

**WASTEWATER COLLECTIONS AND
TREATMENT SYSTEMS**

ANNUAL PERFORMANCE REPORT

July 1, 2023 - June 30, 2024



Fayetteville Public Works Commission

The Fayetteville Public Works Commission (PWC) enjoyed another year of truly excellent performance at both of our treatment plants and the collection systems which they serve. Our plants have been recognized by the NC Department of Environmental Quality as "Exceptionally Performing Facilities." We had 14 events where sewage was released from the collection system, and these occurrences were mostly due to factors beyond our control. At both the treatment plants and in our sewage collection systems, this is an extremely high level of service and system reliability that we strive to maintain. The following provides a summary of all collection system overflows and treatment plant permit exceedances.

Collections Systems

General Information

Facility/System Name: **Collection System**

Responsible Entity: **Fayetteville Public Works Commission, Town of Stedman, NORCRESS, and Kelly Hills/Slocomb Road Water and Sewer District**

Person in Charge/Contact: **Chris Rainey, PE – Operations Manager
(910) 223-4718**

Applicable Permit(s): **(PWC) WQCS00007
(Stedman) WQCSD0537
(Norcross) WQCS00353**

Description of Collection Systems

The following description of collection systems is for PWC and the three permitted entities with which PWC maintains operation and maintenance agreements.

PWC's sanitary sewer collection system is separated into two basins, the Cross Creek and the Rockfish Creek basins. The collection system consists of approximately 1,293 miles of sewer mains varying in size and material and includes 68 sewer pumping stations. In addition, 11 privately owned pumping stations are operated and maintained per O & M agreements. Main sizes range from 6" to 60". Wastewater is collected from approximately 93,353 customers in the City of Fayetteville and surrounding Cumberland County area. PWC serves approximately 17 Industrial, 6 Wholesale, 6,219 Non-Residential, 245 Flat Rate Non-Residential, 78,037 Residential, and 8,721 Flat Rate Residential customers. PWC also provides wastewater service to 96 City of Fayetteville sites and to 12 PWC locations. The wastewater is conveyed to the Cross Creek and Rockfish Creek Water Reclamation Facilities.

Since March 2001, PWC has operated and maintained the Town of Stedman sanitary sewer system, owned by the Town of Stedman. The system serves approximately 593 customers (540 residential and 53 non-residential) and consists of approximately 22.1 miles of sanitary sewer

mains and 4 pumping stations. The wastewater from Stedman is conveyed to the Rockfish Creek Water Reclamation Facility.

In September 2005, PWC began operation and maintenance of the NORCRESS (Wade, Godwin, and Falcon) sanitary sewer system, owned by Cumberland County. The system serves 387 customers (333 residential and 54 non-residential) and consists of approximately 35.3 miles of sanitary sewer mains and 4 pumping stations. The wastewater from NORCRESS is conveyed to the Cross Creek Water Reclamation Facility.

PWC also maintains and operates the Kelly Hills / Slocomb Road Water & Sewer District sanitary sewer collection system, owned by Cumberland County. The system serves approximately 100 customers (all residential) and consists of approximately 4.5 miles of sanitary sewer mains. The wastewater from Kelly Hills / Slocomb Road Water & Sewer District is conveyed to the Cross Creek Water Reclamation Facility.

Public Works Commission WOC00007 - Summary of Collections System Performance for Fiscal Year (July 2023- June 2024)

During the Fiscal Year July 2023 - June 2024, approximately 8.75 billion gallons of wastewater were conveyed to the Cross Creek and Rockfish Creek Water Reclamation Facilities. Sanitary sewer overflows totaling 63,452 gallons or .00001% of total gallons conveyed were reported to the NC Department of Environment and Natural Resources, Water Quality Division. Monthly estimates are as follows:

Month	Gallons	Month	Gallons
July	11,675	January	3,925
August	554	February	43,525
September	15	March	0
October	0	April	0
November	0	May	3,758
December	0	June	0

Sanitary sewer overflow events in which volumes exceeding 1,000 gallons overflowed or reached surface waters are included in the monthly estimates and are shown separately as follows:

Event 1: **Date:** 7/11/23 **Gallons:** 7,675

Location:

868 Santee Drive

Description:

This SSO was the result of a grease blockage in the sewer main. The mainline blockage was reported by a private resident. Due to the extent of the grease blockage, wastewater exited from a sewer manhole in the easement area and entered an unnamed tributary to Beaver Creek.

Corrective measures:

PWC staff jet rodded the sewer main to clear the grease blockage and end the spill incident. Wastewater debris was removed from the spill location and the area treated with lime and odor neutralizer. Main cleaning and CCTV inspections were conducted upstream and downstream of the blockage location. Sampling at the spill location was conducted and results forwarded to the DWR-FRO.

Event 2: **Date:** 7/17/23 **Gallons:** 4,000

Location:

2735 Rivercliff Road

Description:

This SSO was the result of a pigging operation in which a contractor was cleaning out the dormant 20" ductile iron sewer force main ahead of the contractor doing a smart tool inspection of the line. The contractor identified a point failure along the force main and notified PWC team members on site. PWC maintenance staff were immediately routed to the damage location to evaluate and repair.

Corrective measures:

The water supply for the pigging operation was turned off which ended the spill incident. PWC staff also closed a nearby mainline valve on the force main and utilized a combination vacuum-jetter truck to remove the wastewater from the excavation site. Maintenance staff cut out the failed section of sewer line and installed a new piece of ductile iron pipe and fittings. Heavily diluted wastewater from the pigging operation entered into a drainage ditch parallel to the railroad tracks and entered into an unnamed tributary to the Cape Fear River. Due to the topography of the area, a portion of the 4,000 gallons of wastewater ponded in a grassy area between the rear of the residence and a drainage ditch in the railroad corridor. The wastewater ponding in this area soaked into the surrounding soil. The remaining volume entered into an unnamed tributary to the Cape Fear River. The affected area was treated with lime. Upon completion of the point repair on the sewer main, the contractor was able to resume the pigging operation. Sampling was conducted and the results forwarded to the DWR-FRO.

Event 3: Date: 8/15/23 Gallons: 554

Location:

5341 Rimrock Court

Description:

This SSO was the result of a failure of a sewer bypass which was installed by the PWC rehabilitation contractor. The contractor was installing a cured in place liner in an easement area near the subject location. As part of the lining project, the contractor had installed a sanitary sewer bypass pumping system to pump around the pipe segments undergoing lining. The bypass piping was installed and laid between two properties out to the sidewalk area in front of the residences and then down along the sidewalk to the next adjacent street, in which the piping was extended into the street to a point of discharge to a designated sanitary sewer manhole. The rehab contractor had taken measures to protect the discharge manhole itself, but failed to protect the exposed discharge piping within the street area. A garbage truck drove over the bypass pipe causing damage to a fitting and resulting in the separation of the discharge piping at the fitting. Upon separation of the piping, wastewater exited from the separated pipe and ran along the street and curb line before entering stormwater catch basins discharging to the Beaver Creek.

Corrective measures:

The contractor's pump watch personnel identified the issue during one of his inspections and immediately took action to maneuver the separated piping into the discharge manhole ending the spill incident. PWC staff were notified of the incident and responded immediately to evaluate the situation. There was not an active spill occurring at the time of PWC's arrival however there was evidence of a spill having taken place. PWC staff flushed the affected storm drainage system with potable water and cleaned up the roadway and curb line before applying odor neutralizer. Sampling at the site was conducted and results forwarded to the DWR-FRO.

Event 4: Date: 9/27/23 Gallons: 15

Location:

5009 Lake Valley Drive

Description:

This SSO was the result of a debris blockage in the sewer main. PWC's sewer main rehabilitation contractor had installed a sewer bypass system to allow for the installation of a cured in place liner in a section of sewer main with identified deficiencies. Due to the complexity of the bypass installation across the All American Freeway and the varying manhole depths on each side of the roadway, surcharging at the bypass manhole was greater than normal, causing the normal wastewater debris to gather and collect before being lifted from the suction manhole, changing the hydraulics of the wastewater flow. Once this material was transferred through the bypass downstream, it created a

blockage leading to wastewater exiting from a PWC cleanout in the utility easement. PWC maintenance staff were notified and responded immediately.

Corrective measures:

PWC maintenance staff jet rodded the sewer lateral and the sewer main to remove the debris blockage and end the spill incident. Wastewater exiting from the manhole in the street immediately entered into a catch basin directly discharging into an unnamed tributary to the Beaver Creek and was unable to be reclaimed. The affected area in the roadway was cleaned and main line cleaning and CCTV inspections were conducted to ensure all debris was removed. Sampling at the spill location was completed and the results forwarded to the DWR-FRO.

Event 5: Date: 1/27/24 Gallons: 3,925

Location:

6414 Easthampton Road

Description:

This SSO was the result of a grease blockage in the sewer main. The issue was reported to PWC by a private resident. Due to the extent of the grease blockage, wastewater exited from a sewer manhole behind the curb and entered an unnamed tributary to Stewarts Creek.

Corrective measures:

The sewer main was jet rodded to clear the grease blockage and end the spill incident. Wastewater debris and residue were removed from the front yard around the manhole and the curb line of the roadway. The affected area was treated with lime and odor neutralizer. Main cleaning and CCTV inspections were done upstream and downstream of the blockage location to ensure that all grease was removed. Sampling was conducted and the results forwarded to the DWR-FRO.

Event 6: Date: 2/3/24 Gallons: 5,500

Location:

4924 Morganton Road

Description:

This SSO was the result of a grease blockage in the sewer main. The overflow was reported by a passing motorist. Due to the extent of the grease blockage, wastewater exited from a sewer manhole in the sidewalk and entered a storm drainage system tributary to an unnamed tributary to Buckhead Creek.

Corrective measures:

The sewer main was jet rodded to clear the grease blockage and end the spill incident. The wastewater which escaped from the manhole in the sidewalk immediately entered a storm drainage

system that discharges to an unnamed tributary to the Buckhead Creek. Due to the actively moving ground water within the drainage piping and location of the unnamed tributary, the wastewater volume could not be reclaimed. The drainage system was flushed with potable water and the flushing water introduced was reclaimed. Main cleaning and CCTV inspections were completed upstream and downstream of the blockage location. Sampling was conducted and results were forwarded to the DWR-FRO.

Event 7: Date: 2/5/24 Gallons: 4,900

Location:

660 Cross Creek Mall

Description:

This SSO was the result of a grease and debris blockage in the sewer main. The blockage was reported by a private plumber contracted by an area business to investigate a backup at their business. Due to the extent of the grease and debris blockage, wastewater exited from a sewer manhole in the parking lot and entered a storm drainage system tributary to an unnamed tributary to Buckhead Creek.

Corrective measures:

PWC sewer maintenance staff jet rodded the sewer main to remove the grease and debris blockage and end the spill incident. The wastewater exiting from the manhole in the parking lot immediately entered a storm drainage system that discharges to a drainage swale subsequently discharging to an unnamed tributary to Buckhead Creek. Due to debris obstructing the drainage swale, a portion of the 4,900 gallons of wastewater was impounded and was able to be reclaimed. The drainage system was flushed with potable water and the water used to flush the drainage system was reclaimed. Main cleaning upstream and downstream of the blockage was conducted to ensure that all grease and debris were removed. Sampling at the spill location was conducted and the results forwarded to the DWR-FRO.

Event 8: Date: 2/13/24 Gallons: 2,575

Location:

105 Brewster Drive

Description:

This SSO was the result of a debris blockage in the sewer main. The issue was reported by a private resident. PWC maintenance staff responded and found a manhole overflowing and immediately began working to stop the spill.

Corrective measures:

The sewer main was jet rodded to clear the debris blockage and end the spill incident. The wastewater which escaped in the easement area entered into Stewarts Creek. Although the wastewater which escaped was unable to be reclaimed the crew was able to clean up the wastewater residue and then treat the area with lime and odor neutralizer. Upon removal of the blockage, it was discovered that an internal drop structure bracket/strap was wedged across the outgoing pipe in the manhole. This caused waste debris to catch on the strap and collect until the pipe was fully blocked. Staff began an inspection of all upstream manholes to try and determine the location of the missing bracket/strap. Several manholes upstream there was a strap found to be missing in a force main discharge manhole. Inspection of the manhole revealed that the interior of the manhole structure was severely deteriorated and provided the reasoning of why the strap was found downstream. Due to the severe deterioration of the manhole it was scheduled for replacement by WRC crews in the coming weeks. Sampling at the spill location was conducted and results forwarded to the DWR-FRO.

Event 9: Date: 2/14/24 Gallons: 100

Location:

5416 Thompson Circle

Description:

This SSO was the result of a grease blockage in the sewer main which was reported by a private resident. PWC maintenance personnel were immediately dispatched to evaluate the issue. There was not an active spill occurring at the time of PWC's arrival, however there was evidence in the roadway and the curb line which indicated a spill had occurred. It was discovered that wastewater had exited from a manhole in the street and entered a storm drainage system immediately discharging into Hope Mills Lake.

Corrective measures:

PWC maintenance staff jet rodded the sewer main to clear the grease blockage. The wastewater which entered the storm drainage system could not be reclaimed due to the actively moving groundwater within the drainage piping. The outlet piping of the drainage system touches surface waters of the lake and is inaccessible. Wastewater residue was removed from the roadway and the curb line and the affected area as well as the storm drainage piping was cleaned. The area was also treated with odor neutralizer. Main cleaning and CCTV inspections upstream and downstream of the spill location were completed. Sampling was conducted and the results forwarded to the DWR-FRO.

Event 10: Date: 2/20/24 Gallons: 5,500

Location:

3525 Sweetbay Circle

Description:

This SSO was the result of a debris blockage in the sewer main. The issue was reported by a private resident. Due to the extent of the debris blockage, wastewater exited from a manhole in an easement area and was contained in a low-lying area.

Corrective measures:

The sewer main was jet rodded to clear the debris blockage and end the spill incident. Wastewater exiting from the manhole ponded in a low-lying area near the manhole structure. No clean up was required as the wastewater soaked into the surrounding soil. The affected area was treated with lime and odor neutralizer. Main cleaning and CCTV inspections were conducted upstream and downstream of the blockage location. Since the wastewater was contained and nothing reached the surface waters of the State, no sampling was needed or conducted.

Event 11: Date: 2/20/24 Gallons: 11,000

Location:

3516 Beechnut Court

Description:

This SSO was the result of a debris blockage in the sewer main. A private resident reported the issue to PWC and maintenance staff responded to evaluate and correct the issue. Due to the extent of the debris blockage, wastewater exited from a sewer manhole in an easement area and entered an unnamed tributary to Evans Lake/Evans Creek

Corrective measures:

PWC maintenance staff jet rodded the sewer main to clear the debris blockage and end the spill incident. Wastewater exiting from the manhole immediately entered an unnamed tributary to Evans Lake/Evans Creek. Although the wastewater could not be reclaimed the residue around the manhole was removed. The affected area was treated with lime and odor neutralizer. Main cleaning and CCTV inspections upstream and downstream were conducted to verify the removal of all the debris. Sampling was conducted and results forwarded to the DWR-FRO.

Event 12: Date: 2/20/24 Gallons: 2,750

Location:

429 Early Street

Description:

This SSO was the result of a sewer main debris blockage which was reported by a private resident. Due to the extent of the blockage, wastewater exited from a weakened sewer main pipe joint and two manholes and then entered an unnamed tributary to Evans Lake/Evans Creek.

Corrective measures:

PWC maintenance personnel jet rodded the sewer main to clear the blockage and end the spill incident. In addition to the two manholes which were overflowing there was a release from a weakened pipe joint due to the surcharging in the collection system. Additional PWC maintenance staff responded and performed a temporary repair on the weakened pipe joint on 2/21/24 and then on 2/22/24 PWC crews replaced the line in question from manhole to manhole with ductile iron pipe. Main cleaning and CCTV inspections upstream and downstream of the blockage were conducted to ensure that all debris was successfully removed. Sampling was conducted and results forwarded to the DWR-FRO.

Event 13: **Date:** 2/25/24 **Gallons:** 11,200

Location:

206 Saxony Place

Description:

This SSO was the result of a pipe failure. PWC was notified of a water leak by a passing motorist. On call staff were dispatched to evaluate the reported issue and found it to be an overflowing manhole and not a water system leak. Additional on call maintenance personnel were dispatched to address the blockage issue. The sewer main was jet rodded and that ended the spill incident. Inspections of the affected system were performed and confirmed that system surcharge had ended and normal flow had resumed. While personnel were still on site another blockage occurred leading to an additional surcharging event, but this time there was not any loss of wastewater from the system as combination vacuum-jetter trucks on site began pump and haul operations to maintain system flows. Further evaluation of the system at that time revealed a pipe failure/collapse to be the cause of the issues. Wastewater which exited the manhole outside of the roadway was contained along the shoulder of the road and did not reach any surface waters. Ponding wastewater along the shoulder was reclaimed except for what volume soaked into the surrounding soil. The affected area along the shoulder of the road was treated with lime and odor neutralizer. Since wastewater did not reach any waters of the State there would not be any sampling conducted.

Corrective measures:

Once it was determined that a pipe failure/collapse had occurred PWC maintenance staff set up an emergency sewer bypass to take the flow off of the section of sewer main in question. PWC staff kept a 24-hour pump watch in place on the emergency bypass system to ensure that everything was functioning correctly and there weren't any further pipe failures at this location. WRC staff performed an emergency replacement of the sewer main in question from manhole to manhole after

gaining access from the affected property owners. Upon completion of the pipe replacement the emergency bypass system was deactivated and removed from the site. PWC has a project to replace all of the sewer mains in this vicinity that is in the bidding phase currently and should be under construction by October 2024.

Event 14: Date: 5/16/24 Gallons: 3,758

Location:

755 Rockhill Road

Description:

This SSO was the result of a third party damage. A contractor working for MetroNet notified PWC that they had struck the sewer force main while attempting a roadway bore at the intersection of Rockhill Road and Hummingbird Place. Maintenance staff were dispatched immediately to respond and evaluate the situation. Upon arrival it was confirmed that the force main had been damaged and there was an active spill taking place. Wastewater which exited from the sewer force main ponded in the road right of way and the adjacent woodline and was contained to that area.

Corrective measures:

PWC lift station staff shut off the pumps at the lift station which ended the spill incident. PWC and contractor combination vacuum-jetter trucks performed pump and haul operations to maintain system flows until the repairs were completed. PWC maintenance staff cut out the damaged section of force main and installed a point repair to resolve the issue. The wastewater which ponded in the road right of way and the adjacent wood line could not be reclaimed as the wastewater soaked into the surrounding soil. The wastewater residue was reclaimed though and then the area was treated with lime and odor neutralizer. Upon completion of the point repair the lift station pumps were turned back on and operations were returned to normal. No sampling was needed since wastewater did not reach surface waters of the State.

Town of Stedman WOCSD0537 - Summary of Collections System Performance for Fiscal Year (July 2023-June 2024)

During the Fiscal Year July 2023-June 2024, approximately 46.6 million gallons of wastewater were conveyed to the PWC collection system and treated at the Rockfish Creek Water Reclamation Facility. No reportable sanitary sewer overflows were reported to the NC Department of Environment and Natural Resources, Water Quality Division.

NORCRESS WOC0353 - Summary of Collections System Performance for Fiscal Year (July 2023 -June 2024)

During the Fiscal Year July 2023 -June 2024, approximately 49.2 million gallons of wastewater were conveyed to the PWC collection system and treated at the Cross Creek Water Reclamation Facility. No reportable sanitary sewer overflows were reported to the NC Department of Environment and Natural Resources, Water Quality Division.

Kelly Hills - Summary of Collections System Performance for Fiscal Year (July 2023 - June 2024)

During the Fiscal Year July 2023 - June 2024, approximately 1.3 million gallons of wastewater were conveyed to the PWC collection system and treated at the Cross Creek Water Reclamation Facility. No reportable sanitary sewer overflows were reported to the NC Department of Environment and Natural Resources, Water Quality Division.

Note: Copies of sanitary sewer overflows are on file at the Public Works Commission's Water Resources Construction Department located at 955 Old Wilmington Road.

Treatment Systems

General Information

Facility/System Name: **Cross Creek Water Reclamation Facility**

Responsible Entity: **Fayetteville Public Works Commission**

Persons in Charge/Contact: **Michael Scott McCoy, Facilities Supervisor
(910) 223-4757**

**Wendell "Chuck" Baxley, Facilities Manager
(910) 223-4701**

Applicable Permit(s): **NPDES NC0023957
WQ0000527
NCGNE1080**

Description of Treatment Process:

The Cross Creek facility is permitted to process 25 million gallons per day (MGD) of wastewater. The treatment processes consist of an influent pump station, mechanical bar screens, grit removal, primary clarification, activated sludge system with nitrification, secondary clarification, filtration, disinfection, and de-chlorination. Biosolids generated by these processes are stabilized through anaerobic digestion and recycled as a fertilizer and soil conditioner to various land application sites.

Summary of Treatment System Performance for Fiscal Year (July 2023 - June 2024):

The Cross Creek Water Reclamation Facility consistently met all permit requirements in the fiscal year.

Facility/System Name: **Rockfish Creek Water Reclamation Facility**

Responsible Entity: **Fayetteville Public Works Commission**

Persons in Charge/Contact: **Michael Scott McCoy, Facilities Supervisor
(910) 223-4757**

**Wendell "Chuck" Baxley, Facilities Manager
(910) 223-4701**

Applicable Permit(s): **NPDES NC0050105
WQ0000527
NCGNE061**

Description of Treatment Process:

The Rockfish Creek facility is permitted to process 21 million gallons per day (MGD) of wastewater. The treatment processes consist of an influent pump station, mechanical bar screens, grit removal, activated sludge system with nitrification, secondary clarification, filtration, disinfection, and de-chlorination. Biosolids generated by these processes are stabilized through aerobic digestion and recycled as a fertilizer and soil conditioner to various land application sites.

Summary of Treatment System Performance for Fiscal Year (July 2023 - June 2024):

The Rockfish Creek Water Reclamation Facility consistently met all permit requirements in the fiscal year.

Notification and Certification

Prevention:

During the time from July 2023 - June 2024, PWC made the following efforts to reduce overflows as associated with grease:

- Conducted a public information campaign that included radio & television advertising, information in quarterly customer newsletter, videos, website updates, podcast, and information slides on City & County Government Access Channels.
- Provided approximately 1,100 "Fat Trapper" grease disposal containers to customers as part of "Cease the Grease" Education program.
- Conducted priority cleaning and rehabilitation of "targeted problem" sewer lines.
- Conducted customer targeted messages about proper grease and wipes disposal using mailings, outbound calls, eblast, NextDoor social media posts in identified grease/wipes problem areas.

Notification:

The report shall be available on the Fayetteville Public Works Commission's website (www.faypwc.com) and at the PWC Communications/Community Relations Division Office (910-223-4009). A statement of availability will be included in customers' billing.

Certification:

I certify under penalty of law that this report is complete and accurate to the best of my knowledge. I further certify this report has been made available to the users or customers of the named system and those users have been notified of its availability.

 8/29/24

Mick Noland
Chief Operating Officer-Water Resources Division
Fayetteville Public Works Commission