



**WATER RESOURCES – ENGINEERING – PUBLIC WORKS**  
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**System Performance Annual Report for the Wastewater Systems of Lexington, N C for the Year of 2016**

The City of Lexington is pleased to report on the performance of its wastewater treatment systems each year. This report and its availability have been identified in the Lexington Dispatch and on the City’s Cable information System. The public may request copies at the Water Resources Department office located at 711 South Talbert Boulevard or may call Roger D. Jones at 336-248-3930- or EMAIL at [RDJones@LexingtonNC.GOV](mailto:RDJones@LexingtonNC.GOV).

Each year, the City of Lexington treats around one billion gallons of wastewater and recycles over 6 million pounds of residuals and other waste products at its wastewater treatment plant. It maintains a major wastewater treatment plant; approximately 212 miles of sewer line and 34 pump stations. Its treatment standards are among the highest in the State because of its proximity to the High Rock Lake Recreation area.

Federal regulations are placing increased emphasis on preventing overflows from sewer lines. A major cause of sewer line overflows is cooking oils and grease from homes and restaurants disposed into sewer lines. Once in the sewer line, oils and grease stick to the sewer lines and eventually accumulate until the line is blocked and overflows from the nearest manhole. Please help us by disposing of this material properly. For more information, contact Mrs. Gisele H. Comer at 336-357-7889.

Three copies of the annual reports for Lexington’s six wastewater treatment systems are sent to the NC Division of Environmental Quality in Raleigh. A condensed version of these reports is used as an insert in utility bills in March.

**Lexington Regional WWTP Collection System**

**I. General Information:**

(A) Name of Regulated Entity: City of Lexington Regional WWTP Collection System

(B) Responsible person: Roger Jones P.E.  
Public Services Operations Manager  
City Of Lexington  
28 West Center Street  
Lexington, NC 27292

(C) Applicable Permit: WQCS00042

(D) Description of treatment process: Wastewater Collection System serving the Lexington Regional WWTP - 212 miles of sewer line and 34 lift stations

**II. Performance:**

(A) Description of overall 12 month performance: in compliance except for the attached sanitary sewer overflows

(B) Violations:

- (1) Permit Limit Violations: none
- (2) Monitoring and Reporting Violations: none
- (3) Illegal Bypasses of Treatment Facilities: none
- (4) Sanitary Sewer Overflows: 10

Month	Date	Location	Volume (Gallons)	Cause	Reached Surface Waters of the State? How many Gallons?
January	1/4/2016	Old Linwood Rd	500	Pipe Failure	No
	1/14/2016	London Ct	100	Grease & Roots	No
March	3/10/2016	E. Center St	75	Debris in Line	No
	3/29/2016	Rainbow Ave	200	Debris in Line	No
April	4/13/2016	White St	700	Grease	Yes, 700
May	5/24/2016	White St	50	Debris in Line	No
June	6/7/2016	Hamilton St	800	Grease	Yes, 300
August	8/8/2016	Monroe Dr	100	Roots	Yes, 25
September	9/16/2016	Twin Acres Dr	800	Pipe Failure	Yes, 800
December	12/30/2016	Jefferson Village	300	Roots	Yes, 100

(Continued)



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- (C) Known Environmental Impact of Violations: minimal
- (D) Description of corrective measures taken to correct violations or deficiencies:  
The first objective to any SSO for Public Works staff is to correct the problem and contain the spill as soon as possible. Once the problem has been resolved, cleanup with appropriate materials such as lime, sand and straw are used to absorb the waste. From there, crews use a vacuum truck to collect all contaminated materials on site to haul off to a designated site for processing.

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**Lexington Regional WWTP**

**I. General Information:**

- (A) Name of Regulated Entity: Lexington Regional WWTP
- (B) Responsible person: Roger Jones P.E.  
Public Services Operations Manager  
City Of Lexington  
28 West Center Street  
Lexington, NC 27292
- (C) Applicable Permit: NC0055786
- (D) Description of treatment process: The Lexington Regional WWTP is a wastewater treatment facility consisting of influent pump stations; flow measurement; mechanical bar screens; grit collection; primary clarifiers; roughing filters; aeration basins; secondary clarifiers; post aeration basins; chlorination contact chamber; anaerobic digesters; and sludge drying beds with a composting facility located at 500 Glendale Road, south of Lexington in Davidson County. The plant discharges into the Abbott's Creek arm of High Rock Lake which is classified Class WS-III and B waters in the Yadkin-Pee Dee River Basin.

**II. Performance:**

- (A) Description of overall 12 month performance: This treatment system performed in full compliance in 2016.
- (B) Violations:
- (1) Permit Limit Violations: none
  - (2) Monitoring and Reporting Violations: none
  - (3) Illegal Bypasses of Treatment Facilities: none
  - (4) Sanitary Sewer Overflows: none
- (C) Known Environmental Impact of Violations:
- a. There were no known environmental impacts from these sanitary sewer overflows.
- (D) Description of corrective measures taken to correct violations or deficiencies: none

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**Lexington Regional WWTP Compost Facility**

**I. General Information:**

- (A) Name of Regulated Entity: Lexington Regional WWTP Compost Facility
- (B) Responsible person: Roger Jones P.E.  
Public Services Operations Manager  
City Of Lexington  
28 West Center Street  
Lexington, NC 27292
- (C) Applicable Permit: WQ0001318
- (D) Description of treatment process: This is a wastewater residuals facility for the processing and distribution of Class A exceptional quality bio-solids (compost produced at the Lexington Regional Wastewater Treatment Plant).

**II. Performance:**

- (A) Description of overall 12 month performance: Full compliance for all 12 months of 2016.
- (B) Violations:
- (1) Permit Limit Violations: none
  - (2) Monitoring and Reporting Violations: none
  - (3) Illegal Bypasses of Treatment Facilities: none
  - (4) Sanitary Sewer Overflows: none
- (C) Known Environmental Impact of Violations: none
- (D) Description of corrective measures taken to correct violations or deficiencies: not applicable.

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**Lexington Golf Course Wastewater Treatment And Reclaimed Water Utilization System**

I. General Information:

- (A) Name of Regulated Entity: Lexington Golf Course Wastewater Treatment and Reclaimed Water Utilization System
- (B) Responsible person: Roger Jones P.E.  
Public Services Operations Manager  
City Of Lexington  
28 West Center Street  
Lexington, NC 27292
- (C) Applicable Permit: WQ0023213
- (D) Description of treatment process: A 300,000 gallon per day reclaimed water scalping treatment facility and reclaimed water utilization system consisting of an interceptor vault diverting flow to an influent pump station with dual 208 gallon per minute pumps, a 300,000 gallon fine bubble aeration basin with two (2) 1,100 cubic feet per minute centrifugal blowers, one 58,130 gallon clarifier with a 312 gallon per minute return waste sludge pump, one tertiary disc filter, a 1,038 gallon chlorine contact basin, an effluent flow measuring device, an effluent composite sampler, a turbidimeter, and a 500,000 gallon storage tank, and a reclaimed water utilization system consisting of dual 1,100 gallon per minute pumps operating at 312 TDH, approximately 88 acres of spray irrigation with 891 sprinkler heads and all associated piping, valves, controls and appurtenances to serve the Lexington Golf Course with no discharge of wastes to the surface waters.

II. Performance:

- (A) Description of overall 12 month performance: The system performed in compliance for all months except July and August.
- (B) Violations:
- (1) Permit Limit Violations: On 7-30-16, zone 7 exceeded the maximum hourly loading rate by 0.04 inches. Golf Course Staff, who controls irrigation times, was reminded of application rate limits
- (2) Monitoring and Reporting Violations: On July 2<sup>nd</sup>, 3<sup>rd</sup>, 17<sup>th</sup> and 24<sup>th</sup> flows were not recorded due to no site visit and failure to record. On August 10<sup>th</sup> and 11<sup>th</sup>, pH and Residual Chlorine readings were not taken. The tank was empty due to a lightning strike of filter system. System completely empty on August 13<sup>th</sup> due to operator error. Plant was winterized at this time.
- (3) Illegal Bypasses of Treatment Facilities: none
- (C) Known Environmental Impact of Violations:
- (1) There were no known environmental impacts from these permit violations.
- (D) Description of corrective measures taken to correct violations or deficiencies:
- (2) Golf Course Staff, who controls irrigation times, was reminded of application rate limits.

**Lexington Water Treatment Plants # 1 & #2**

I. General Information:

- (A) Name of Regulated Entity: City of Lexington Water Treatment Plants # 1 & # 2
- (B) Responsible person: Roger Jones P.E.  
Public Services Operations Manager  
City Of Lexington  
28 West Center Street  
Lexington, NC 27292
- (C) Applicable Permit: NC0028037
- (D) Description of treatment process: Filter backwash and basin wash water from Lexington Water Treatment Plants # 1 & # 2 are discharged to a treatment system consisting of the following elements - two 24 hour settling ponds, four sludge drying beds and a 40 by 60 foot concrete sludge storage pad with a drain line located at the Lexington Water Plants No. 1 and No. 2, 2979 Greensboro Street, Lexington, Davidson County. The discharge from these treatment works is into Abbott's Creek, which is classified as WS-III waters in the Yadkin-Pee Dee River Basin.

II. Performance:

- (A) Description of overall 12 month performance: This treatment system performed in full compliance for 2016.
- (B) Violations:
- (1) Permit Limit Violations: none
- (2) Monitoring and Reporting Violations: none
- (3) Illegal Bypasses of Treatment Facilities: none
- (C) Known Environmental Impact of Violations: none

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(D) Description of corrective measures taken to correct violations or deficiencies: none

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**Lexington Conjunctive-Use Wastewater Spray Irrigation Disposal System**

I. General Information:

(A) Name of Regulated Entity: Lexington Conjunctive Use Wastewater Spray Irrigation Disposal System

(B) Responsible person: Roger Jones P.E.  
Public Services Operations Manager  
City Of Lexington  
28 West Center Street  
Lexington, NC 27292

(C) Applicable Permit: WQ0016165

(D) Description of treatment process: This is a 9,000 gallon per day conjunctive use spray irrigation disposal system consisting of 176,000 square foot spray irrigation area; forty sprinkler heads with a maximum 57 foot cast; and all associated piping, valves, and appurtenances to serve the City of Lexington's Regional Wastewater Treatment Plant with no discharge of wastes to the surface waters

II. Performance:

(A) Description of overall 12 month performance: this treatment system performed in full compliance in 2016.

(B) Violations:

- (1) Permit Limit Violations: none
- (2) Monitoring and Reporting Violations: none
- (3) Illegal Bypasses of Treatment Facilities: none

(C) Known Environmental Impact of Violations: none

(D) Description of corrective measures taken to correct violations or deficiencies: NA