



2019-2020

Wastewater System Performance Report



Cape Fear
Public Utility Authority

Stewardship. Sustainability. Service.



System Overview

Cape Fear Public Utility Authority's (CFPUA) sewage collection and wastewater treatment facilities provide service to residential, commercial, and industrial customers in the City of Wilmington and New Hanover County. Wastewater collected by CFPUA undergoes multiple phases of thorough treatment before being discharged into the Cape Fear River. CFPUA is responsible for the daily operation of treatment and collection facilities and with ensuring compliance with strict environmental standards. In Fiscal Year 2020, more than \$12 million was spent to maintain, operate, and manage CFPUA's sewer, collection, and treatment systems, which received and treated nearly 6.1 billion gallons of wastewater.

James A. Loughlin (Northside Plant)

2311 N. 23rd Street

Permitted to treat up to 16 million gallons of wastewater daily

M'Kean Maffitt (Southside Plant)

3436 River Road

Permitted to treat up to 12 millions gallons of wastewater daily

Copies of this report are available at:
235 Government Center Drive and
305 Chestnut Street

You may also access this report
on our website: **www.CFPUA.org**.

UV at Southside

Wastewater treatment at CFPUA's Southside Wastewater Treatment Plant took a state-of-the-art step forward in 2020 with completion of the new UV treatment facility. UV, already in use at CFPUA's Northside Plant, is the final treatment step for wastewater. High-powered UV bulbs kill bacteria and pathogens in treated wastewater before it is discharged into the Cape Fear River.

Since Southside's opening in the 1970s, crews had previously used chlorine gas for this final disinfection step. Replacing chlorine with UV light is not only safer for staff and the environment, it will allow Southside to be removed from the EPA's Risk Management Program.



Work on an \$11.5 million project to replace CFPUA's Pump Station 10 was just months from completion when, in December 2019, a pipe failure led to a sanitary sewer overflow at the site. The circa-1967 facility, located northeast of downtown Wilmington, is one of CFPUA's highest-volume pump stations, and crews worked around the clock to repair the break and capture 500,000 gallons of untreated wastewater.

Contractor T.A. Loving wrapped construction in summer 2020. The new PS 10 has a capacity of 15,300 gallons per minute (GPM), an increase of more than 5,000 GPM over the old facility.

Annual Performance Summary Report, July 1, 2019, through June 20, 2020

Month of SSO	Incident Start Date	Volume Spilled (Gallons)	Volume to Surface Water (Gallons)	Watershed	Location	Probable Cause
August	8/10/2019	1,800	0	N/A	River Bluffs Pump Station	Roots
December	12/9/2019	900	500	Intracoastal Waterway	Halcyon Lane – Pump Station 137	Contractor
December	12/19/2019	2,440,000	2,440,000	Smith Creek	Pump Station 10	Pipe Failure
February	2/10/2020	43,382	43,382	Barnards Creek	Barnards Creek near River Road	Contractor

Plant Bypasses and Sanitary System Overflows, July 1, 2019, through June 20, 2020

Location/NPDES Permit	Type of Violation or Deficiency	Date	Parameter	Corrective Action
James A. Loughlin (Northside) WWTP / NC0023965	None	N/A	N/A	N/A
M’Kean Maffitt (Southside) WWTP / NC0023973	None	N/A	N/A	N/A
Collection System / WQCS00012	NCDEQ - NOV & Intent to Issue Civil Penalty	March 2020	SSOs - December 2019	CFPUA made the necessary repairs to the collection system in response to both spills that occurred in December. CFPUA continues to participate in the NC 811 program to help prevent contractor damage to our system. Pump Station 10 has been replaced with a new station and details can be found within this report.
Collection System / WQCS00012	City of Wilmington -NOV	January 2020	SSO - December 19, 2019	See details of the Pump Station 10 upgrade within this report.

*Volume estimated using best professional judgment and a worst-case scenario calculation given recorded conditions during the event.
All system overflows were reported per North Carolina Department of Environmental Quality (NCDEQ) regulations and guidance.*

Contact us

For more detailed information about this report, contact an Operator in Responsible Charge (ORC):

Geoffrey Cermak, ORC | (910) 332-6562
James A. Loughlin (Northside)
Wastewater Treatment Plant
Permit No. NC0023965

Steven Styers, ORC | (910) 332-6578
M'Kean Maffitt (Southside)
Wastewater Treatment Plant
Permit No. NC0023973

Robert Daughtry, ORC | (910) 332-6637
CFPUA Utilities Collections System
Superintendent
Permit No. WQCS00012

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/customers of the CFPUA system and that those users have been notified of its availability.

Notification of availability of this report is provided through printed notice on water/sewer bills and the Authority's website. This report was completed by staff of Cape Fear Public Utility Authority and is accurate to the best of our knowledge and belief.