installed as soon as possible. If the pump in a simplex pump station fails, it shall be replaced immediately.
8. Each pump station shall be clearly and conspicuously posted with a pump station identifier and an emergency contact telephone number at which an individual who can initiate or perform emergency service for the wastewater collection system 24 hours per day, seven days per week can be contacted. This emergency contact telephone number shall be coupled with instructions that the emergency contact should be called if the visual alarm illuminates, if the audible alarm sounds, or if an emergency is apparent.
9. Pump station sites, equipment and components shall have restricted access, per 15A NCAC 02T .305(h)(4).
10. Pump stations that do not employ an automatic polling feature (i.e. routine contact with pump stations from a central location to check operational status of the communication system) shall have both audible and visual high water alarms. The alarms shall be weather-proof and placed in a clear and conspicuous location. Permits issued for the construction of pump stations that included high water alarms in the description must maintain the alarms even if simple telemetry (i.e. notification of an alarm condition initiated by the pump station control feature) is installed.
11. For all newly constructed, modified and rehabilitated pump stations, all equipment and components located within the pump station shall be corrosion-resistant and components in close proximity of the pump station shall be sealed within a corrosion-resistant coating or encasement.
12. All construction and rehabilitation of the wastewater collection system (i.e., permitted or deemed permitted) shall be scheduled to minimize the interruption of service by the existing utilities. Construction and rehabilitation shall not result in the violation of Condition (I)(2) of this permit.

II. OPERATION AND MAINTENANCE REQUIREMENTS

1. Upon classification of the collection system 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 system within 24 hours of knowledge of a bypass, spill, or overflow of wastewater from the system, unless visited by the Back-Up ORC, and shall comply with all other conditions of 15A NCAC 8G .0204.
2. The Permittee shall develop and adhere to a schedule for reviewing all inspection, maintenance, operational and complaint logs. If the review process results in the identification of any recurring problem in the wastewater collection system, that cannot be resolved in a short time period, the Permittee shall establish a plan for addressing the problem(s).
3. The Permittee shall develop and adhere to a schedule for testing emergency and standby equipment.
4. The Permittee shall develop and implement a routine pump station inspection and maintenance program, which shall include, but not be limited to, the following maintenance activities:
 - a. Cleaning and removing debris from the pump station structure, outside perimeter, and wet well;
 - b. Inspecting and exercising all valves;

- c. Inspecting and lubricating pumps and other mechanical equipment according to the manufacturer's recommendations; and
 - d. Verifying the proper operation of the alarms, telemetry system and auxiliary equipment.
5. For each pump station without pump reliability (i.e. simplex pump stations serving more than a single building or pump stations not capable of pumping at a rate of 2.5 times the average daily flow rate with the largest pump out of service), at least one fully operational spare pump capable of pumping peak flow shall be maintained on hand.
 6. The Permittee shall maintain on hand at least two percent of the number of pumps installed, but no less than two pumps, that discharge to a pressure sewer and serve a single building, unless the Permittee has the ability to purchase and install a replacement pump within 24 hours of first knowledge of the simplex pump failure or within the storage capacity provided in any sewer line extension permit.
 7. Rights-of-way and/or easements shall be properly maintained to allow accessibility to the wastewater collection system unless the Permittee can demonstrate the ability to gain temporary access in an emergency situation where existing land-use conditions do not allow the establishment and maintenance of permanent access. In this case, the Permittee shall continue to observe the lines visually, utilize remote inspection methods (e.g. CCTV) and use the opportunity of drier conditions to perform further inspections and necessary maintenance.
 8. The Permittee shall assess cleaning needs, and develop and implement a program for appropriately cleaning, whether by hydraulic or mechanical methods, all sewer lines. At least 10 percent of the wastewater collection system, selected at the discretion of the ORC, shall be cleaned each year. Preventative cleaning is not required for sewer lines less than five years old unless inspection otherwise reveals the need for cleaning or cleaning is required by a sewer line extension permit.
 9. Adequate measures shall be taken to contain and properly dispose of materials associated with SSOs. The Permittee shall maintain a Response Action Plan that addresses the following minimum items:
 - a. Contact phone numbers for 24-hour response, including weekends and holidays;
 - b. Response time;
 - c. Equipment list and spare parts inventory;
 - d. Access to cleaning equipment;
 - e. Access to construction crews, contractors and/or engineers;
 - f. Source(s) of emergency funds;
 - g. Site sanitation and clean up materials; and
 - h. Post-SSO assessment.
 10. The Permittee, or their authorized representative, shall conduct an on-site evaluation for all SSOs as soon as possible, but no more than two hours after first knowledge of the SSO.
 11. In the event of a SSO or blockage within the wastewater collection system, the Permittee shall restore the system operation, remove visible solids and paper, sanitize any ground area and restore the surroundings.

III. RECORDS

1. Records shall be maintained to document compliance with Conditions I(4), II(2) - II(4), II(7) - II(8), IV(3) and V(1) -V(4). Records shall be kept on file for a minimum of three years.
2. The Permittee shall maintain adequate records pertaining to SSOs, and complaints for a minimum of three years. These records shall include, but are not limited to, the following information:
 - a. Date of SSO or complaint;
 - b. Volume of wastewater released as a result of the SSO and/or nature of complaint;

- c. Location of the SSO and/or complaint;
 - d. Estimated duration of the SSO;
 - e. Individual from the Division who was informed about the SSO and/or complaint, when applicable;
 - f. Final destination of the SSO;
 - g. Corrective actions;
 - h. Known environmental/human health impacts resulting from the SSO; and
 - i. How the SSO was discovered.
3. The Permittee shall maintain an up-to-date, accurate, comprehensive map of its wastewater collection system that also notes the locations where other wastewater collection systems become tributary. If a comprehensive map of the collection system has not been established, a rough sketch shall be drawn. The Permittee shall map approximately 10 percent of its existing collection system each year for the next ten years, or until complete, whichever is sooner. The comprehensive map shall include, but is not limited to: pipe size, pipe material, pipe location, flow direction, approximate pipe age, number of active service taps, and each pump station identification, location and capacity.
 4. The Permittee shall maintain records of all of the modifications and extensions to the collection system permitted herein. The Permittee shall maintain a copy of the construction record drawings and specifications for modifications/extensions to the wastewater collection system for the life of the modification/extension. Information concerning the extension shall be incorporated into the map of the wastewater collection system within one year of the completion of construction. The system description contained within this permit shall be updated to include this modification/extension information upon permit renewal.

IV. MONITORING AND REPORTING REQUIREMENTS

1. Any monitoring (including, but not necessarily limited to, wastewater flow, groundwater, surface water, soil or plant tissue analyses) deemed necessary by the Division to ensure surface water and groundwater protection will be established, and an acceptable sampling and reporting schedule shall be followed.
2. The Permittee shall verbally report to a Division of Water Quality staff member at the Raleigh Regional Office, at telephone number (919) 571-4700 as soon as possible, but in no case more than 24 hours following the occurrence or first knowledge of the occurrence of either of the following:
 - a. Any SSO and/or spill over 1,000 gallons; or
 - b. Any SSO and/or spill, regardless of volume, that reaches surface water.

Voice mail messages or faxed information shall not be considered as the initial verbal report. SSOs (and other types of spills) occurring outside normal business hours may also be reported to the Division of Emergency Management at telephone number (800) 858-0368 or (919) 733-3300. Persons reporting any of the above occurrences shall file a spill report by completing Part I of Form CS-SSO (or the most current Division approved form), within five days following first knowledge of the occurrence. This report shall outline the actions taken or proposed to ensure that the problem does not recur. Per Condition I(2), Part II of Form CS-SSO (or the most current Division approved form) can also be completed to show that the SSO was beyond control.

3. The Permittee shall meet the annual reporting and notification requirements provided in North Carolina General Statute §143-215.1C.

V. INSPECTIONS

1. The Permittee or the Permittee's designee shall inspect the wastewater collection system regularly to reduce the risk of malfunctions and deterioration, operator errors, and other issues

that may cause or lead to the release of wastes to the environment, threaten human health or create nuisance conditions. The Permittee shall keep an inspection log or summary including, at a minimum, the date and time of inspection, observations made, and any maintenance, repairs, or corrective actions taken by the Permittee.

2. Pump stations without Supervisory Control and Data Acquisition (SCADA) systems or telemetry shall be inspected everyday (i.e. 365 days per year). Pump stations equipped with SCADA systems or telemetry shall be inspected at least once per week.
3. A general observation of the entire collection system shall be performed throughout the course of every year.
4. Inspections of all high priority lines (i.e. aerial line, sub-waterway crossing, line contacting surface waters, siphon, line positioned parallel to stream banks that are subject to eroding in such a manner that may threaten the sewer line, or line designated as high-priority in a permit) shall be performed at least once per every six month period of time. A list of high-priority lines is presented as Attachment A and is hereby incorporated into this permit condition. New high priority lines installed or identified after permit issuance are incorporated by reference and subject to this permit condition until permit renewal where they shall be referenced in writing in Attachment A.

VI. GENERAL CONDITIONS

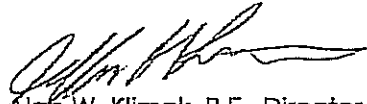
1. This permit is not transferable. In the event that the Permittee desires to transfer ownership of the wastewater collection system or there is a name change of the Permittee, a formal permit modification request shall be submitted to the Division. The request shall be accompanied by documentation from the parties involved, and other supporting materials as may be appropriate. Such request will be considered on its merits and may or may not be approved.
2. 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 through §143-215.6C, and a sewer moratorium may be established.
3. The issuance of this permit does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e., local, state, and federal) having jurisdiction, including but not limited to applicable river buffer rules in 15A NCAC 2B .0200, soil 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 15A NCAC 02T .0100 and all applicable North Carolina Occupational Safety and Health Act health and safety standards.
4. The issuance of this permit does not prohibit the Division 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 15A NCAC 02T .0100 and North Carolina General Statute §143-215.1 et. al., or as needed to address changes in federal regulations with respect to the wastewater collection system.
5. The Permittee shall pay the annual 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 02T .0110(4).
6. The Permittee shall request renewal of this permit at least six months prior to the expiration of this permit. Upon receipt of the request, the Commission will review the adequacy of the wastewater collection system described therein, and if warranted, will extend the permit for a period of time and under such conditions and limitations, as the Commission may deem appropriate.
7. The Permittee shall notify the Division's Pretreatment, Emergency Response and Collection Systems Unit in writing at 1617 Mail Service Center, Raleigh, North Carolina 27699-1617 of any

changes to the name and/or address of the responsible party (i.e. mayor, city/town manager) of the wastewater collection system.

8. 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 collection system 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 wastewater, groundwater, surface water, soil, or plant tissue.

Permit issued this the 22nd day of February, 2007

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION



Alan W. Klimek, P.E., Director
Division of Water Quality
By Authority of the Environmental Management Commission

Permit Number WQCS00002