



City of Concord Water Resources Department – Wastewater Division
Wastewater Collection System Performance Annual Report
Fiscal Year July 2019 – June 2020

I. General Information

System Name: City of Concord Wastewater Collection System

Responsible Entity: City of Concord

Persons in Charge: Jeff Corley
Director of Water Resources

Mark Varnadore
Wastewater Utility Services Superintendent & System Operator

Applicable Permits: WQCS00326
Tributary to NC0036269 and NC0081621

Description of the System:

The City of Concord Wastewater Collection System consists of over 592 miles of sewer pipelines, approximately 14,785 manholes, and 24 wastewater pump stations. The system came into existence in the early 1900s and continues to be upgraded and extends to become the system we operate today.

II. Performance

The City of Concord's Wastewater Division performs the operation and maintenance of the City's collection system, which serves approximately 37,040 customers. Nine 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 24 wastewater pump stations through periodic cleaning and sludge removal. An inflow-infiltration crew locates defects and obstructions in the pipelines using a camera that videotapes the inside of the sewer lines. The City also has a crew that is dedicated to the operation and maintenance of the City's 24 wastewater pump stations. One service line installation and repair crew install's new service lateral connections to the City's sewer mains and repairs sewer mains as well as manholes. One crew of heavy construction has been dedicated to heavy right-of-way clearing or to fill in as a repair crew to do new installs and make repairs as well. All right-of-way maintenance crews collect data on the location of the various components of the City's system that provides maintenance of the wastewater collection system rights-of-way's that performs semi-annual inspections of the system. The City has a System Compliance Superintendent 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 this fiscal year, the City of Concord was requested to investigate approximately 213 reports of possible sewer-related backups. These calls were related to both municipal and private lines. The City of Concord had 1 incidence that resulted in the spill or overflow of more than 1,000 gallons of wastewater to surface waters of the State.

September 2019

Total+/- 1500 gallons to waters of the State

End of Carpenter Court NW (1500-gallon spill)

This spill occurred because of grease and debris being illegally discharged into the sewer system to flow into a tributary to Rocky River. The affected pipe has been cleaned and all grease and debris removed. There were no known environmental impacts because of this spill.

The Wastewater Division began a program in the fiscal year of '06 - '07 to make property owners aware of water and sewer easements on their property. The purpose of this program is to initiate corrective actions to existing accessibility problems and to prevent future accessibility problems. Easements are not always identified on property deeds. The first step to ensure access to the water and 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 distributed easement notification letters for sewer and raw water easements to customers, including information about the City's requirements for keeping the easement accessible. Easement research and notifications for the City's utility service area have been completed. Properties with sewer easements are flagged in the City's customer database so new owners can be notified when property ownership is transferred. Letters have been mailed because of property transfers. Property owners have responded to the letters with request for additional information concerning easement location.

The Wastewater Compliance Superintendent oversees the department's FOG (Fats, Oils and Grease) program. This superintendent reviews plans for new construction and up-fit plans dealing with food preparation and grease disposal. Monthly pumper hauler routing reports and individual food service facility pumping manifests are two items that are used to monitor grease disposal from the food service industry. City crews assist the Compliance Superintendent by providing information pertaining to grease buildups noticed during daily maintenance operations. Information gleaned from the crews is used to provide educational information to the areas or establishments that are contributing to the problem. The Compliance Superintendent also has an extensive educational program, providing grease related programs to elementary grade students, Journey Through Concord and Concord 101 adult education programs.

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	300,960	linear feet
Dye Testing	14	
Sewer Service Inspections	170	
Sewer Line Replacements	26,294	linear feet
Smoke Testing	33,000	linear feet
T.V. Inspections	158,400	linear feet
Pipe Lining	26,294	linear feet
Manholes Rehabilitated	88	

The City of Concord also operates an in-house flow monitoring program. The desired outcomes of this program are to ensure adequate system capacity, prevent sanitary sewer overflows, identify segments of the system impacted by inflow and infiltration, and prioritize field investigations and repairs that could create the greatest reduction in the conveyance and treatment of unnecessary flow. Over the past year, the following basins were studied:

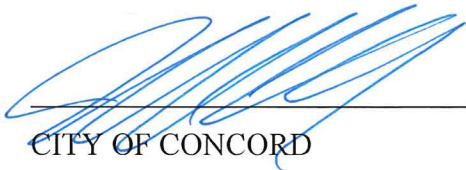
- Rocky River: ROC5600 NE, ROCT10200 SW: Concord Regional Airport and Concord Mills.
- Midland: Entire basin.

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 *Independent Tribune*, a local daily newspaper. A copy of this report is available for review at the Alfred M. Brown Operations Center at 635 Alfred Brown Jr. Ct. SW, Concord, North Carolina; at City Hall, 35 Cabarrus Ave. W, Concord, North Carolina; and on the City of Concord's website at www.concordnc.gov.

IV. 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: 10/19/2020

CITY OF CONCORD

Jeff Corley, Director of Water Resources