



CHARLOTTESM

**CHARLOTTE-MECKLENBURG
UTILITIES**

Wastewater Performance Report

July 1, 2000 – June 30, 2001

Charlotte-Mecklenburg Utilities

5100 Brookshire Blvd.

Charlotte, NC 28216

Phone: (704)399-2221 Fax: (704)393-2219

www.cmutilities.com

I. General Information

Name of Regulated Entity and Responsible Person:

City of Charlotte
Barry Gullet, Deputy Director
Charlotte-Mecklenburg Utilities
Administration Division
5100 Brookshire Blvd.
Charlotte, NC 28216
(704) 399-2221

Applicable Permits:

There are five wastewater treatment facilities owned and operated by Charlotte-Mecklenburg Utilities. Charlotte-Mecklenburg Utilities also operates one facility that is owned by Mecklenburg County. Below is a list of these facilities and their applicable NPDES (National Pollutant Discharge Elimination System) permit number. Included with the list of facilities is the name of the Operator in Responsible Charge (ORC) at the facilities and the site telephone numbers.

<u>WWTF</u>	<u>Permit Number</u>	<u>ORC</u>	<u>Phone</u>
Irwin Creek WWTP	NC0024945	James T. Hunter	704-357-1344
Mallard Creek WRF	NC0030210	Jerome Lucky	704-547-0680
McAlpine Creek WWMF	NC0024970	Sandy Kim Neely	704-542-0736
McDowell Creek WWTP	NC0036277	Elliot E. Goins, Jr.	704-875-6443
Sugar Creek WWTP	NC0024937	Roy E. Purgason, Jr.	704-553-2124

<u>WW COLLECTION</u>	<u>Permit Number</u>	<u>ORC</u>	<u>Phone</u>
4100 W. Tyvola Road	none	Earl Peigler	704-357-6064

The wastewater treatment facility that is owned by Mecklenburg County and operated by Charlotte-Mecklenburg Utilities is:

<u>WWTF</u>	<u>Permit Number</u>	<u>ORC</u>	<u>Phone</u>
McDowell Park WWTP	NC0029220	Robert P. Norris	704-537-1344

Description of collection and treatment systems:

The wastewater collection system currently operates under existing wastewater treatment plant NPDES permits. However, the N.C. Department of Environment and Natural Resources has begun permitting wastewater collection systems statewide, and Utilities is currently in the process of applying for its collection system permit.

Charlotte-Mecklenburg Utilities collects wastewater from an estimated 171,300 connections to households and businesses throughout the county. Wastewater is collected and directed (mostly using gravity flow) to one of five wastewater treatment plants where it is treated and released. An average of 76 million gallons of wastewater is treated and discharged each day.

More than 100 employees work to maintain 3,062 miles of collection pipelines and 65 sewage lift stations throughout the county to ensure proper gravity flow. The sewer pipes in this system range in size from 6 inches in diameter to 78 inches in diameter.

Each of the wastewater treatment plants provides primary, secondary and advanced treatment to the waste stream. Large solid particles and inorganic materials are removed by screening and settling. The wastewater is treated biologically to remove dissolved pollutants. Disinfection reduces bacterial and pathogenic materials. Finally, the waste stream passes through sand filters to remove very small particles that may not have been removed through the settling process.

II. Summary of System Performance

Highlights

Charlotte-Mecklenburg Utilities safely collected, treated and discharged more than 28.3 billion gallons of wastewater for the fiscal year ending June 30, 2001. Our wastewater collection system and plants safely transported and processed more than 99.99 percent of all flow. Less than 0.01 percent escaped the collection and treatment system in the form of sewage spills and overflows. Our wastewater treatment plants met 98.86 percent of all permitted discharge limits.

This accomplishment required a coordinated effort between our Wastewater Collection, Wastewater Treatment, System Protection, Residuals Management and Engineering divisions. Effective July 2001, three of these groups – Wastewater Treatment, System Protection and Residuals Management – began operating under a single division, known as Environmental Management. The move and name change serves to more clearly emphasize the vital role these units play within our agency, and to unify several operating units that complement each other in order to make their day-to-day business more efficient.

In FY01, Utilities teamwork resulted in several highlights:

- For the second year in a row, three wastewater plants – McAlpine, Sugar and McDowell – earned Silver Performance Awards from the Association of Metropolitan Sewerage Agencies.
- 918 miles of sewer lines were cleaned (including repeated cleanings).
- 32 miles of sewer lines were restored or replaced
- Plant expansions and upgrades continued at all five treatment facilities to enhance performance and meet discharge permit requirements.
- In its first year our Oil & Grease Prevention Program inspected grease-handling facilities at 1,206 restaurants to ensure compliance with city sewer use ordinance and protect the sewer system from improper grease disposal.
- Utilities also finished its Management Operation and Maintenance (MOM) self-audit and plan to enhance wastewater planning and performance. The plan has been submitted to the U.S. Environmental Protection Agency for review. In the meantime, major MOM initiatives have been included in the FY02 Utilities Business Plan.

Continuing Challenges

The greatest continuing wastewater challenge in this community – and in others across the U.S. – are sewage spills and overflows. During the fiscal year ending June 30, 2001,

Utilities reported 213 sewage spills -- 200 from the collection system and 13 from the five plants.

We are pleased to have seen a decline in the number of spills during the past two consecutive years; however it's important to note that our standard for reducing spills is not based on a year-to-year decline but a comparison using our five-year annual average, which is currently 250.7 collection spills per year (from 1996 to present). That said, we are encouraged to have met our fiscal year goal by reducing spills to below the five-year average. Our Business Plan for the coming fiscal year has established a goal seeking a 3 percent reduction in spills below the five-year average.

Most spills are due to blockages in the line caused by a buildup of grease, rocks, sand, or roots. Vandalism is also a problem, with tree stumps, logs, bricks, rags, and other miscellaneous items being dumped into manholes or forced into lines to cause a blockage. Leaking joints and crushed or broken lines cause overflows, and so do surcharges from heavy rains and accidental damage to manholes or pipes.

In fact, the most environmentally significant spill we had this year was beyond our control. On June 13, 2001, a private blasting subcontractor using dynamite on a private construction site in southwest Charlotte damaged a 10-inch sewer main owned by Charlotte-Mecklenburg Utilities. The spill went undetected for nearly two days, and roughly 150,000 gallons spilled into Steele Creek. Once notified, Charlotte-Mecklenburg Utilities responded within 30 minutes and worked through the weekend on cleanup. While Utilities notified environmental officials in both states about the spill, there was a lot of difficulty with finding the appropriate authorities in South Carolina. As a result of this incident, Utilities has worked with both state agencies to improve the notification process on spills in the lower Catawba Basin.

Charlotte-Mecklenburg Utilities continues its excellent sewage spill response record. Our wastewater collection staff averaged a 28.7-minute response time to all overflows as of June 30, 2001. This represents less than 25 percent of the state's two-hour standard.

Generally, clean-up of sewage spills involves raking up all solids, vacuuming the sewage, flushing with water, and spreading lime and straw over the affected spill area. The spilled sewage can sometimes be captured and pumped back into the sewer system.

At the treatment plants, we met 98.86 percent of all discharge limits set forth by our NPDES permits but our commitment is 100 percent compliance. To achieve this we have increased predictive and preventative maintenance. We are currently upgrading all five plants to enhance our treatment capabilities under existing and future permit limits.

Utilities also continues its goal of meeting all reporting requirements. While not a threat to water quality, reporting violations happen when a required test sample is either inadvertently missed, testing equipment fails, or a testing and recording procedure error occurs. To minimize reporting errors in the future, we completed an extensive training program this past year for all wastewater treatment operators with the new Standard

Operating Procedures for sample collection. During the past year, we've also increased in-house monitoring, including nutrient monitoring at the plants and in the receiving streams. In addition, we have increased monitoring for trace metals using new, state-of-the-art equipment.

Finally, our pretreatment program has identified, permitted and is regulating all large industrial users to keep unsuitable discharges out of the wastewater system. While industrial compliance is extremely high in Charlotte-Mecklenburg, identifying other potentially hazardous discharge sources is an ongoing challenge. This year the new trunkline monitoring program was expanded with the installation of 13 monitors that can collect continuous pH samples. Also completed was the replacement of the existing monitors with newer meters. The data will enable Utilities pretreatment staff to more closely observe what industrial and commercial customers discharge into the sewer network and to identify potential problem areas to protect the collection system and plants. More meter installations are anticipated during the fiscal year ending June 30, 2002.

The following pages detail all spills from the collection system and plants, along with plant permit limit violations and monitoring and reporting violations. The first list of spills for the fiscal year ending June 30, 2001 is separated by month for the collection system and for each individual treatment plant. These include descriptions of any known environmental impact of violations, and corrective measures taken. The second list represents NPDES reporting and monitoring violations and is separated by plant.

III. Notification

This report is available to the users or customers of this system on Charlotte-Mecklenburg Utilities' web page at www.cmutilities.com. There are also printed copies available at the Charlotte-Mecklenburg Utilities Administration Building at 5100 Brookshire Blvd., Charlotte, NC 28216, and at the City/County Customer Service and Information Center at 600 East Fourth Street, Charlotte, NC 28202. The users or customers of this system have received a summary version of this report – and have been notified of the availability of this comprehensive version – via a bill insert in the September 2001 water/sewer bill. A news release was also issued about this report.

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.

Barry Gullet, Deputy Director
Charlotte – Mecklenburg Utilities

Date