

*Town of Liberty, NC  
Wastewater Treatment Plant  
and  
Collection System  
2021 Annual Report*

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## **I. General Information**

### **Name of Regulated Facility**

Town of Liberty

The Town of Liberty is permitted through the State of North Carolina to operate a spray irrigation wastewater treatment facility and operate the wastewater collection system.

### **Responsible Persons**

Elix T. Fike is the treatment plant operator responsible in charge (ORC).

Kevin Coble is the collection system operator responsible in charge (ORC).

Scott Kidd, Town Manager is the responsible person for the Town of Liberty facilities and can be contacted at (336) 622-4276.

### **Permit Number**

Wastewater Treatment Facility Permit Number: WQ0003090

Wastewater Collection System Permit Number: WQCS00280.

The wastewater treatment facility is a spray irrigation system located at 7178 East Highfill Avenue. The treatment process consists of a manual bar screen, a lagoon, chemical treatment, and effluent pump station. The Town is permitted for 550,000 gallons per day of sewage. The sewage enters the plant and goes through the bar screen which removes all solids. The solids are removed and disposed of by Allied Waste. The flow then proceeds to a three (3) pump influent station that pumps the sewage to the lagoon. The lagoon is a natural occurrence system that separates the remaining solids from the liquid. The solids settle to the bottom of the lagoon with the water staying to the top. After a 45 day detention time, the water is then treated with chlorine to remove all fecal coliform bacteria. The next process is to spray the effluent onto the spray fields. We maintain one hundred eighty (180) acres of spray fields. The spray fields are broken down into eight (8) zones. The Town of Liberty contracts the cutting and removal of the fields for hay.

The Town of Liberty collection system consists of approximately 25 miles of sewer lines. The lines vary in size from four (4") inch to twelve (12") inch in diameter. The collection system also consists of eight (8) lift stations that carry the wastewater to the treatment facility. Operators make daily checks on the outfall lines and lift stations. The public works crew along with contracted maintenance is responsible for the mowing and clearing of the outfall lines for easy access in case of any emergencies.

## **II. Performance**

The Town's most recent Compliance Evaluation Inspection of the Wastewater Treatment Plant was August 30, 2021. The inspection mostly reflects compliance with Permit No. WQ0003090. The inspection results are included in this report. (See attached)

All items continue to be monitored by the ORC.

It is our goal to continue to find ways to improve the operations of the Wastewater Treatment Facility and Collection System as we go forward.

### **Overflows at the Wastewater Treatment Plant**

<b>Date</b>	<b>Amount (gallon)</b>	<b>Cause</b>
01/01-01/14/2021	939,650	I/I due to rainfall of 2.6" in 2 day
01/03/2021	6,000	I/I due to rainfall of 2.0" in 1 day
01/31/2021	4,100	I/I due to rainfall of 1.7" in 1 day
01/28-02/10/2021	954,000	I/I due to rainfall of 4.9" in 5 day
02/12-03/10/2021	1,512,000	I/I due to rainfall of 6.4" in 9 day
03/18-04/09/2021	1,605,550	I/I due to rainfall of 4.1" in 5 day
09/22/2021	660	I/I due to rainfall of 2.5" in 1 day

### Overflows in the Collection System

Date	Amount (gallons)	Location	Cause
1/3/2021	3,360	W. Kime Ave. Lift Station Manhole #400	I/I
1/3/2021	3,360	W. Kime Ave. Manhole #400A	I/I
1/3/2021	3,600	Kinro Rd Manhole #500B	I/I
1/31/2021	3,520	Kinro Rd Manhole #500B	I/I
1/31/2021	3,200	W. Kime Ave Manhole #400A	I/I
1/31/2021	3,200	W. Kime Ave. Lift Station Manhole #400	I/I
2/15/2021	2,250	W. Kime Ave Manhole #400A	I/I
2/15/2021	1,350	Kinro Rd Manhole #500B	I/I
2/15/2021	2,250	W. Kime Ave. Lift Station Manhole #400	I/I
2/15/2021	2,475	Johnson Lift Station Manhole #300	I/I
8/7/2021	1,500	W. Kime Ave. Lift Station Manhole #400	I/I
8/7/2021	1,500	W. Kime Ave. Manhole #400A	I/I
8/7/2021	2,100	Kinro Rd Manhole #500B	I/I
8/7/2021	4,800	Johnson Lift Station Manhole #300	I/I
9/22/2021	900	W. Kime Ave. Manhole #400A	I/I
9/22/2021	900	Johnson Lift Station Manhole #300	I/I
9/22/2021	900	W. Kime Ave. Lift Station Manhole #400	I/I
9/22/2021	750	Kinro Rd Manhole #500B	I/I

### Description of Corrective Measures

See Special Order By Consent

*Liberty: A Great Place to Live*

### **III. Notification**

The Town of Liberty will add a notation on the next water bill about the availability of this report. The report will be at Liberty Town Hall for viewing at 239 South Fayetteville St.

The report will also be posted on the Town Website at <http://www.liberty-nc.com>, under Departments, Public Works, Wastewater Department.

**IV. Certification**

**2021 Annual Report Certification Form**

**System Name:** Town of Liberty

**Wastewater Permit #** WO0003090

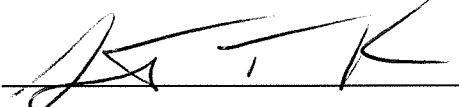
**Collection Permit #** WQCS00280

**Report Year:** 2021

**Population Served:** 2,665

The wastewater system operator named above hereby confirms that all provisions under the House Bill 1160 requiring the development of, distribution of, and notification of an annual report have been executed. Further, the system operator certifies the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the primacy agency by their NC certified laboratory.

**Certified by:** Name: Scott Kidd Title: Town Manager

**Signature:** 

**Phone #:** (336) 622-4276 **Date:** February 8, 2022



**NORTH CAROLINA  
ENVIRONMENTAL MANAGEMENT COMMISSION**

**COUNTY OF RANDOLPH**

<b>IN THE MATTER OF</b>	)	
<b>NORTH CAROLINA</b>	)	
<b>PERMITS</b>	)	<b>SPECIAL ORDER BY CONSENT</b>
<b>WQ0003090 &amp; WQCS00280</b>	)	<b>EMC SOC WQ S19-011</b>
	)	
<b>HELD BY THE</b>	)	
<b>TOWN OF LIBERTY</b>	)	

Pursuant to provisions of North Carolina General Statutes (G.S.) 143-215.2 and 143-215.67, this Special Order by Consent is entered into by the Town of Liberty, hereinafter referred to as the Town, and the North Carolina Environmental Management Commission, an agency of the State of North Carolina created by G.S. 143B-282, and hereinafter referred to as the Commission:

1. The Town of Liberty and the Commission hereby stipulate the following:
  - (a) The Town holds North Carolina non-discharge permit number WQCS00280, for management and operation of an existing wastewater collection system but is unable to consistently comply with sanitary sewer overflow (SSO) prohibitions stipulated in Condition I.2. of the permit, due primarily to the introduction of large volumes of extraneous flow resulting from inflow and infiltration (I&I) throughout the collection system. The Town reported 82 SSOs during the time period January 2018 through September 2020, with some volume of untreated wastewater reaching unnamed tributaries to the Rocky River, which are classified WS-III (water supply) waters of the state within the Cape Fear River Basin, during the vast majority of those incidents.
  - (b) The Town holds North Carolina non-discharge permit number WQ0003090, for the management and operation of an existing non-discharge wastewater treatment facility (WWTF) which employs wastewater irrigation for final disposal of the treated wastewater. Due to high flows that reach the WWTF resulting from I&I to the collection system, the WWTF periodically receives flows in excess of the volumes it can manage and contain, resulting in 14 bypasses of nontreated or undertreated wastewater from treatment units within treatment system during the time period January 2018 through September 2020. Portions of the volumes spilled have entered the North Prong Rocky River, which is currently classified a WS-III (water supply) water of the state within the Cape Fear River Basin.
  - (c) A list of recent SSOs from the Town of Liberty collection system and unpermitted bypasses of wastewater from the Town of Liberty WWTF is included in Attachment A to this Special Order.



- (d) The unpermitted discharges of untreated and/or undertreated wastewater from the Town's treatment system to surface waters constitutes causing and contributing to the pollution of the waters of this State, named above, and the Town is within the jurisdiction of the Commission as set forth in G.S. Chapter 143, Article 21.
  - (e) The Town has recently completed a study of its collection system that has identified and categorized sources of I&I, and established a priority list of actions (repair, rehabilitation and/or replacement of collection system infrastructure) the Town shall undertake to reduce volumes of I&I.
  - (f) The Town has secured, through grants and funding, financing for planning, designing, and improving the wastewater collection system which, once complete and properly operated, will be sufficient to adequately convey all wastewater collected throughout the Town to the WWTF, and reduce to the greatest practical extent the I&I flow it currently receives. A listing of funding sources and projects for the Town's collection system improvements is included in Attachment B to this Special Order.
  - (g) Since this Special Order is by Consent, neither party will file a petition for a contested case or for judicial review concerning its terms.
2. The Town, desiring to comply with the permits identified in paragraph 1(a) and 1(b) above, hereby agrees to do the following:
- (a) Undertake the following activities in accordance with the indicated time schedule:
    - (1) Provide the Winston-Salem Regional Office with quarterly progress reports regarding improvements being made to collection system infrastructure. Reports are due within 30 days following the end of each calendar quarter. **The first report is due April 30, 2021** for the January through March (1<sup>st</sup>) quarter and shall continue to be submitted throughout the life of this Special Order.
    - (2) **On or before January 1, 2021**, the Town shall commence construction on the project funded by the \$493,778 GLF, which was awarded in December 2019. This project targets repair of six of the worse defects identified through the Town's I&I study and calls for rehabilitation of approximately 3,231 linear feet of sewer main repair or replacement of all manholes and laterals within these system areas.
    - (3) **On or before April 30, 2021**, the Town shall begin execution of the \$2,000,000 CDBG-funded project, which was awarded in March 2019. This project includes replacement and/or rehabilitation of ~15,900 linear feet of 8" vitrified clay sewer lines, 72 brick-constructed manholes and related appurtenances, and 150 lateral line replacements, in the southwest quadrant of the Town.
    - (4) **On or before August 1, 2022**, the Town shall begin execution of the Additional Supplemental Appropriations for Disaster Relief Act of 2019 (ASADRA) project loan of \$3,000,000, which was approved in August 2020. This project includes the relocation of the Starmount lift station that is in a 100 year floodplain, the



rehabilitation of the Kinro Road lift station, the rehabilitation of 8,000 linear feet of sewer line, and CCTV of 18,000 linear feet of sewer line.

- (5) **On or before June 1, 2021**, the Town shall complete the GLF grant-funded rehabilitation and repair project noted in 2 (b)(2) above.
  - (6) **On or before July 29, 2022**, the Town shall complete the CDBG-funded project noted in 2 (b)(3) above.
  - (7) **On or before September 30, 2023**, the Town shall complete the ASADRA-funded project noted in 2 (b)(4) above.
- (b) No later than fifteen (15) calendar days after any date identified for accomplishment of any activity listed in 2(b) above, the Town shall submit to the Director of DWR written notice of compliance or noncompliance therewith. In the case of noncompliance, the notice shall include a statement of the reason(s) for noncompliance, remedial action(s) taken, and a statement identifying the extent to which subsequent dates or times for accomplishment of listed activities may be affected.

3. The Town, desiring to comply with the Permits identified in paragraph 1(a) above, hereby agrees to the following settlement of outstanding civil penalties, an upfront penalty, and stipulated penalties:
  - (a) The Town has outstanding civil penalty assessments that total \$49,250. As settlement of all alleged violations of non-discharge permit number WQCS00280 and non-discharge permit number WQ0003090 prior to entering into this Special Order by Consent, the Town agrees to pay an upfront penalty amount of \$1,477.50, with the remaining amount of \$47,772.50 to be held in abeyance until the successful completion of this SOC.
  - (b) At the successful conclusion of this Special Order by Consent, the penalty amount held in abeyance (\$47,772.50) will be remitted. Should the Special Order by Consent not reach a successful conclusion, the full remaining penalty amount will be due immediately by check payable to the North Carolina Department of Environmental Quality and forwarded to the Director.
  - (c) The Town agrees that unless excused under paragraph four (4), the Town will pay the Director of DWR, by check payable to the North Carolina Department of Environmental Quality, stipulated penalties according to the following schedule for failure to meet deadlines set out in paragraph 2(a) and for SSOs and bypasses that discharge to surface waters as described here:



Violation Description	Stipulated Penalty
Any reportable Sanitary Sewer Overflow (SSO) WQCS00280	<ul style="list-style-type: none"> <li>• \$250 per SSO greater than 1,000 gallons and less than 100,000 gallons (to be paid on a monthly basis)</li> <li>• \$500 per SSO greater than 100,001 gallons (to be paid on a monthly basis)</li> </ul>
And reportable bypass WQ0003090	<ul style="list-style-type: none"> <li>• \$250 per bypass greater than 1,000 gallons and less than 100,000 gallons (to be paid on a monthly basis)</li> <li>• \$500 per bypass greater than 100,001 gallons (to be paid on a monthly basis)</li> </ul>
Failure to meet a schedule date	\$100.00/day for the first 7 days, \$500.00/day thereafter
Failure to submit progress reports by schedule date	\$1,000.00/report
Failure to complete any project as described in this Special Order	\$1,000.00/project

- (d) Checks are to be made payable to the North Carolina Department of Environmental Quality and forwarded to the Director of DWR at 1617 Mail Service Center, Raleigh, North Carolina 27699-1617.
4. The Town and the Commission agree stipulated penalties are not due if the Town satisfies the Division of Water Resources noncompliance was caused solely by:
- (a) An act of God;
  - (b) An act of war;
  - (c) An intentional act or omission of a third party, but this defense shall not be available if the act or omission is that of an employee or agent of the defendant or if the act or omission occurs in connection with a contractual relationship with the Town;
  - (d) An extraordinary event beyond the Town's control. Contractor delays or failure to obtain funding will not be considered as events beyond the Town's control; or
  - (e) Any combination of the above causes.

Failure within thirty (30) days of receipt of written demand to pay the penalties or challenge them by a contested case petition pursuant to G.S. 150B-23, will be grounds for a collection action, which the Attorney General is hereby authorized to initiate. The only issue in such



an action will be whether the thirty (30) days has elapsed.


5. In accordance with the provisions of G.S. 143-215.67(b) the Commission allows the Town to accept **0.0 MGD** of additional wastewater (via permitted sewer extensions) to its waste treatment system while improvements to the collection system are being made.

The nature of the additional flows is such that the waste characteristics do not exceed those generally associated with domestic waste or are pretreated to domestic strengths. Waste of greater than normal domestic strength may be accepted if it can be demonstrated to the satisfaction of the Director the additional waste will not adversely affect the treatment efficiency of the treatment system or result in the violation of any permit limitation. All new and proposed industrial waste tributary to the system must be controlled using all needed mechanisms including but not limited to adoption and implementation of industrial waste control and pretreatment ordinances. No wastewater can be accepted that will add toxic pollutants in quantities not generally associated with domestic wastewater characteristics unless the acceptance of the additional wastewater can be supported through appropriate analyses acceptable to the Director.

6. This Special Order by Consent and any terms or conditions contained herein, hereby supersede any and all previous Special Orders, Enforcement Compliance Schedule Letters, terms, conditions and limitations contained therein issued in connection with permits WQ0003090 and WQCS00280.
7. Any violation of the terms of this Special Order by Consent may terminate paragraph five (5) of this Order, and any authorized additional waste not previously connected to the system shall not thereafter be connected until the necessary sewer collection system improvements have been completed and placed in operation.
8. Noncompliance with the terms of this Special Order by Consent are subject to enforcement action in addition to the above stipulated penalties, including injunctive relief pursuant to G.S. 143-215.6.(C).
9. This Special Order may be modified at the Commission's discretion, provided the Commission is satisfied that the Town has made good faith efforts to secure funding, complete all construction, and achieve compliance within the dates specified.
10. Failure to pay the up-front penalty described in paragraph 3.(a) within thirty (30) days of the execution of this Special Order may terminate this Special Order and require the Town to comply with all terms and conditions contained in non-discharge permits WQ0003090 and WQCS00280.
11. This Special Order shall become effective in accordance with state law; however, the Town, upon signature of this Special Order by Consent, will be expected to comply with all schedule dates, terms, and conditions within this document.
12. This Special Order by Consent shall expire **December 31, 2023**.

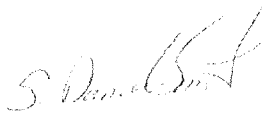


**FOR THE TOWN OF LIBERTY**

  
\_\_\_\_\_  
William Doerfer  
Town Manager

Date 11/2/2020

**FOR THE NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION:**

  
\_\_\_\_\_  
S. Daniel Smith  
Director, Division of Water Resources

Date 1/4/2021



**EMC SOC WQ S19-011  
ATTACHMENT A  
Unauthorized Releases of Wastewater from  
Town of Liberty WWTF (Permit WQ0003090)**

Start Date	Location	Total Volume Released (gal)	Volume Reaching Surface Waters (gal)
1/28/2018	Kinro Rd Manhole	600	600
2/4/2018	Kinro Road	205	205
8/6/2018	Kinro Lift Station	4,260	1,800
9/4/2018	Newberry outfall	600	600
9/16/2018	W Kime Ave	10,500	10,500
9/16/2018	W Kime Ave Pump Station	10,500	10,500
9/16/2018	Johnson Lift Station - W. Moffitt Rd	28,560	28,560
9/16/2018	Starmount Ave Outfall	25,500	25,500
9/17/2018	E Brookwood Ave	2,400	2,400
9/17/2018	E Brookwood Ave	2,400	2,400
9/17/2018	E Butler Ave	1,800	
9/16/2018	Kinro Rd	13,680	13,680
9/16/2018	E Lowe Ave	21,600	21,600
10/11/2018	Kinro Rd., Liberty	900	900
11/5/2018	W Kime Ave Lift Station	1,200	1,200
11/5/2018	W Kime Ave Manhole	1,200	1,200
11/5/2018	Kinro Rd	1,200	1,200
11/5/2018	Johnson Lift Station - 616 W Moffitt Ave	1,200	1,200
11/5/2018	Starmount Ave	2,400	2,400
11/5/2018	E Lowe Ave	900	900
11/12/2018	Starmount Ave Outfall Line	4,800	4,800
11/12/2018	Johnson Street Lift Station	1,350	1,350
11/12/2018	West Kime Ave	3,780	3,780
11/12/2018	West Kime Ave Lift Station	4,830	4,830
11/12/2018	East Lowe Ave	8,400	8,400
11/12/2018	Kinro Road	4,800	4,800
11/15/2018	Starmount Ave Outfall	3,600	3,600
11/15/2018	E Lowe Ave	720	720
11/15/2018	Kinro Rd	1,560	1,560
12/14/2018	Kinro Rd	4,200	4,200
12/20/2018	Kinro Road	12,000	12,000
12/20/2018	West Kime	2,160	2,160
12/20/2018	West Kime Lift Station	4,050	4,050



**EMC SOC WQ S19-011**  
**ATTACHMENT A**  
**Unauthorized Releases of Wastewater from**  
**Town of Liberty Collection System (Permit WQCS00280)**

8			
12/20/2018	East Lowe Avenue	7,500	7,500
12/28/2018	West Kime Ave	600	600
12/28/2018	E Lowe Ave	975	975
12/28/2018	Kinro Rd	2,880	2,880
12/28/2018	Kime Ave Lift Station	600	600
1/24/2019	Kinro Rd	1,500	1,500
2/18/2019	Kinro Rd	1,200	1,200
2/23/2019	Kinro Road	2,700	
3/21/2019	Kinro Rd	1,800	1,800

Start Date	Location	Total Volume Released (gal)	Volume Reaching Surface Waters (gal)
4/12/2019	West Kime Avenue	1,650	1,650
4/12/2019	Kinro Road	2,160	2,160
4/13/2019	West Kime Avenue	4,680	4,680
4/13/2019	Kinro Road	11,040	11,040
4/13/2019	Starmount Outfall Line	2,880	2,880
4/13/2019	Johnson Lift Station	675	0
5/29/2019	South Greensboro St	850	850
1/3/2020	W Kimes Ave MH	2,700	2,700
1/3/2020	W. Kime Ave LS	2,700	2,700
1/3/2020	Kinro Rd	1,200	1,200
1/24/2020	Kinro Rd	5,490	5,490
1/24/2020	West Kime Ave	6,600	6,600
1/24/2020	Johnson Lift Station	4,725	4,725
1/24/2020	Starmount Ave Outfall	4,005	4,005
1/24/2020	W. Kime Ave LS	3,000	3,000
2/6/2020	Johnson Lift Station	14,850	14,850
2/6/2020	Kime Street Lft Station 516 West Kime Street	6,480	6,480
2/6/2020	Kime Street Lift Station 516 West Kime Street	1,680	1,680
2/6/2020	West Kime Street	6,600	6,600
2/6/2020	West Kime Street	1,680	1,680
2/6/2020	Kinro Road	3,000	3,000
2/7/2020	Kinro Road	2,340	2,340
4/30/2020	West Kime Avenue	2,850	2,850
4/30/2020	West Kime Avenue Lift Station	2,850	2,850
4/30/2020	Kinro Road	780	780



**EMC SOC WQ S19-011**

**ATTACHMENT A**

**Unauthorized Releases of Wastewater from**

**Town of Liberty Collection System (Permit WQCS00280)**

4/30/2020	Johnson Lift Station	1,800	1,800
5/21/2020	E Lowe Ave #506A	1,800	1,800
5/21/2020	W Kime Ave LS #400	4,200	4,200
5/21/2020	W Kime Ave . #401	4,200	4,200
5/21/2020	Johnson LS	6,600	6,600
5/21/2020	Kinro Rd	6,300	6,300
6/11/2020	Kinro Road	2,400	2,400
6/11/2020	West Kime Avenue Lift Station	1,200	1,200
6/11/2020	West Kime Avenue	1,200	1,200
6/11/2020	Johnson Lift Station	6,000	6,000
8/03/2020	W Kime Ave LS	1,800	1,800
8/03/2020	West Kime Ave	1,800	1,800
8/04/2020	Kinro Rd MH500-B	1,200	1,200
9/11/2020	West Kime Ave	900	900
9/19/2020	South Greensboro St	600	400



**EMC SOC WQ S19-011  
ATTACHMENT A  
Unauthorized Releases of Wastewater from  
Town of Liberty Collection System (Permit WQCS00280)**

Date Wastewater Release Began	Location of Release	Estimated Volume of Release (gal)	Estimated Volume Reaching Surface Waters (gal)
1/30/2018	Pump Station between the bar screen and treatment lagoon	400	0
9/17/2018	Pump Station between the bar screen and treatment lagoon	342	0
4/13/2019	Chlorine Contact Chamber	180,000	180,000
4/14/2019	Pump Station between the bar screen and treatment lagoon	4,500	0
1/03/2020	Chlorine Contact Chamber	3,600	3,600
2/05/2020	Pump Station between the bar screen and treatment lagoon	400	0
2/06/2020	Pump Station between the bar screen and treatment lagoon	400	0
2/06/2020	Chlorine Contact Chamber	10,000	10,000
2/06/2020	Pump Station between the bar screen and treatment lagoon.	200	0
2/06/2020	Pump Station between the bar screen and treatment lagoon.	200	0
2/07/2020	Pump Station between the bar screen and treatment lagoon	6,400	0
2/21/2020	Chlorine Contact Chamber	996,000	996,000
5/26/2020	Chlorine Contact Chamber	348,000	348,000
6/17/2020	Chlorine Contact Chamber	1,837,500	1,837,500
8/17/2020	Pump Station between bar screen and treatment lagoon	1,200	0
8/17/2020	Chlorine Contact Chamber	360,000	360,000
9/11/2020	Pump Station between bar screen and treatment lagoon	20,000	0
9/17/2020	Pump Station between bar screen and treatment lagoon	12,000	0
9/18/2020	Chlorine Contact Chamber	454,400	454,400



**EMC SOC WQ S19-011  
ATTACHMENT B  
Secured Funding Sources  
Town of Liberty Collection System (Permit WQCS00280)**

**Secured Funding Sources**

<b>Source</b>	<b>Amount</b>
Golden Leaf Foundation (GLF)	\$493,778
Community Development Block Grant (CDBG) for Infrastructure	\$2,000,000
ASADRA - Additional Supplemental Appropriations for Disaster Relief Act of 2019	\$3,000,000

