



REGION 4

ATLANTA, GA 30303

October 23, 2024

ELECTRONIC MAIL

CONFIRMATION OF EMAIL RECEIPT REQUESTED

Vicki Gainer
City Manager
825 Ohio Avenue
Lynn Haven, Florida 32444
vgainer@cityoflynnhaven.com

Re: Compliance Evaluation Inspection Report NPDES Permit No. FL0169978
Lynn Haven Advanced Wastewater Treatment Facility

Dear Vicki Gainer:

The U.S. Environmental Protection Agency Region 4, and the Florida Department of Environmental Protection conducted a Compliance Evaluation Inspection on the Lynn Haven Advanced Wastewater Treatment Facility on August 20 and 21, 2024. The objective of the inspection was to assess the City of Lynn Haven's compliance with the Clean Water Act and the National Pollutant Discharge Elimination System permit, and to evaluate the general condition of the facility. The inspection results have been summarized in the enclosed Compliance Evaluation Inspection Report.

The EPA appreciates the City's cooperation and courtesy. If you have specific questions about the inspection report, please contact Dennis Sayre at sayre.dennis@epa.gov. Please verify receipt of this letter and report by emailing Mr. Sayre at the email address provided.

Sincerely,

**JAIRO
CASTILLO**

Jairo Castillo, P.E., Chief
Wastewater Enforcement Section
Water Enforcement Branch

Digitally signed by
JAIRO CASTILLO
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Enclosure
Lynn Haven FL CEI Report

cc: Erin Rasnake
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United States Environmental Protection Agency Region 4

Enforcement and Compliance Assurance Division

Water Enforcement Branch

61 Forsyth Street, SW

Atlanta, Georgia 30303



Compliance Evaluation Inspection Report

Project No. CV-FL0169978-20240820

Lynn Haven Advanced Wastewater Treatment Facility

5th Street and Montana Avenue

Lynn Haven, FL 32444-2351

NPDES Permit Number: FL0169978

Date of Inspection: August 20 – 21, 2024

Inspectors:

Dennis Sayre, EPA Region 4

Stacey Wix, EPA Region 4

COMPLIANCE EVALUATION INSPECTION REPORT

City of Lynn Haven, Project # CV-FL0169978-20240820

Title and Approval Sheet

Title: Compliance Evaluation Inspection Report - Lynn Haven AWTF

Approving Official:

**JAIRO
CASTILLO**

Digitally signed by JAIRO
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Jairo Castillo, P.E., Chief
Wastewater Enforcement Section
Water Enforcement Branch

Lead Inspector:

**DENNIS
SAYRE**

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Dennis Sayre, Environmental Engineer
Wastewater Enforcement Section
Water Enforcement Branch

COMPLIANCE EVALUATION INSPECTION REPORT

City of Lynn Haven, Project # CV-FL0169978-20240820

Table of Contents

1. Introduction	1
2. Participants	1
3. Facility Description	1
4. Inspection Procedures	2
5. Findings & Conclusions	2
<i>A. Permit Review</i>	2
<i>B. Records and Reports</i>	2
<i>C. Flow Measurement</i>	3
<i>D. Sampling</i>	3
<i>E. Site Visit (Operation and Maintenance)</i>	5
<i>F. Sludge Handling</i>	6
6. Discussion	6
 Appendix 1 - Compliance History	 A1-1
Appendix 2 – Photographs	A2-1

COMPLIANCE EVALUATION INSPECTION REPORT
City of Lynn Haven, Project # CV-FL0169978-20240820

1. Introduction

On August 20 and 21, 2024, representatives of the United States Environmental Protection Agency Region 4 and the Florida Department of Environmental Protection (FDEP) conducted a Compliance Evaluation Inspection (CEI) on the Lynn Haven Advanced Wastewater Treatment Facility (AWTF), owned and operated by the City of Lynn Haven and located on W 5th Street, Lynn Haven, Florida. The inspection was conducted under the authority of Section 308 of the Clean Water Act, as amended. This report provides a summary of the inspection.

2. Participants

Name	Organization	Contact Information
Dennis Sayre	EPA Region 4	Sayre.Dennis@epa.gov
Stacey Wix	EPA Region 4	Wix.Stacey@epa.gov
Erin Rasnake	FDEP NW District	Erin.Rasnake@FloridaDEP.gov
Kristine Locke	FDEP NW District	Kristine.Locke@FloridaDEP.gov
Danny McArdle	City of Lynn Haven	DMcArdle@cityoflynnhaven.com
Chris Lightfoot	City of Lynn Haven	CLightfoot@cityoflynnhaven.com

3. Facility Description

The Lynn Haven advance wastewater treatment facility (AWTF) is a sequence batch reactor (SBR) treatment plant with an average annual treatment capacity of 2.5 million gallons per day (MGD). Process components include a mechanical bar screen with a vortex de-gritting unit, two (2) reactor basins (1,365,000 gallons capacity each), a 329,000-gallon post equalization tank, and a dual unit Schreiber Fuzzy Filter® compressible media up-flow filtration process system. Disinfection for Outfall D001 is achieved using chlorine hypochlorite which is dechlorinated prior to discharge using sulfur dioxide. The facility is also equipped with Trojan UV4000 disinfection system. The effluent pipe is being utilized as a chlorine contact chamber which discharges into an effluent pump station located at the intersection of Illinois Avenue and 8th Avenue. The effluent pump station discharges treated water to either the submerged Outfall D-001 located in St. Andrews Bay or to the City's reuse transmission system for local irrigation.

Waste activated sludge is sent to four aerobic digesters operating in series. The facility is also configured with a storage pond that stores reject effluent. The AWTF has a permanent generator for emergency back-up power which is turned on weekly to exercise the generator.

COMPLIANCE EVALUATION INSPECTION REPORT
City of Lynn Haven, Project # CV-FL0169978-20240820

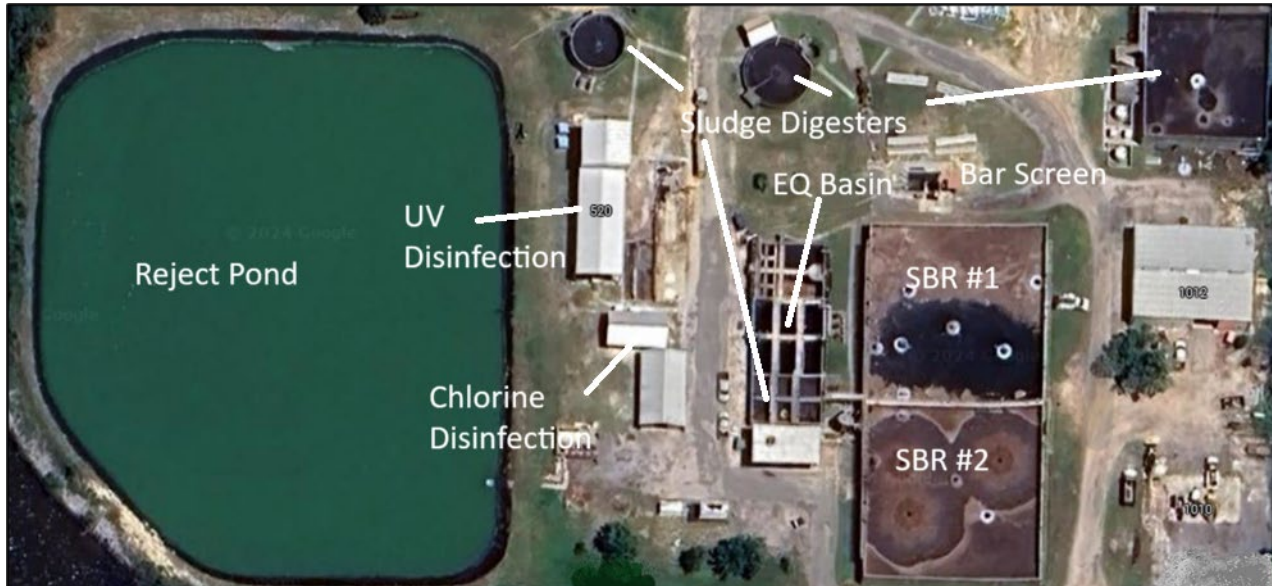


Figure 1: Aerial Display of the AWTF.

4. Inspection Procedures

The overall objective of this CEI was to evaluate the condition and operational performance of the AWTF and the City's self-monitoring program and to offer compliance assistance as needed. Specific tasks included conducting an opening conference, interviewing staff, reviewing Discharge Monitoring Reports (DMRs) and other AWTF records, conducting a site visit throughout the AWTF, and a closing conference.

5. Findings & Conclusions

A. Permit Review

The City's AWTF is permitted under National Pollutant Discharge Elimination System (NPDES) permit number FL0169978 which was issued and became effective on February 28, 2020 and expires on February 27, 2025. The NPDES permit provides effluent limits for Outfall D-001 to St. Andrews Bay and also provides effluent limits for direct reclaimed water for distribution through Reuse System R-001. This inspection did not cover the reuse system.

B. Records and Reports

A review of the City's DMRs through EPA's Integrated Compliance Information System (ICIS) database from August 1, 2021 through June 30, 2024, shows that the AWTF exceeded effluent limits on 192 occasions, including; Enterococci, Total Residual Chlorine (TRC), Copper, Nitrogen, Dissolved Oxygen (DO), pH, Phosphorus, Total Suspended Solids (TSS), Whole Effluent Toxicity, Zinc, Carbonaceous Biochemical Oxygen Demand, and fecal coliform. Refer to Appendix 1 (Compliance History) for a complete list of effluent exceedances.

COMPLIANCE EVALUATION INSPECTION REPORT
City of Lynn Haven, Project # CV-FL0169978-20240820

The ICIS database also shows late DMR submissions for Total Recoverable Zinc and various parameters for instream (St. Andrew Bay) sampling for the months of August 2022 and June 2023.

C. Flow Measurement

Flow for Outfall D-001 is measured at the effluent pump station located at the intersection of Illinois Avenue and 8th Avenue. Flow was not observed during the inspection because there was no discharge from the facility to the effluent pump station during the inspection.

D. Sampling

Sampling for Outfall D-001 is conducted at multiple locations for various parameters as shown in Table 1 below. Sampling sites located out of the AWTF perimeter were not observed.

Table 1. Sampling locations.

Monitoring Site Number	Description of Monitoring Site
FLW-01	Turbo Flow Meter (model Sensus W-5500) located at the de-chlorination facility located near the Sports Park (Hilltop Lane and Recreation Drive).
EFF-02	Composite and pH Effluent Sampling Point located at the end of the UV Channel prior to the V-Notch Weir to a pit to the Effluent Pumping Station.
EFA-02	Grab Sampling Point for Fecal Coliform, TRC, Giardia and Cryptosporidium at the end of the chlorine contact chamber pipe. Located near the intersection of 800 block of Illinois Avenue and West 8th Street.
EFA-03	Total Residual Chlorine continuous meter monitoring location at the effluent pump station at the WWTP.
EFD-01	D-001 Surface Water Monitoring Point located at the Sports Park (intersection of Hilltop Lane and Recreation Drive)
EFA-UV	Calculate UV dosage.
SWI-LH01	LH-01 Ambient Monitoring station 30 deg-08 min-00.4 sec N, 85 deg-37 min-14.0 sec W
SWI-LH02	LH-02 Ambient Monitoring station 30 deg-06 min-34.5 sec N, 85 deg-36 min-53.1 sec W
SWI-LH03	LH-03 Ambient Monitoring station 30 deg-08 min-04.0 sec N, 85 deg-38 min-06.2 sec W

The composite samplers were in good condition, functional, and had properly buffered thermometers in the sample storage chamber. The EPA reviewed various daily bench sheets and Chain of Custody (COC) sheets during the inspection. The following observations were noted:

- The calibration records for sampling meters used on August 20, 2024, for DO, Turbidity, TRC, and pH shows that the meters were adequately calibrated.
- The COC sheet for composite sampling conducted on July 24, 2024 for the TSS sample recorded a sample temperature of 27.2 C° and a temperature of 17.8 C° at the laboratory.
- No deficiencies were noted on the COC for samples collected for bacteria on January 18, 2022, and for composite influent and effluent samples collected on January 22, 2022.

COMPLIANCE EVALUATION INSPECTION REPORT
City of Lynn Haven, Project # CV-FL0169978-20240820

The EPA requested all COC sheets and analytical results from The Water Spigot, Inc. laboratory for the months of June 2022 and June 2023. Records were emailed to the EPA following the inspection. A post inspection review was conducted with the following results:

- The documents provided included Outfall D001 influent and effluent sampling results as well as instream St. Andrews Bay sampling results and the associated COCs. The analytical results from the contract lab shows that holding times were within the methods prescribed pursuant to 40 CFR Section 136.
- Section 1.A.1 of the NPDES permit requires weekly sampling for TSS using 16-hour flow proportional composite sampling procedures. Tables 2 and 3 are a summary of EPA's review of COC sheets and the resulting analytical results. From the documents provided, the City did not conduct composite sampling at the frequency required in Section 1.A.1 for the months of June 2022 and June 2023.

Table 2: TSS sampling and results summary

Sample Collection Date	Grab Sample	Composite Sample	Result (mg/L)
6/1/2022		x	1.4
6/7/2022		x	1
6/9/2022*	x		1
6/9/2022*	x		1.2
6/10/2022	x		1
6/13/2022	x		2
6/14/2022	x		2
6/15/2022	x		2
6/16/2022		x	1
6/16/2022	x		1
6/17/2022	x		3
6/20/2022	x		1.2
6/21/2022	x		1.2
6/22/2022	x		1
6/23/2022	x		1
6/24/2022	x		1.2
6/27/2022	x		1
6/28/2022	x		1.4
6/29/2022	x		1
6/30/2022	x		1

Table 3: TSS sampling and results summary

Sample Collection Date	Grab Sample	Composite Sample	Result (mg/L)
6/7/2023	X		1
6/8/2023	X		1.4
6/9/2023	X		1.4
6/12/2023	X		1
6/13/2023	X		1
6/14/2023	X		1
6/15/2023	X		1.4
6/15/2023		x	2
6/16/2023	X		1.8
6/19/2023	X		1
6/20/2023	X		1.4
6/21/2023	X		1
6/22/2023	X		1
6/23/2023	X		1
6/23/2023		x	1.4
6/26/2023	X		1.4
6/27/2023	X		3
6/29/2023		x	3
7/3/2023	X		1.2
7/4/2023	X		1.4
7/5/2023	X		1.2

*Two values are recorded on the laboratory report for June 16, 2022. The COC reflects two grab samples collected for D-001 effluent.

COMPLIANCE EVALUATION INSPECTION REPORT
City of Lynn Haven, Project # CV-FL0169978-20240820

DMR data for TSS for months of June 2022 and June 2023 are summarized in Table 4.

Table 4. Reported TSS data from the City's DMRs

Monitoring Period End Date	Parameter Description	DMR Reported Value	Statistical Base
6/30/2022	Solids, total suspended	1.4	Maximum Single Sample
6/30/2022	Solids, total suspended	1.1	Maximum Weekly Average
6/30/2022	Solids, total suspended	1.1	Maximum Monthly Average
6/30/2023	Solids, total suspended	2.88	Maximum Monthly Average
6/30/2023	Solids, total suspended	5	Maximum Weekly Average
6/30/2023	Solids, total suspended	5	Maximum Single Sample

Other than the June 2022 Maximum Single Sample and the Maximum Monthly Average, the EPA could not replicate these values given the data provided. The value reported for June 2022 Maximum Monthly Average appears to be the average of all composite samples taken in June 2022, but the EPA only has record of three composite samples taken throughout the month. There are no recorded exceedances of TSS.

E. Site Visit (Operation and Maintenance)

(References to Photos can be seen in Appendix 2)

The AWTF was generally in good operating condition. The AWTF site visit observations are as follows:

- SBR#1 reactor basin was in aeration mode on August 20th, and SBR#2 reactor basin was in settling mode. SBR#1's aerators were operational and showed adequate aeration. SBR#2 reactor basin showed dark foamy solids on the surface but not in excess (Photos 1 and 2).
- Heavy dark foam was observed on the surface of SBR#1 during settling and decanting operations on August 21st, (Photos 3 and 4).
- The UV disinfection system is not operational (Photo 5). The lead operator stated that they no longer use the UV system and rely on chlorine hypochlorite disinfection.
- The SBR#2 was observed decanting and discharged into the post equalization basin (Photo 6). The effluent from the reactor basin appeared to be clean. No discharge from the post equalization basin was observed.
- The reject pond was undergoing relining operations and was scheduled to be completed by August 28, 2024, (Photo 7 behind the digester).
- The centrifuge sludge dewatering system was non-operational which prevented the dewatering of sludge past that of the final digester.
- The first two sludge digesters, located next to the equalization basin, were operating as aerobic digesters and contained dark brown sludge. The third digester basin was also aerating and contained dark, thicker sludge (Photo 7). The fourth and final digester basin was not aerating and stored much thicker sludge (Photo 8).

F. Sludge Handling

Since the facility's centrifuge sludge dewatering system was non-operational, the City stated that they have been hauling liquid sludge to landfills located in Florala, Alabama and Clarksville, Florida.

Sludge hauling receipts were reviewed for August 1st and 2nd of 2024, (Photos 10, 11, and 12). The receipts do not adequately record the final disposal site. Most receipts reviewed show the final location as "Al farms," with no facility name, identification, or address. Some receipts did not record the final disposal location. Other portions of some of the receipts were left blank, such as the truck number, date/time received, and site manager signature at the receiving location.

6. Discussion

Excessive heavy, brown foaming on the batch reactors surface during settling mode can be caused by a variety of issues but is most commonly caused by the age of the sludge being too old. Heavy, brown foaming is indicative of an overabundance of filamentous microorganisms that grows abundantly in older sludge. Reducing the sludge age has been shown to control excessive surface foaming.¹ The City should expedite repair or replacement of the sludge processing equipment to adequately perform sludge management at the AWTF.

Compliance with sludge/biosolids disposal, as specified in with Part 503 of the CWA and in state administrative codes, is dependent on the location and category of the disposal sites being used, such as landfills or land application to farms, among others. The EPA could not ascertain from the hauling records whether the disposal sites were landfills or a land application sites. No hauling receipts identified a specific landfill disposal site by name. All receipts reviewed recorded the final disposal site as either "Al Farms" or did not identify any location by name.

The EPA could not locate any landfills in the vicinity of Florala named Al Farms or Alabama Farms. The City is permitted to land apply pursuant to their NPDES permit in the State of Florida. However, if the City is land applying biosolids in Alabama then the Alabama Department of Environmental Management requires biosolids generators that generate 100 dry tons or more per year to register with the State of Alabama and report annually, whether the biosolids are from in-state or out-of-state.

END OF REPORT

¹ The Causes and Control of Activated Sludge Bulking and Foaming, Fact Sheet EPA/625/8-87/012

Appendix 1 – Compliance History
City of Lynn Haven, Project # CV-FL0169978-20240820

Monitoring Period End Date	Parameter Description	Monitoring Location	Limit Value	DMR Value	Unit	Statistical Base	% Effluent Exceeded
12/31/2022	Enterococci	EFA-02	130	2419	#/100mL	90TH %	1,761
1/31/2023	Enterococci	EFA-02	130	1414	#/100mL	90TH %	988
2/28/2023	Enterococci	EFA-02	130	2420	#/100mL	90TH %	1,762
6/30/2023	Enterococci	EFA-02	130	1986	#/100mL	90TH %	1,428
7/31/2023	Enterococci	EFA-02	130	1175	#/100mL	90TH %	804
9/30/2023	Enterococci	EFA-02	130	387	#/100mL	90TH %	198
11/30/2023	Enterococci	EFA-02	130	1012	#/100mL	90TH %	678
5/31/2023	Chlorine, total residual	EFA-03	4	0.2	mg/L	MINIMUM	95
6/30/2023	Chlorine, total residual	EFA-03	4	0.5	mg/L	MINIMUM	88
8/31/2023	Chlorine, total residual	EFA-03	4	2	mg/L	MINIMUM	50
9/30/2023	Chlorine, total residual	EFA-03	4	0.9	mg/L	MINIMUM	78
10/31/2023	Chlorine, total residual	EFA-03	4	1.3	mg/L	MINIMUM	68
11/30/2023	Chlorine, total residual	EFA-03	4	2	mg/L	MINIMUM	50
12/31/2023	Chlorine, total residual	EFA-03	4	0	mg/L	MINIMUM	100
1/31/2024	Chlorine, total residual	EFA-03	4	2	mg/L	MINIMUM	50
2/29/2024	Chlorine, total residual	EFA-03	4	3.1	mg/L	MINIMUM	23
3/31/2024	Chlorine, total residual	EFA-03	4	2.1	mg/L	MINIMUM	48
4/30/2024	Chlorine, total residual	EFA-03	4	3.1	mg/L	MINIMUM	23
5/31/2024	Chlorine, total residual	EFA-03	4	3.6	mg/L	MINIMUM	10
8/31/2021	Chlorine, total residual	EFD-01	0.01	77	mg/L	MAXIMUM	769,900
4/30/2024	Chlorine, total residual	EFD-01	0.01	2.2	mg/L	MAXIMUM	21,900
5/31/2024	Chlorine, total residual	EFD-01	0.01	4.3	mg/L	MAXIMUM	42,900
6/30/2024	Chlorine, total residual	EFD-01	0.01	1.3	mg/L	MAXIMUM	12,900
10/31/2021	Copper, total recoverable	EFF-02	3.7	7.6	ug/L	MAXIMUM	105
1/31/2022	Copper, total recoverable	EFF-02	3.7	4.5	ug/L	MAXIMUM	22
2/28/2022	Copper, total recoverable	EFF-02	3.7	4	ug/L	MAXIMUM	8
2/28/2023	Copper, total recoverable	EFF-02	3.7	5.9	ug/L	MAXIMUM	59
3/31/2023	Copper, total recoverable	EFF-02	3.7	4.7	ug/L	MAXIMUM	27
4/30/2023	Copper, total recoverable	EFF-02	3.7	5.9	ug/L	MAXIMUM	59
5/31/2023	Copper, total recoverable	EFF-02	3.7	4.9	ug/L	MAXIMUM	32
11/30/2023	Copper, total recoverable	EFF-02	3.7	7.5	ug/L	MAXIMUM	103
12/31/2023	Copper, total recoverable	EFF-02	3.7	4.8	ug/L	MAXIMUM	30
4/30/2024	Copper, total recoverable	EFF-02	3.7	10	ug/L	MAXIMUM	170

Appendix 1 – Compliance History
City of Lynn Haven, Project # CV-FL0169978-20240820

Monitoring Period End Date	Parameter Description	Monitoring Location	Limit Value	DMR Value	Unit	Statistical Base	% Effluent Exceeded
10/31/2021	Nitrogen, total [as N]	EFF-02	4.5	6.16	mg/L	MO AVG	37
11/30/2021	Nitrogen, total [as N]	EFF-02	9	9.01	mg/L	MAXIMUM	0
11/30/2021	Nitrogen, total [as N]	EFF-02	4.5	6.52	mg/L	MO AVG	45
12/31/2021	Nitrogen, total [as N]	EFF-02	4.5	4.69	mg/L	MO AVG	4
1/31/2022	Nitrogen, total [as N]	EFF-02	4.5	5.04	mg/L	MO AVG	12
2/28/2022	Nitrogen, total [as N]	EFF-02	4.5	4.74	mg/L	MO AVG	5
1/31/2023	Nitrogen, total [as N]	EFF-02	9	9.04	mg/L	MAXIMUM	0
1/31/2023	Nitrogen, total [as N]	EFF-02	4.5	5.22	mg/L	MO AVG	16
2/28/2023	Nitrogen, total [as N]	EFF-02	6.75	7.52	mg/L	WKLY AVG	11
2/28/2023	Nitrogen, total [as N]	EFF-02	9	17.9	mg/L	MAXIMUM	99
2/28/2023	Nitrogen, total [as N]	EFF-02	4.5	7.52	mg/L	MO AVG	67
3/31/2023	Nitrogen, total [as N]	EFF-02	9	16.2	mg/L	MAXIMUM	80
3/31/2023	Nitrogen, total [as N]	EFF-02	6.75	6.81	mg/L	WKLY AVG	1
3/31/2023	Nitrogen, total [as N]	EFF-02	4.5	6.81	mg/L	MO AVG	51
4/30/2023	Nitrogen, total [as N]	EFF-02	6.75	11.7	mg/L	WKLY AVG	73
4/30/2023	Nitrogen, total [as N]	EFF-02	9	11.7	mg/L	MAXIMUM	30
4/30/2023	Nitrogen, total [as N]	EFF-02	4.5	8.64	mg/L	MO AVG	92
5/31/2023	Nitrogen, total [as N]	EFF-02	4.5	5.74	mg/L	MO AVG	28
8/31/2023	Nitrogen, total [as N]	EFF-02	4.5	4.9	mg/L	MO AVG	9
11/30/2023	Nitrogen, total [as N]	EFF-02	4.5	4.69	mg/L	MO AVG	4
1/31/2024	Nitrogen, total [as N]	EFF-02	6.75	7.1	mg/L	WKLY AVG	5
1/31/2024	Nitrogen, total [as N]	EFF-02	4.5	5.4	mg/L	MO AVG	20
2/29/2024	Nitrogen, total [as N]	EFF-02	6.75	8.5	mg/L	WKLY AVG	26
2/29/2024	Nitrogen, total [as N]	EFF-02	4.5	5.8	mg/L	MO AVG	29
3/31/2024	Nitrogen, total [as N]	EFF-02	4.5	4.8	mg/L	MO AVG	7
5/31/2024	Nitrogen, total [as N]	EFF-02	9	19.8	mg/L	MAXIMUM	120
5/31/2024	Nitrogen, total [as N]	EFF-02	6.75	19.8	mg/L	WKLY AVG	193
5/31/2024	Nitrogen, total [as N]	EFF-02	4.5	13.3	mg/L	MO AVG	196
9/30/2023	Nitrogen, total [as N]	EFF-02	4.5	4.7	mg/L	ANNL AVG	4
10/31/2023	Nitrogen, total [as N]	EFF-02	4.5	4.85	mg/L	ANNL AVG	8
11/30/2023	Nitrogen, total [as N]	EFF-02	4.5	4.9	mg/L	ANNL AVG	9
12/31/2023	Nitrogen, total [as N]	EFF-02	4.5	5	mg/L	ANNL AVG	11
1/31/2024	Nitrogen, total [as N]	EFF-02	4.5	5.2	mg/L	ANNL AVG	16

Appendix 1 – Compliance History
City of Lynn Haven, Project # CV-FL0169978-20240820

Monitoring Period End Date	Parameter Description	Monitoring Location	Limit Value	DMR Value	Unit	Statistical Base	% Effluent Exceeded
2/29/2024	Nitrogen, total [as N]	EFF-02	4.5	5	mg/L	ANNL AVG	11
3/31/2024	Nitrogen, total [as N]	EFF-02	4.5	4.9	mg/L	ANNL AVG	9
5/31/2024	Nitrogen, total [as N]	EFF-02	4.5	5.1	mg/L	ANNL AVG	13
6/30/2024	Nitrogen, total [as N]	EFF-02	4.5	5.1	mg/L	ANNL AVG	13
4/30/2023	Oxygen, dissolved [DO]	EFF-02	6	4	mg/L	MINIMUM	33
7/31/2023	pH	EFF-02	6.5	6.3	SU	MINIMUM	NA
1/31/2024	pH	EFF-02	6.5	5.9	SU	MINIMUM	NA
2/29/2024	pH	EFF-02	6.5	6.1	SU	MINIMUM	NA
4/30/2024	pH	EFF-02	6.5	6.4	SU	MINIMUM	NA
2/28/2023	Phosphorus, total [as P]	EFF-02	1.5	1.58	mg/L	WKLY AVG	5
2/28/2023	Phosphorus, total [as P]	EFF-02	2	3.66	mg/L	MAXIMUM	83
2/28/2023	Phosphorus, total [as P]	EFF-02	1	1.58	mg/L	MO AVG	58
4/30/2023	Phosphorus, total [as P]	EFF-02	1.5	1.75	mg/L	WKLY AVG	17
4/30/2023	Phosphorus, total [as P]	EFF-02	1	1.09	mg/L	MO AVG	9
6/30/2023	Phosphorus, total [as P]	EFF-02	1.5	2.29	mg/L	WKLY AVG	53
6/30/2023	Phosphorus, total [as P]	EFF-02	2	2.29	mg/L	MAXIMUM	15
6/30/2023	Phosphorus, total [as P]	EFF-02	1	1.28	mg/L	MO AVG	28
7/31/2023	Phosphorus, total [as P]	EFF-02	1.5	1.77	mg/L	WKLY AVG	18
7/31/2023	Phosphorus, total [as P]	EFF-02	1	1.66	mg/L	MO AVG	66
8/31/2023	Phosphorus, total [as P]	EFF-02	2	2.3	mg/L	MAXIMUM	15
8/31/2023	Phosphorus, total [as P]	EFF-02	1	1.4	mg/L	MO AVG	40
9/30/2023	Phosphorus, total [as P]	EFF-02	2	2.8	mg/L	MAXIMUM	40
9/30/2023	Phosphorus, total [as P]	EFF-02	1.5	2.2	mg/L	WKLY AVG	47
9/30/2023	Phosphorus, total [as P]	EFF-02	1	2.2	mg/L	MO AVG	120
10/31/2023	Phosphorus, total [as P]	EFF-02	1.5	2.77	mg/L	WKLY AVG	85
10/31/2023	Phosphorus, total [as P]	EFF-02	2	2.77	mg/L	MAXIMUM	39
10/31/2023	Phosphorus, total [as P]	EFF-02	1	1.78	mg/L	MO AVG	78
11/30/2023	Phosphorus, total [as P]	EFF-02	2	3.3	mg/L	MAXIMUM	65
11/30/2023	Phosphorus, total [as P]	EFF-02	1.5	3.3	mg/L	WKLY AVG	120
11/30/2023	Phosphorus, total [as P]	EFF-02	1	1.7	mg/L	MO AVG	70
5/31/2024	Phosphorus, total [as P]	EFF-02	1	1.6	mg/L	MO AVG	60
5/31/2024	Phosphorus, total [as P]	EFF-02	2	2.2	mg/L	MAXIMUM	10
5/31/2024	Phosphorus, total [as P]	EFF-02	1.5	2.5	mg/L	WKLY AVG	67

Appendix 1 – Compliance History
City of Lynn Haven, Project # CV-FL0169978-20240820

Monitoring Period End Date	Parameter Description	Monitoring Location	Limit Value	DMR Value	Unit	Statistical Base	% Effluent Exceeded
6/30/2024	Phosphorus, total [as P]	EFF-02	1.5	1.8	mg/L	WKLY AVG	20
6/30/2024	Phosphorus, total [as P]	EFF-02	1	1.3	mg/L	MO AVG	30
4/30/2023	Phosphorus, total [as P]	EFF-02	1	1.16	mg/L	ANNL AVG	16
5/31/2023	Phosphorus, total [as P]	EFF-02	1	1.18	mg/L	ANNL AVG	18
6/30/2023	Phosphorus, total [as P]	EFF-02	1	1.26	mg/L	ANNL AVG	26
7/31/2023	Phosphorus, total [as P]	EFF-02	1	1.4	mg/L	ANNL AVG	40
8/31/2023	Phosphorus, total [as P]	EFF-02	1	1.4	mg/L	ANNL AVG	40
9/30/2023	Phosphorus, total [as P]	EFF-02	1	1.5	mg/L	ANNL AVG	50
10/31/2023	Phosphorus, total [as P]	EFF-02	1	1.6	mg/L	ANNL AVG	60
11/30/2023	Phosphorus, total [as P]	EFF-02	1	1.7	mg/L	ANNL AVG	70
12/31/2023	Phosphorus, total [as P]	EFF-02	1	1.76	mg/L	ANNL AVG	76
1/31/2024	Phosphorus, total [as P]	EFF-02	1	1.3	mg/L	ANNL AVG	30
2/29/2024	Phosphorus, total [as P]	EFF-02	1	1.2	mg/L	ANNL AVG	20
3/31/2024	Phosphorus, total [as P]	EFF-02	1	1.2	mg/L	ANNL AVG	20
4/30/2024	Phosphorus, total [as P]	EFF-02	1	1.18	mg/L	ANNL AVG	18
5/31/2024	Phosphorus, total [as P]	EFF-02	1	1.3	mg/L	ANNL AVG	30
6/30/2024	Phosphorus, total [as P]	EFF-02	1	1.3	mg/L	ANNL AVG	30
2/28/2023	Solids, total suspended	EFF-02	11.25	11.5	mg/L	WKLY AVG	2
2/28/2023	Solids, total suspended	EFF-02	15	29	mg/L	MAXIMUM	93
2/28/2023	Solids, total suspended	EFF-02	7.5	11.5	mg/L	MO AVG	53
3/31/2023	Solids, total suspended	EFF-02	15	38	mg/L	MAXIMUM	153
3/31/2023	Solids, total suspended	EFF-02	7.5	10.54	mg/L	MO AVG	41
4/30/2023	Solids, total suspended	EFF-02	11.25	15	mg/L	WKLY AVG	33
4/30/2023	Solids, total suspended	EFF-02	7.5	10.25	mg/L	MO AVG	37
7/31/2023	Solids, total suspended	EFF-02	11.25	85	mg/L	WKLY AVG	656
7/31/2023	Solids, total suspended	EFF-02	15	85	mg/L	MAXIMUM	467
7/31/2023	Solids, total suspended	EFF-02	7.5	22.35	mg/L	MO AVG	198
8/31/2023	Solids, total suspended	EFF-02	15	18	mg/L	MAXIMUM	20
11/30/2023	Solids, total suspended	EFF-02	11.25	13.6	mg/L	WKLY AVG	21
11/30/2023	Solids, total suspended	EFF-02	15	45	mg/L	MAXIMUM	200
11/30/2023	Solids, total suspended	EFF-02	7.5	13.6	mg/L	MO AVG	81
12/31/2023	Solids, total suspended	EFF-02	11.25	16	mg/L	WKLY AVG	42
12/31/2023	Solids, total suspended	EFF-02	15	16	mg/L	MAXIMUM	7

Appendix 1 – Compliance History
City of Lynn Haven, Project # CV-FL0169978-20240820

Monitoring Period End Date	Parameter Description	Monitoring Location	Limit Value	DMR Value	Unit	Statistical Base	% Effluent Exceeded
12/31/2023	Solids, total suspended	EFF-02	7.5	10.75	mg/L	MO AVG	43
1/31/2024	Solids, total suspended	EFF-02	11.25	16	mg/L	WKLY AVG	42
1/31/2024	Solids, total suspended	EFF-02	15	16	mg/L	MAXIMUM	7
3/31/2024	Solids, total suspended	EFF-02	11.25	14	mg/L	WKLY AVG	24
11/30/2023	Solids, total suspended	EFF-02	7.5	7.7	mg/L	ANNL AVG	3
12/31/2023	Solids, total suspended	EFF-02	7.5	8.46	mg/L	ANNL AVG	13
1/31/2024	Solids, total suspended	EFF-02	7.5	8.5	mg/L	ANNL AVG	13
2/29/2024	Solids, total suspended	EFF-02	7.5	7.8	mg/L	ANNL AVG	4
6/30/2021	WET Ceriodaphnia dubia	EFF-02	100	20.6	%	MINIMUM	79
7/31/2021	WET Ceriodaphnia dubia	EFF-02	100	52.1	%	MINIMUM	48
6/30/2022	WET Ceriodaphnia dubia	EFF-02	100	12.4	%	MINIMUM	88
6/30/2023	WET Ceriodaphnia dubia	EFF-02	100	13.7	%	MINIMUM	86
12/31/2023	Zinc, total recoverable	EFF-02	86	93	ug/L	MAXIMUM	8
1/31/2024	CBOD [5 day, 20 C]	EFF-02	12.6	23	mg/L	MAXIMUM	83
1/31/2024	CBOD [5 day, 20 C]	EFF-02	6.3	9.25	mg/L	MO AVG	47
1/31/2024	CBOD [5 day, 20 C]	EFF-02	9.45	23	mg/L	WKLY AVG	143
9/30/2021	Coliform, fecal general	EFA-02	86	1046.2	#/100mL	MAXIMUM	1,117
1/31/2022	Coliform, fecal general	EFA-02	86	143.9	#/100mL	MAXIMUM	67
2/28/2022	Coliform, fecal general	EFA-02	86	261.3	#/100mL	MAXIMUM	204
9/30/2022	Coliform, fecal general	EFA-02	86	2419.6	#/100mL	MAXIMUM	2,713
10/31/2022	Coliform, fecal general	EFA-02	86	517.2	#/100mL	MAXIMUM	501
11/30/2022	Coliform, fecal general	EFA-02	86	816.4	#/100mL	MAXIMUM	849
12/31/2022	Coliform, fecal general	EFA-02	86	2419.6	#/100mL	MAXIMUM	2,713
12/31/2022	Coliform, fecal general	EFA-02	43	2419.6	#/100mL	90TH %	5,527
1/31/2023	Coliform, fecal general	EFA-02	86	2419.6	#/100mL	MAXIMUM	2,713
2/28/2023	Coliform, fecal general	EFA-02	86	2419.6	#/100mL	MAXIMUM	2,713
2/28/2023	Coliform, fecal general	EFA-02	43	2419.6	#/100mL	90TH %	5,527
3/31/2023	Coliform, fecal general	EFA-02	86	1732.9	#/100mL	MAXIMUM	1,915
5/31/2023	Coliform, fecal general	EFA-02	43	2419.6	#/100mL	90TH %	5,527
5/31/2023	Coliform, fecal general	EFA-02	86	2419.6	#/100mL	MAXIMUM	2,713
6/30/2023	Coliform, fecal general	EFA-02	86	2419.6	#/100mL	MAXIMUM	2,713
6/30/2023	Coliform, fecal general	EFA-02	43	2419.6	#/100mL	90TH %	5,527
7/31/2023	Coliform, fecal general	EFA-02	43	1899.3	#/100mL	90TH %	4,317

Appendix 1 – Compliance History
City of Lynn Haven, Project # CV-FL0169978-20240820

Monitoring Period End Date	Parameter Description	Monitoring Location	Limit Value	DMR Value	Unit	Statistical Base	% Effluent Exceeded
7/31/2023	Coliform, fecal general	EFA-02	86	2419.6	#/100mL	MAXIMUM	2,713
8/31/2023	Coliform, fecal general	EFA-02	86	178.5	#/100mL	MAXIMUM	108
9/30/2023	Coliform, fecal general	EFA-02	43	107.1	#/100mL	90TH %	149
9/30/2023	Coliform, fecal general	EFA-02	86	2419.6	#/100mL	MAXIMUM	2,713
10/31/2023	Coliform, fecal general	EFA-02	86	1732.9	#/100mL	MAXIMUM	1,915
10/31/2023	Coliform, fecal general	EFA-02	43	980.4	#/100mL	90TH %	2,180
11/30/2023	Coliform, fecal general	EFA-02	43	1801.6	#/100mL	90TH %	4,090
11/30/2023	Coliform, fecal general	EFA-02	86	2419.6	#/100mL	MAXIMUM	2,713
12/31/2022	Coliform, fecal general	EFA-02	14	990.2	#/100mL	ANNL AVG	6,973
1/31/2023	Coliform, fecal general	EFA-02	14	90.2	#/100mL	ANNL AVG	544
2/28/2023	Coliform, fecal general	EFA-02	14	95.1	#/100mL	ANNL AVG	579
3/31/2023	Coliform, fecal general	EFA-02	14	101.3	#/100mL	ANNL AVG	624
4/30/2023	Coliform, fecal general	EFA-02	14	101.8	#/100mL	ANNL AVG	627
5/31/2023	Coliform, fecal general	EFA-02	14	159.5	#/100mL	ANNL AVG	1,039
6/30/2023	Coliform, fecal general	EFA-02	14	159.4	#/100mL	ANNL AVG	1,039
7/31/2023	Coliform, fecal general	EFA-02	14	452.7	#/100mL	ANNL AVG	3,134
8/31/2023	Coliform, fecal general	EFA-02	14	467.5	#/100mL	ANNL AVG	3,239
9/30/2023	Coliform, fecal general	EFA-02	14	481.2	#/100mL	ANNL AVG	3,337
10/31/2023	Coliform, fecal general	EFA-02	14	569.4	#/100mL	ANNL AVG	3,967
11/30/2023	Coliform, fecal general	EFA-02	14	695.8	#/100mL	ANNL AVG	4,870
12/31/2023	Coliform, fecal general	EFA-02	14	614	#/100mL	ANNL AVG	4,286
1/31/2024	Coliform, fecal general	EFA-02	14	201.5	#/100mL	ANNL AVG	1,339
2/29/2024	Coliform, fecal general	EFA-02	14	184.8	#/100mL	ANNL AVG	1,220
3/31/2024	Coliform, fecal general	EFA-02	14	153.8	#/100mL	ANNL AVG	999
4/30/2024	Coliform, fecal general	EFA-02	14	152.4	#/100mL	ANNL AVG	989
5/31/2024	Coliform, fecal general	EFA-02	14	109.2	#/100mL	ANNL AVG	680
6/30/2024	Coliform, fecal general	EFA-02	14	75.8	#/100mL	ANNL AVG	441

Appendix 2 – Photographs
City of Lynn Haven, Project # CV-FL0169978-20240820



Photo 1. SBR #1 reactor basin. August 20, 2024



Photo 2. SBR #2 reactor basin. August 20, 2024

Appendix 2 – Photographs
City of Lynn Haven, Project # CV-FL0169978-20240820



Photo 3. SBR#1, August 21, 2024



Photo 4. SBR #1 reactor basin sludge judge.
The black arrow indicates water depth.

Appendix 2 – Photographs
City of Lynn Haven, Project # CV-FL0169978-20240820



Photo 5. Trojan UV disinfection system (nonoperational).



Photo 6. Reactor basin outfall to the post equalization basin.

Appendix 2 – Photographs
City of Lynn Haven, Project # CV-FL0169978-20240820



Photo 7. Digester basin and the reject pond in the background.



Photo 8. Final digester basin.

Appendix 2 – Photographs
City of Lynn Haven, Project # CV-FL0169978-20240820

GREENSOUTH SOLUTIONS, LLC
30043 Edwards Road • Florida, AL 36442
(334) 858-2622

Date 8-1-24 Time 10:58
Customer L.H. WWTP Facility ID _____
Location Lynn Haven Truck No. 008
Driver DAN

Quantity	Total
Liquid Biosolids	Gallons <u>6500</u>
Weight Ticket No. _____	Gross _____
Press Cake _____	Tare _____
Liquid ☒	Net _____
Other _____	
Class of Biosolids A _____	Signature of Plant Operator <u>[Signature]</u>
B _____	

Disposal Location

Date/Time Received _____
Name _____ Facility ID _____
Site Manager Signature _____

Photo 9. Liquid sludge hauling receipt for 10:58 a.m., 8/21/2024.

GREENSOUTH SOLUTIONS, LLC
30043 Edwards Road • Florida, AL 36442
(334) 858-2622

Date 8-2-24 Time 11:05
Customer L.H. WWTP Facility ID _____
Location Lynn Haven Truck No. 008
Driver DAN

Quantity	Total
Liquid Biosolids	Gallons <u>6500</u>
Weight Ticket No. _____	Gross _____
Press Cake _____	Tare _____
Liquid ☒	Net _____
Other _____	
Class of Biosolids A _____	Signature of Plant Operator <u>[Signature]</u>
B _____	

Disposal Location

Date/Time Received _____
Name AL Farris Facility ID _____
Site Manager Signature _____

Photo 10. Liquid sludge hauling receipt 11:05 a.m., 8/21/2024.

GREENSOUTH SOLUTIONS, LLC
30043 Edwards Road • Florida, AL 36442
(334) 858-2622

Date 8/2/24 Time 10:30
Customer Lynn Haven WWTP Facility ID _____
Location Lynn Haven Truck No. _____
Driver [Signature]

Quantity	Total
Liquid Biosolids	Gallons <u>6500</u>
Weight Ticket No. _____	Gross _____
Press Cake _____	Tare _____
Liquid ☒	Net _____
Other _____	
Class of Biosolids A _____	Signature of Plant Operator <u>[Signature]</u>
B _____	

Disposal Location

Date/Time Received 8/2/24 11:00
Name AL Farris Facility ID _____
Site Manager Signature [Signature]

Photo 11. Liquid sludge hauling receipt for 10:33 a.m., 8/21/2024.