

PERFORMANCE ANNUAL REPORT

JULY 1, 2016 TO JUNE 30, 2017

I. General Information

Facility/System Name: City of Henderson Water Reclamation Facility,
Pump Stations and Collection System

Responsible Entity: City of Henderson

Person in Charge/Contact H. Lamont Allen, Director HWRF
(252-431-6080).
Joey Long Jr, ORC Utility Operations
(252-431-6030)

Applicable Permit(s): NPDES # NC0020559 Water Reclamation Facility
WQCS00055 Collection System

II. Description of Collection System and Treatment Process:

The treatment plant is designed for a flow of 4.14 million gallons per day of wastewater and received an average of 1.89 million gallons per day. The plant treated 699,545, 000 gallons from July 1, 2016 to June 30, 2017.

The treatment processes are: Headworks removes large rags and debris by two (2) mechanical barscreens; the readily settleable solids are collected by the grit collector. Wastewater enters the Influent Pump Station consisting of four (4) submersible pumps. Biological Treatment has two (2) Oxidation Ditches each designed for 2.07 MGD average daily flow. Wastewater flow from the oxidation ditch(s) will flow to two (2) .874 MGD Final Clarifiers. Tertiary Filtration, effluent from the clarifiers will flow to four (4) deep-bed filters. Post Aeration and Ultraviolet Disinfection, after water comes out the bottom of the filters it enters the post aeration tank to increase the oxygen in the water, then is exposed to ultraviolet light for disinfection and discharged from the plant. Thickening Building, sludge from the bottom of the final clarifiers is sent to the thickener process where polymer is added to remove additional water from the sludge. Aerobic Digestion, after the sludge is thickened it is put in the digester to further break down pathogens before it is land applied.

The collection system consists of approximately one hundred sixty-two and 69/100 (162.69) miles of gravity sewer and force main lines, thirteen (13) pumping stations that convey the wastewater to the treatment plant and four(4) stations for odor control.

III. Performance Summary

The City of Henderson's Industrial Pretreatment Program, the Henderson Water Reclamation Facility Laboratory, and Grease Trap Program were in compliance with all permit limits during this performance period. The Pretreatment Annual Report was reviewed by the State DWR and was determined to be acceptable.

The Pretreatment, Emergency Response, and Collection System (PERCS) unit of the Division of Water Resources has reviewed the Headworks Analysis (HWA) for the City of Henderson that they received March 23, 2017.

The Division concurs with HWA calculations for all pollutants of concerns.

The Pretreatment, Emergency Response, and Collection System (PERCS) unit of the Division of Water Resources has reviewed the Industrial Waste Survey for the City of Henderson that they received on May 1, 2017.

The review indicated that the IWS is adequate and meets the minimum requirements of 40 CFR 403.8(f)(2). Proper completion of an Industrial Waste Survey is required by Part IV (D) of the NPDES permit.

The City of Henderson's Pretreatment program had an audit inspection by representatives of the Raleigh Regional Office, PERCS unit on May 24, 2017. The Audit report indicated that the City of Henderson's Pretreatment Program meets the pretreatment requirements as outlined on 15A NCAC 2H .9000 and 40 CFR 403 and the inspection is satisfactory and in compliance.

The City of Henderson's Water Reclamation Facility was inspected by a representative of the Raleigh Regional Office, Division of Water Resources on June 21, 2017. The inspection report did not indicate any major concerns. The Regional Office did request that the treatment units that have been abandoned and will not be used by the City be properly demolished for employee and environmental safety.

The City of Henderson's Water Reclamation Facility residual bio-solids were land applied at agronomic rates in 2016 on agricultural fields by a private contractor, Granville Farms, Inc. The Treatment Plant produced a total of 772.75 dry tons or 3,083,500 gallons of bio-solids which were applied to farmland and met all permit conditions.

The City of Henderson's Collection System was inspected by the state during this reporting period, but the City has not received a response letter yet. Internal inspections by the staff are keeping the system in compliance.

The City inspected 3 establishments for grease trap compliance. No violations or fines were issued. The City documented when grease educational flyers "Don't Feed the Grease Goblin" were distributed. Flyers are also replenished at City Hall and Operations receptionist area as needed.

For the period of July 1, 2016 thru June 30, 2017 the City of Henderson Collection System staff cut 69,276 feet (13.1 miles) of the right-of-ways and performed 100 % of their semiannual inspection of priority lines and manholes this year. **They actually inspected many of them on a weekly basis.** The City sent out 8,700 flyers twice in water and sewer bills (for a total of 17,400). The City of

Henderson oversees 145.65 miles of gravity sewer and 17.04 miles of force main. The staff cleaned 128,773 feet (24.38 miles) of sewer line with the Jet Vac and rodder. This is 16.74% of the entire system and exceeds the State DWQ requirement by 6.74% of cleaning 10% of the system per year. Inflow/Infiltration repairs made: 29 cleanouts were repaired, 9 cleanouts were installed and 4 manholes were repaired, 7 rings and 0 manhole lids were replaced. It is estimated that Inflow/Infiltration was reduced by 500 gallons/minute.

The City of Henderson's Water Reclamation

The City of Henderson's Facility had **no bypass event between July 1, 2016 and June 30, 2017.**

- **Collection System (pump stations and gravity and/or force main lines) overflowed a total of 291,050 gallons of untreated wastewater between July 1, 2016 and June 30, 2017. There were 6 overflows of the pump stations and 3 overflows of the gravity lines. All of the overflows were the result of one of the following: heavy inflow and infiltration from rainfall exceeding the system capacity, blockages of the lines with grease and rags or failure of the pump station's equipment.**

III. Performance

July 2016

DMR Violations – NONE

Environmental Violations--- On 7-20-16 the City of Henderson experienced a thunderstorm that caused pump controls to malfunction at the Sandy Creek Pump Station. The city had an estimated discharge of 7,200 gallons untreated wastewater.

No known environmental damage occurred as a result of the overflow.

August, 2016

DMR Violations –NONE

Environmental Violations -NONE

September 2016

DMR Violations-NONE

Environmental Violations-NONE

October 2016

DMR Violations – NONE

Environmental Violations--- On 10-08-2016 the City of Henderson experienced heavy rain from tropical storm Matthew that caused flooding throughout the area. The city had two discharges of untreated wastewater. The first estimated discharge of 48,000 gallons was at the Sandy Creek Pump Station. The second estimated discharge of 16,000 was at the Julia Avenue Pump Station. **No known environmental damage occurred as a result of the overflow.**

November 2016

DMR Violations –NONE

Environmental Violations-NONE

December, 2016

DMR Violations – NONE

Environmental Violations-NONE

January 2017

DMR Violations - NONE

Environmental Violations -- On 1-23-17 a manhole at 1913 Willow Ln overflowed 9,000 gallons of sewage into Sandy Creek.

February 2017

DMR Violations – NONE

Environmental Violations- On 2-17-17 a manhole at 925 Arch Street overflowed 600 gallons of sewage into Sandy Creek.

March 2017

DMR Violations – YES: SEE BELOW

Environmental Violations—on 3-11-17 the Henderson Water Reclamation Facility violated the weekly Effluent limit for BOD and Nitrogen, Ammonia Total. On 3-31-17 the city also exceeded the monthly Effluent limit for Nitrogen, Ammonia Total.

No known environmental damage occurred as a result of the elevated BOD and Nitrogen, Ammonia Total.

April 2017

DMR Violations – YES: SEE BELOW

Environmental Violations-- on 4-9-17 the Henderson Water Reclamation Facility violated the weekly Effluent limit for Nitrogen, Ammonia Total .On 4-30-17 the city also exceeded the monthly Effluent limit for Nitrogen, Ammonia Total.

No known environmental damage occurred as a result of the elevated Nitrogen, Ammonia Total.

On 4-25-2017 The City of Henderson experienced heavy rain that caused flooding throughout the area. The city had three discharges of untreated wastewater. The first discharge of an estimated 114,000 gallons was at the Sandy Creek Pump Station. The second estimated discharge of 10,750 was at the Julia Avenue Pump Station. The third estimated discharge of 37,500 gallons was at the Redbud Pump Station. **No known environmental damage occurred as a result of the overflow.**

On 4-26-17 a manhole at Hughes Farm overflowed 48,000 gallons of sewage into Nutbush Creek.

May, 2017

DMR Violations--NONE

Environmental Violations--NONE

June 2017

DMR Violations - NONE

Environmental Violations – NONE

V. Notification

The following public notice was run in the Henderson Daily Dispatch on July 27, 2017 to fulfill the requirement of making the Performance Annual Report available to the users of the system and indicating how the users were notified of its availability.

PUBLIC NOTICE

PERFORMANCE ANNUAL REPORT JULY 1, 2016 TO JUNE 30, 2017 CITY OF HENDERSON WATER RECLAMATION FACILITY AND CITY OF HENDERSON WASTEWATER COLLECTION SYSTEM

As required by North Carolina General Statutes Article 21 Chapter 143.215 C, the City of Henderson has produced a Performance Annual Report from July 1, 2016 to June 30, 2017 for the Water Reclamation Facility and Wastewater Collection System.

Copies of the report are available to the public at no charge. You may pick up a copy at the Reception area in the City Hall Municipal Building at 134 Rose Avenue or the reception Area at the City's Operation Center at 900 Beckford Drive. You can also contact Lamont Allen at (252) 431-6086 or Joey Long at (252) 431-6030 to request a copy be mailed to you at no charge and to answer any questions you have regarding the report.

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.

Responsible Person: H. Lamont Allen H. Lamont Allen Date: 7/26/17

Title: Plant Director

Entity: City of Henderson Water Reclamation Facility

Responsible Person: Joey Long Jr. Joey Long Jr. Date: 7-26-17

Title: Operator in Responsible Charge for Sewer Collection and Water Distribution

Entity: City of Henderson Utility Operations