

2020-2021

Wastewater System Performance Report



System Overview

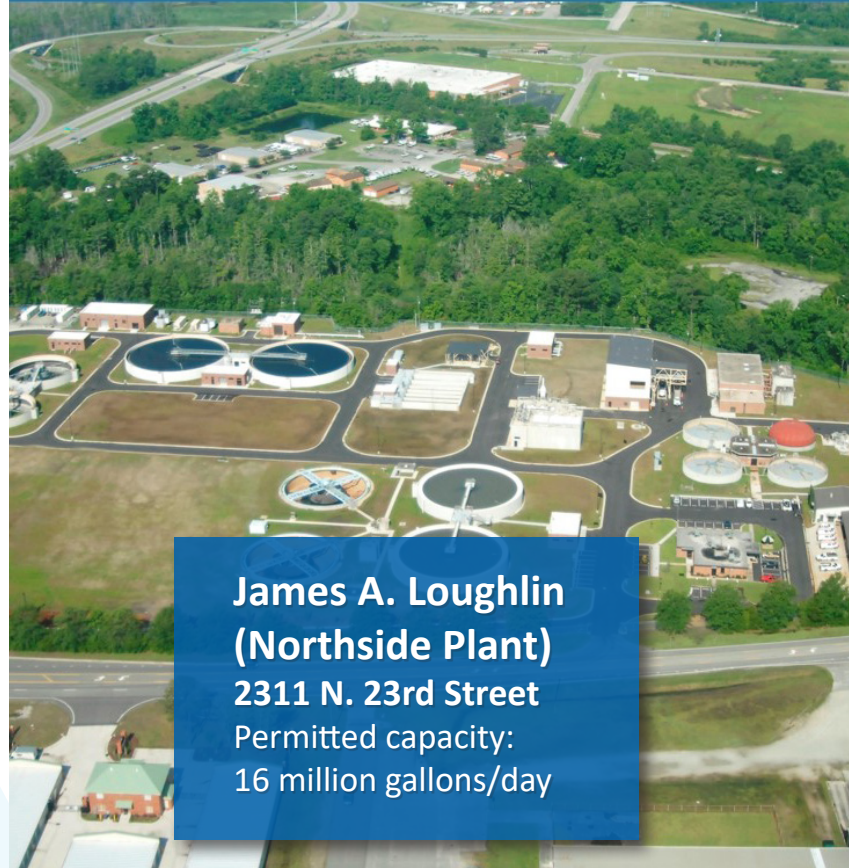
Cape Fear Public Utility Authority's (CFPUA) sewage collection and wastewater treatment facilities provide service to residential, commercial, and industrial customers in the City of Wilmington and New Hanover County.

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.

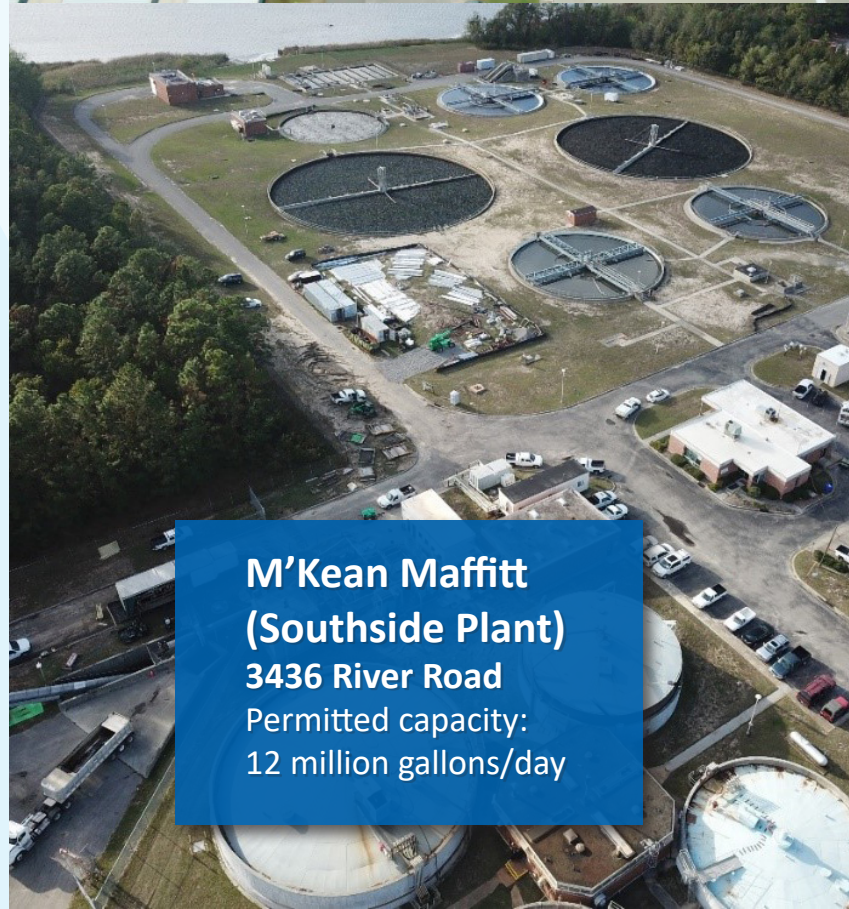
In Fiscal Year 2021, more than \$11 million was spent to maintain, operate, and manage CFPUA's sewer, collection, and treatment systems, which received and treated nearly 6.6 billion gallons of wastewater.

**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**



**James A. Loughlin
(Northside Plant)
2311 N. 23rd Street
Permitted capacity:
16 million gallons/day**



**M'Kean Maffitt
(Southside Plant)
3436 River Road
Permitted capacity:
12 million gallons/day**

Annual Performance Summary Report, July 1, 2020, through June 30, 2021

Month of SSO	Incident Start Date	Volume Spilled (Gallons)	Volume to Surface Water (Gallons)	Watershed	Location	Probable Cause
July	7/8/2020	315	1	Pages Creek	Bayshore Drive	Pipe Failure
	7/12/2020	3,600	2,200	Spring Branch	Lennon Dr & Penny Lane	ARV Failure
August	8/24/2020	645	645	Burnt Mill Creek	Burnt Mill Outfall near Archie Blue Park	Grease and Wipes
October	10/13/2020	3,720	3,720	Pages Creek	7700 Block of Market St	Contractor Error
	10/24/2020	1,950	1,950	Smith Creek	Silver Grass Court	Grease and Wipes
December	12/21/2020	390	390	Prince George Creek	NC 132 North of Blue Clay Rd	Pipe Failure
February	2/22/2021	100	100	Burnt Mill Creek	1900 Block of Chestnut St	Clogged Bypass Pump
March	3/26/2021	1,230	1,230	Barnards Creek	2700 Block of 17th St	Wipes and Floss

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.

Line Cleaning and Preventative Maintenance, July 1, 2020, through June 30, 2021

CFPUA cleaned **118.13 miles of gravity sewer mains**, or **12% of the total system**, which exceeded the required 10% of the system annually.

CFPUA Pump Station Crews completed **inspection and maintenance of 218 air release valves** and **1,194 preventative maintenance work orders**. CFPUA Collection System Crews completed **585 corrective maintenance and cleaning work orders**.

Closed Circuit TV crews **inspected a total of 43.11 miles of gravity sewer mains** for defects and combined warranty inspections. CFPUA spent \$2,543,972.28 on contracts to line **2.67 miles of sewer main**.



Biosolids program saves \$775,000

Biosolids dewatering equipment at the Southside Wastewater Treatment Plant on River Road.

It's a key part of every wastewater utility's job: Treating and disposing of what our community flushes down the toilets and drains. Once wastewater is treated and discharged, utilities have to deal with the leftover biosolids. Since 2019 CFPUA has been sending its biosolids to the Sampson County Landfill, but 2020 marked the first year that we fully managed our biosolids program in-house, rather than through a contractor.

Taking over the program meant adding three biosolids specialists to our staff. We contracted with Southport based Beheler Trucking Inc. to haul the waste to the landfill. In 2020 the team treated and disposed of 29,149 cubic yards of biosolids, or about 900 truckloads.

This first year of managing the program in-house saved an estimated \$775,000 compared with 2019. The biosolids team is excited to build on this achievement, researching, testing, and implementing new strategies to make the program even more efficient and further reduce costs. ■

Plant rehab earns design awards

CFPUA's Southside Wastewater Treatment Plant Rehabilitation Project was named "Best Water/Wastewater Design-Build Project under \$25M" by the Southeast Chapter of the Design-Build Institute of America (DBIA).

Completed in 2019 with Crowder Construction and Hazen & Sawyer, the project restored and upgraded facilities at Southside that were nearing end-of-life, including the dewatering building and pump station components. The project was budgeted at \$6 million, but communication and coordination between CFPUA staff and contractors resulted in the work being completed \$702,274 under budget and two months ahead of schedule.

The project also led to CFPUA being named 2020's "Owner of the Year" in DBIA Southeast's annual awards. ■

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.