



**City of Concord Wastewater Resources Department**  
Wastewater Collection System Performance Annual Report  
Fiscal Year July 2006 – June 2007

**I. General Information**

System Name: City of Concord Wastewater Collection System

Responsible Entity: City of Concord

Persons in Charge: T. Mark Fowler  
Director of Wastewater Resources

Aaron R. Cook  
Wastewater Utility Services Coordinator and System Operator

Applicable Permits: WQCS00326  
Tributary to NC0036269, NC0081621, and NC0067172

Description of the System:

The City of Concord Wastewater Collection System consists of over 496 miles of sewer pipelines, approximately 12,200 manholes, and 27 wastewater pump stations. The system came into existence in the early 1900s and continued to be upgraded and extended to become the system we operate today.

**II. Performance**

The City of Concord's Wastewater Resources Department performs the operation and maintenance of the City's collection system, which serves approximately 29,050 customers. Eleven crews provide this service. Two rapid-response crews respond to all calls related to potential blockages and overflows in the system. Two jet-vac truck crews perform maintenance on the system by removing obstructions that may be present in the system, thus limiting the number of possible back-ups and overflows. These trucks are also used to maintain the City's 27 wastewater pump stations through periodic cleaning and sludge removal. A closed circuit TV inspection crew locates defects and obstructions

in the pipelines by the use of a camera that videotapes the inside of the sewers. This crew also inspects all new collection system extensions prior to the City's acceptance of the extension's operation and maintenance responsibility. The City also has a crew that is dedicated to the operation and maintenance of the City's wastewater pump stations. Two service line installation and repair crews install new service connections to the City's sewer mains and repair sewer mains as well as manholes. One crew is dedicated to the installation of new sewer lines and the replacement of aged and deteriorated sewer lines. The City has a Global Positioning System (GPS) and right-of-way maintenance crew that collects data on the location of the various components of the City's system, provides maintenance of the wastewater collection system's rights-of-way, and performs semi-annual inspections of the system. The City has a System Compliance Officer who is responsible for the implementation of the Fats, Oil, and Grease Program (FOG), along with the inspection of sewer right-of-ways to ensure easement accessibility.

During the past fiscal year, the City of Concord was requested to investigate approximately 209 reports of possible sewer-related overflows. These calls were related to both municipal and private lines. The City of Concord had 4 incidences that resulted in the spill or overflow of more than 1,000 gallons of wastewater to surface waters of the State.

**August 2006**                      Total - +/- 11,500 gallons

*St. Johns Avenue, Concord (2,500)*

This spill occurred as a result of a blockage and a defective pipe. The blockage was removed and normal flow restored to the pipe. The pipe segment is scheduled for replacement in this budget year. There were no known environmental impacts as a result of this spill.

*Rubens Road, Concord (9,000)*

This spill occurred as a result of a severe weather event, which caused the adjacent stream to overflow and surcharge the receiving sewer system in addition to Concord's sewer system. The system was inspected after the water subsided and no defects were found. A private rain gauge on Union Cemetery Road captured 4.5 inches of rainfall in two hours, indicating a storm frequency beyond the 200-year storm event according to the Point Precipitation Frequency Estimates from NOAA Atlas 14. There were no known environmental impacts as a result of this spill.

**September 2006**                      Total - +/- 7,200 gallons

*Concord Parkway, Concord (7,200)*

This spill occurred when a section of pipe came loose from a coupling that had failed. The defective coupling was replaced and normal flow restored to the pipe. There were no known environmental impacts as a result of this spill.

**January 2007**

Total - +/- 3,600 gallons

*Pitts School Road, Concord (3,600)*

This spill occurred as a result of an illegal discharge into the sewer system that caused the line to become blocked and overflow. The debris was removed from the pipe and normal capacity was restored. There were no known environmental impacts as a result of this spill.

The City of Concord is continually performing preventative maintenance activities and undergoing rehabilitation projects to prevent sanitary sewer overflows. The following activities have been completed during the past fiscal year.

Jet-Vac Line Cleaning	341,848	linear feet
Root Control	38,122	linear feet
Dye Tests	3	
Sewer Service Inspections	709	
Sewer Line Replacement	1,254	linear feet
Smoke Testing	183,725	linear feet
T.V. Inspections	89,209	linear feet

During FY '05-'06, the City of Concord hired a Wastewater Systems Compliance Officer to administer the City's Fats, Oils, and Grease program (FOG). He is also responsible for monitoring and enforcing sewer right-of-way encroachment issues.

The City of Concord Wastewater Department began a program in FY '06-'07 to make property owners aware of sewer easements on their property. The purpose of this program is to initiate corrective actions to existing accessibility problems and prevent future accessibility problems. Easements are not always identified on property deeds. The first step to ensure access to the sewer system is to confirm that the property owner is aware of the City's easements so they can plan or modify the use of their property accordingly. Notification letters include the specific reference to a recorded easement or subdivision plat that affects the owner's property. To date the City of Concord has sent out 811 easement notification letters to customers, including information about the City's requirements are for keeping the easement accessible. Properties with sewer easements are flagged in the City's customer database so new owners can be notified when property ownership is transferred.

In an effort to improve customer service, the Wastewater Resources Department began using GPS equipment to locate sewer cleanouts at the edge of public rights-of-way. This information will help staff more efficiently locate and determine causes for back-ups on service lines and laterals. To date, 11,638 cleanout points have been collected.

The City of Concord was awarded a grant from the NC Clean Water Management Trust Fund for the construction of a sewer extension to transport wastewater from an abandoned wastewater treatment facility. The application was prepared by the City on the behalf of homeowners living approximately a half-mile outside of the municipal

limits. This project will eliminate the discharge of nearly 5,000 gallons per day of untreated or poorly treated wastewater that currently drains to a roadside ditch. The start date for the contract was May 14, 2007. To date, 2200 feet of pipe has been installed of the 2,981 total footage included in the contract. September 14, 2007 is the expected competition date for the project.

**III. Notification**

Customers of the City of Concord’s wastewater collection system were notified regarding the availability of this annual report through a public notice in the *Concord & Kannapolis Independent Tribune*, a local daily newspaper. A copy of this report is available for review at the Alfred M. Brown Operations Center at 850 Warren C. Coleman Boulevard, Concord, North Carolina; at City Hall, 26 Union Street South, Concord, North Carolina; and on the City of Concord’s website at <http://ci.concord.nc.us>.

**III. Certification**

I certify under penalty of law that this report is complete and accurate to the best of my knowledge. I further certify that this report has been made available to the users or customers of the named system and that those users have been notified of its availability.

\_\_\_\_\_ Date: \_\_\_\_\_

CITY OF CONCORD

T. Mark Fowler, Director of Wastewater Resources