



KINSTON PUBLIC SERVICES

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Fleet Maintenance, Meter Reading, Stormwater, Streets, Wastewater, and Water



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City of Kinston
Annual Operations and Performance Report
2021

Johnnie Mosley Regional Water Reclamation Facility (JMRWRF)

NPDES	# NC0024236
Design Capacity	11.85 Million Gallons
Treatment Type	Johannesburg Process
Service Date	2006
Report Generated	January 10, 2022

Facility Comments:

The last annual state inspection report for the Johnnie Mosley Regional Water Reclamation Facility, dated October 05, 2021, was found to be in noncompliance with its discharge permit. There were four Notices of Violations (NOVs) during calendar year 2021.

The first NOV was issued March 24, 2021 for exceeding the weekly and monthly average for Total Suspended Solids. The January 1-2, 2021 weekly average limit value of 45 mg/L, was exceeded at an average value of 556.7 mg/L and the monthly average limit value of 30 mg/L, was exceeded at the monthly average value of 68.76 mg/L. The cause of the violations was the results of high flows (infiltration). Civil penalty was assessed in the amount of \$3,100.00.

The second NOV was issued May 5, 2021 for exceeding the quarterly average for Total Phosphorus. The quarterly average limit value of 2 mg/L was exceeded at the quarterly average value of 2.36 mg/L. No cause was determined for the violation. No civil penalty was assessed.

The third NOV was issued June 17, 2021 for exceeding the weekly geometric mean for Fecal Coliform. The week ending April 3, 2021 showed the geometric mean limit value of 400/100 ml, was exceeded at an average value of 989.16/100 ml. The cause of the violation was believed to come from residual solids at the sampling location. A Civil penalty in the amount of \$600.00 was assessed.

The fourth NOV was issued November 01, 2021 for exceeding the weekly and monthly average for Total Suspended Solids and BOD. The August 2-7, 2021 weekly average limit value of 45 mg/L was exceeded for TSS. The average for the week was 180.63 mg/L. The monthly average

for TSS was over the limit of 30 mg/L. Results show the average TSS for the month was 49.26 mg/L. The August 2-7, 2021 weekly average limit value of 7.5 mg/L was exceeded for BOD also. The average for the week was 30.74 mg/L. The monthly average for BOD was over the limit of 5.0 mg/L. Results show the average BOD for the month was 6.99 mg/L. The cause of the violations was the results of high flows (infiltration). Civil penalty was assessed in the amount of \$5,600.00.

No environmental impacts associated with these violations were observed.

SANITARY SEWER COLLECTION SYSTEM

During calendar year 2021, the collection system reported no sanitary sewer overflows (SSO) or spills.

Any spill of 1,000 gallons or more and any reaching surface waters are required to be reported to the DWQ.

The last state inspection report for the collection system is dated November 19, 2014.

2021 continued to be a struggle for the City's collection system and treatment plant. Not only did we see record rainfall events, we have experienced unprecedeted flash flooding in our area. During heavy rains and high ground water periods, we continue to experience high amounts of infiltration in our collection system. Flows from both pump stations that discharge to the headworks of the treatment plant increased, so we know there is more than one cause of the issue.

The City of Kinston performed numerous repairs and rehabilitations to the Collection system in 2021.

Manhole #126P located on the Lower Neuse Outfall flowing to Forrest St. Lift Station was reported during 2021 smoke testing to be experiencing I & I. City staff repaired the manhole and the 30" outfall pipe to prevent future I & I at this location.

The 600 Block of E Washington Ave. was reported to have multiple I & I issues found during CCTV inspections. City staff performed three point repairs on the 8"sewer main and installed a manhole at 425' from the upstream manhole for effective preventative maintenance. City contracted Bio-Nomic Services to CIPP rehab 710' of the 8" sewer main along with 22 service laterals. The rehab portion of the project totaled \$118,000

The City identified through CCTV inspections that the 400 Block of E Lenoir Ave. was suffering from significant damage to the sewer main. The findings initiated the City to replace 545' of 8" sewer main, 14 new service laterals, and replace one manhole. The project was completed by City staff.

City staff reported a substantial void on the sewer main located on E Bright St. The City contracted STEP Construction to replace 60' of 8" sewer main heading east from manhole 115C. The project total was \$53,000.

City of Kinston rehabbed Barrus Lift Station wet well in 2021. This project was to eliminate I & I and prolong the service life of the wet well at this lift station. The City contracted this project to Southeast Industrial Services LLC to epoxy coat and test the 8'x7'x22' wet well at a cost totaling \$12,632.00

City of Kinston has been working with Duke Energy, Piedmont Natural Gas, and Champion Cleaning to identify and repair gas cross bores throughout the Collection system as these are a significant source of I & I. In 2021 a total of 17 gas Cross Bores were identified and repaired.

Cross Bore City	Cross Bore Street Name	Cross Bore House Street	Cross Bore Date Discovered	Repair Date	Cross Bore Gas Facility Involved	Cross Bore Other Facility Involved
KINSTON	HAMPTON RD	1909	2021-10-01T13:17:12Z	10-15-2021	Main	Sanitary Lateral
KINSTON	HAMPTON RD	1907	2021-09-28T16:00:48Z	10/20/2021	Main	Sanitary Lateral
KINSTON	HARDEE RD	1611	2021-09-21T18:11:36Z	10-05-2021	Main	Sanitary Lateral
KINSTON	WARREN AVE	409 WARREN AVE	2021-06-04T16:37:19Z	07/21/2021	Main	Sanitary Lateral
KINSTON	DEWEY	901 DEWEY	2021-05-24T13:55:17Z	6/17/2021	Main	Sanitary Lateral
KINSTON	HARDING AVE	1006 HARDING AVE	2021-05-18T14:21:08Z	6/24/2021	Main	Sanitary Lateral
KINSTON	DESMOND ST	1102 DESMOND ST	2021-03-24T18:19:31Z	08-09-2021	Main	Sanitary Lateral
KINSTON	DESMOND ST	1104 DESMOND ST	2021-03-24T16:13:11Z	09/15/2021	Main	Sanitary Lateral
KINSTON	S ADKIN ST	306-2	2021-03-08T21:17:51Z	06/24/2021	Service	Sanitary Lateral
KINSTON	WESTOVER AVE	804/807	2021-11-30T14:12:35Z	12/15/2021	Service	Sanitary Main
KINSTON	POLLOCK ST	1103/1106	2021-06-07T12:23:20Z	08-06-2021	Service	Sanitary Main
KINSTON	HARDING AVE	900 LAROQUE AVE	2021-05-17T14:44:52Z	08-06-2021	Service	Sanitary Main
KINSTON	LAROQUE AVE	904 LAROQUE AVE	2021-05-14T12:01:52Z	08-06-2021	Service	Sanitary Main
KINSTON	CAREY RD	1909/1910 CAREY RD	2021-04-30T15:03:18Z	08/09/2021	Service	Sanitary Main
Kinston	W. Vernon Ave	710	2021-03-17T16:10:38Z	08/06/2021	Service	Sanitary Main
Kinston	Carey Rd	1107	2021-03-17T16:04:43Z	08/09/2021	Service	Sanitary Main
Kinston	S Adkin St	306	2021-02-23T18:11:27Z	02/23/2021	Service	Sanitary Main

During calendar year 2021 City staff was able to identify and repair an additional 57 service laterals, CCTV over 12,000' of sewer main, manually flow monitor sewer sheds on the Adkin and Lower Neuse Outfall areas that are suspected to be experiencing I & I during heavy rainfall

events, and effectively perform preventative maintenance on 19.1 miles of Collection System piping throughout the City. The City also purchased new sewer bypassing equipment in 2021 for further condition assessments along areas with higher amounts of flow and for swift remediation of any emergency SSO's. The cost to purchase this equipment totaled \$180,349.34

Four additional projects have recently been funded

The City was awarded \$1,062,000 for the Briery Run Lift Station FEMA Mitigation. The project will consist of installing new dry pit submersible pumps, and raising all electrical control panels above historical flood elevations .This will provide the City the ability for the lift station to remain in operation during flash flooding events.

Briery Run Phase V Sewer Rehabilitation Project will include raising all remaining manholes on this outfall above the 100 year flood elevation, and to include lining several sections of the outfall. The cost for this project is \$2.9 million.

The City has also secured \$3.3 million for the Lawrence Heights Sewer Replacement Project. This project will replace old (>50 years old) terra cotta sewer line, along Old Snow Hill Road from East Highland Avenue to Jackson Lane. The project will consist of replacing 11,348 LF 8" sewer line, 1,310 LF 10" sewer line, 279 sewer services, and 45 sewer manholes throughout the project area. The area has high I/I, collapsed lines, and service interruptions. Project will help alleviate inflow, infiltration, and exfiltration issues. Work will be included along the following streets: Jackson, Dixon, Williams, Stadium, Highland, Old Snow Hill, Hyman, Stroud, Charlotte, George, Nobles, and Lawrence. This project has been awarded and anticipating completion by the end of 2022.

The City has also secured a AIA Grant in the amount of \$150,000. This project consist of CCTV, flow monitoring, and smoke testing portions of the Upper Neuse and Jericho Run Outfalls in the collection system. The grant scope will also include a condition assessment at the wastewater treatment plant and evaluation of plant operations. The City anticipates this work to start mid-year 2022.

Responsible Person Contact Listing

General:

Rhonda Barwick – Interim City Manager/ Public Services Director	252-939-3111
Steve Miller – Interim Public Services Director/ Assist. Public Services Director	252-939-3285
Vacant - Water Resources Manager	252-939-3316

Stormwater Utility:

Vacant - Water Resources Manager	252-939-3316
Gilbert Acevedo - Street Superintendent	252-939-3314

Water Reclamation (Wastewater Utility):

Kenneth R. Stevens, Jr. - Water Reclamation Facility Superintendent (ORC)	252-939-3375
Swindell Flowers - Residual Management Coordinator (ORC-Land Application)	252-939-3248
Jimmy Garvey – Water Operations Superintendent	252-939-3299
Steve Miller- ORC - Wastewater Collections	252-939-3285

Water Utility:

Joey Pittman - Water Production Superintendent (ORC-Wells)	252-939-3286
Jimmy Garvey – Water Operations Superintendent (ORC Distribution)	252-939-3299
Tony Creech - Water Production Supervisor (ORC-Cross Connection)	252-939-3156