

## SUMMARY PAGE

**Name of Facility:** City of Madison – Southside Water Pollution Control Plant (WPCP)

**NPDES Permit No.:** GA0023141

This is a reissuance of the NPDES permit for the Southside WPCP. Up to 0.66 MGD (monthly average) of treated domestic wastewater is discharged to Horse Branch in the Oconee River Basin. The permit is also being modified for an update of the existing Sludge Management Plan (SMP) to include one additional land application site and removal of one existing site in Morgan County. The draft permit was issued on August 23, 2024 and the public comment period ended on October 5, 2024.

**Please Note The Following Changes to the Proposed NPDES Permit From The Existing Permit:**

Part I.B – Effluent Limitations and Monitoring Requirements:

- Decreased the monthly average total suspended solids limit from 30 mg/L to 20 mg/L in accordance with the 2022 TMDL requirements.
- Replaced monthly average fecal coliform effluent limit of 200 counts/100 mL with monthly average *Escherichia coli* (*E. coli*) of 126 counts/100 mL to reflect the recently approved bacterial indicator for freshwater. The proposed limit is in accordance with EPD's *Bacteria Equivalency Strategy for Using the Optimal Indicator Organisms for WQS and NPDES Permitting*, 2022.
- Added a monthly total phosphorus (TP) limit of 0.76 mg/L to meet lake standards for Lake Oconee and a compliance schedule to meet the new limit.
- Increased flow monitoring frequency from five days/week to seven days/week since the facility is equipped with a continuous recorder.
- Added total nitrogen monitoring requirements to quantify nutrient loadings in the Oconee River Basin.
- Increased monitoring frequency for orthophosphate, organic nitrogen, total Kjeldahl nitrogen, and nitrate-nitrite from one day/quarter to one day/month in accordance with EPD monitoring requirements guidelines.
- Removed the completed Ammonia Compliance Schedule.
- Added effluent data monitoring testing requirements for future permit renewal.
- Converted mass loading limits from kg/day to lbs/day to be consistent with other NPDES permits in Georgia.

Part I.C. – Monitoring and Reporting:

- Added permit condition for the development of a Comprehensive Nutrient Optimization Plan (CNOP) with reopener clause to include nutrient limits.

**Standard Conditions and Boilerplate Modifications:**

The permit boilerplate includes modified language or added language consistent with current NPDES permits.

**Final Permit Determinations and Public Comments:**

- ☐ Final issued permit did not change from the draft permit placed on public notice.
- ☒ Public comments were received during public notice period.
- ☐ Public hearing was held on
- ☒ Final permit includes changes from the draft permit placed on public notice. See attached permit revisions and/or permit fact sheet revisions.



## ENVIRONMENTAL PROTECTION DIVISION

**Jeffrey W. Cown, Director**

**EPD Director's Office**

2 Martin Luther King, Jr. Drive  
Suite 1456, East Tower  
Atlanta, Georgia 30334  
404-656-4713

11/27/2024

Mr. John Klimm, City Manager  
City of Madison  
Post Office Box 32  
Madison, Georgia 30650

RE: Permit Issuance  
Southside Water Pollution Control Plant  
NPDES Permit No. GA0023141  
Morgan County, Oconee River Basin

Dear Mr. Klimm:

Pursuant to the Georgia Water Quality Control Act, as amended; the Federal Water Pollution Control Act, as amended; and the Rules and Regulations promulgated thereunder, we have today issued the attached National Pollutant Discharge Elimination System (NPDES) permit for the referenced wastewater treatment facility. The permit has been modified to include one additional land application site in Morgan County.

Your facility has been assigned to the following EPD office for reporting and compliance:

Georgia Environmental Protection Division  
Northeast District Office  
745 Gaines School Road  
Athens, Georgia 30605

Please be advised that on and after the effective date indicated in the attached NPDES permit, you must comply with all the terms, conditions and limitations of this permit. Updated Discharge Monitoring Reports (DMRs) should be available for review in NetDMR approximately two weeks after the effective date of the permit. Please log in into your account and ensure that reporting requirements in the DMRs matches the reporting requirements in your permit (list of parameters, limitations, sampling frequency, sample type, reporting units, etc.). If it is not the case or if you have questions about the permit, please contact August Lutkehus at (470) 524-0733 or [august.lutkehus@dnr.ga.gov](mailto:august.lutkehus@dnr.ga.gov).

Sincerely,

Jeffrey W. Cown  
Director

JWC\aal

Attachments: Revisions to Permit, Revisions to Fact Sheet, EPD Response to Public Comments, NPDES Permit No. GA0023141, Fact Sheet

cc: Derrick Williams, EPD Northeast District ([derrick.williams@dnr.ga.gov](mailto:derrick.williams@dnr.ga.gov))  
John Klimm, City of Madison ([jklimm@madisonga.com](mailto:jklimm@madisonga.com))  
Jodi Wilson, City of Madison ([jwilson@madisonga.com](mailto:jwilson@madisonga.com))  
Wayne Ghann, City of Madison ([wghann@madisonga.com](mailto:wghann@madisonga.com))  
Lindsey Bryant, Carter & Sloope, Inc. ([lbryant@cartersloope.com](mailto:lbryant@cartersloope.com))  
Marty Boyd, Carter & Sloope, Inc. ([mboyd@cartersloope.com](mailto:mboyd@cartersloope.com))  
Josh Welte, EPD Water Quality Modeling Unit ([josh.welte@dnr.ga.gov](mailto:josh.welte@dnr.ga.gov))  
Tyler Parsons, EPD TMDL Modeling & Development Unit ([tyler.parsons@dnr.ga.gov](mailto:tyler.parsons@dnr.ga.gov))



### Revisions to Permit

**Name of Facility:** City of Madison – Southside Water Pollution Control Plant (WPCP)

**NPDES Permit No.:** GA0023141

Were there any revisions between the draft proposed NPDES permit placed on public notice and the final proposed NPDES permit? ☐ No ☒ Yes

If yes, specify:

Part IV. Removed the Shepherd Property, located on Walter Shepherd Road, Rutledge, GA, from the list of approved sites for land application of sludge. The City no longer wishes to use this site.

As the revisions outlined in this document are more stringent, EPD has determined that another public notice is not necessary and EPD will proceed with permit reissuance.



### Revisions to Fact Sheet

**Name of Facility:** City of Madison – Southside Water Pollution Control Plant (WPCP)

**NPDES Permit No.:** GA0023141

Were there any revisions between the draft fact sheet and the final fact sheet? ☒ Yes ☐ No

Section 5.3     Removed language for the addition of the Shepherd Farm site for land application of biosolids since the City no longer wishes to use this site.

**Public Comments on Draft Permit and EPD Responses**  
**City of Madison**  
**Southside Water Pollution Control Plant**  
**NPDES Permit No. GA0023141**

Comment	Response to Comment
<p>I am very opposed to this. Fecal matter water will drain in to the water shed going straight into the old City of Rutledge well. Although not in use now but may be needed in the future. No use in contaminating all of our water just so Shepherd Farm can save a little money.</p>	<p>The City of Madison has decided to withdraw their request to add the Shepherd Farm property as an approved site for land application of biosolids. The final permit has been revised and the Shepherd Farm property is no longer listed as an approved site.</p>
<p>This application involves the addition of a Shepherd Property field on Walter Shepherd Road, Rutledge GA. The EPA is currently developing two proposed rules to designate some types of PFAS as hazardous. If that occurs, those compounds would then be more tightly regulated under a federal waste law, known as RCRA (the Resource Conservation and Recovery Act). A public hearing should be held for this proposal and approval of this application should be withheld until a final determination by the EPA.</p>	<p>The City of Madison has decided to withdraw their request to add the Shepherd Farm property as an approved site for land application of biosolids. The final permit has been revised and the Shepherd Farm property is no longer listed as an approved site. The site has been removed from the City's sludge management plan, therefore a public hearing on the matter is no longer needed.</p>
<p>My name is George Bishop 5580 Atlanta Hwy Rutledge GA. I have a deep concern with the dumping of this biowaste on this property. My property borders this property on two sides. With the mixing of waste that is classified as a bio-hazards. I am on a water well. About 90% of the rain run-off from this property comes across my property. This is more than likely to contaminate my well and soil. I have heard of this being done in other parts of the county. I have also heard that people got sick and animals died. So you can see my objection to this waste being dumped so close to my property. With amount of rain runoff they just as well dump directly on my property. The denial of this permit is a must.</p>	<p>The City of Madison has decided to withdraw their request to add the Shepherd Farm property as an approved site for land application of biosolids. The final permit has been revised and the Shepherd Farm property is no longer listed as an approved site.</p>

<p>I am writing to make you aware that my husband and I object to the proposed application of biosolids from the city of Madison on to land farmed by the Shepherd Family Farm on Walter Shepherd Road in Rutledge. Mr. Shepherd alternates his crops of winter wheat and cotton on his acreage and we feel uncomfortable with a known food product for humans as well as wheat straw, a common roughage for livestock, being grown with this application. While people don't think of cotton as being a food product, by products of cotton, such as seed and branches, are used in sweet feed for cows and probably other animals, so that would also be harmful.</p> <p>It is our understanding that the EPA is making some major decisions about products found in these biosolids and their possible "forever" negative effects on humans and animals. This field where the Shepherd family would apply the biosolids is part of our vital shallow groundwater recharge area in Rutledge which makes it all the more important that no biosolids at all be applied here. Please ask the city of Madison to find an alternate location but to be sure of what is grown on or beneath the new area. Regardless of what is done, we would like a public meeting to advise all the residents who would be affected by this.</p>	<p>The City of Madison has decided to withdraw their request to add the Shepherd Farm property as an approved site for land application of biosolids. The final permit has been revised and the Shepherd Farm property is no longer listed as an approved site. The site has been removed from the City's sludge management plan, therefore a public hearing on the matter is no longer needed.</p>
<p>I would like to have a public hearing about this human waste matter in Morgan County at the Shepherd farm there are too many people against this.</p>	<p>The City of Madison has decided to withdraw their request to add the Shepherd Farm property as an approved site for land application of biosolids. The final permit has been revised and the Shepherd Farm property is no longer listed as an approved site. The site has been removed from the City's sludge management plan, therefore a public hearing on the matter is no longer needed.</p>
<p>Why take a chance with our ground water? What, just so Shepherd Farm can save a little money? No this must stop now.</p>	<p>The City of Madison has decided to withdraw their request to add the Shepherd Farm property as an approved site for land application of biosolids. The final permit has been revised and the Shepherd Farm property is no longer listed as an approved site.</p>

The recent request from the City of Madison to add an additional sludge field in RUTLEDGE, Morgan County should be subject to a public hearing due to the evolving wastewater sludge laws regarding PFAS contamination from land application. The recent 8/2024 “CRBI vs City of Calhoun” case from North Georgia is very relevant to wastewater biosolid applications across the State of Georgia.

Can Madison prove the wastewater sludge to be applied on Shepherd Property Field 1 (approximately 25.84 acres on Walter Shepherd Road, Rutledge, Georgia 30663) is PFAS free? The Calhoun case highlights the very recent changing rules from EPA (see attached). In addition, the runoff from the location at Walter Shepherd Rd, Rutledge would also be in proximity to numerous private wells, located on the County water recharge area and located in the center of two streams (Rawlings Branch and Rice Creek) which are tributaries to Big Indian Creek, a designated EPA “drinking water” designated waterway.

Considering the environmentally sensitive area around the proposed Rutledge field location (see attached), a RUTLEDGE public information session is warranted.

On a broader note, per the “Environmental Protection Agency (EPA), the greatest concern regarding a Biosolids Program, is the risk of exposure of chemicals found in biosolids, specifically PFOS and PFOA. The science and risks to hazardous PFOS and PFOA containment is still being studied and is ongoing. “. It is my understanding that GaEPD is awaiting new and finalized EPA regulations and standards. We clearly need more information. Is the wastewater sludge safe? A local public local hearing and/or pause on expanding permits is clearly warranted.

The City of Madison has decided to withdraw their request to add the Shepherd Farm property as an approved site for land application of biosolids. The final permit has been revised and the Shepherd Farm property is no longer listed as an approved site. The site has been removed from the City’s sludge management plan, therefore a public hearing on the matter is no longer needed.





**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT**

In accordance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the State Act; the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the Federal Act; and the Rules and Regulations promulgated pursuant to each of these Acts,

City of Madison  
Post Office Box 32  
Madison, Georgia 30650

is authorized to discharge from a facility located at

Southside Water Pollution Control Plant  
1612 Four Lakes Drive  
Madison, Georgia 30650  
(Morgan County)

to receiving waters

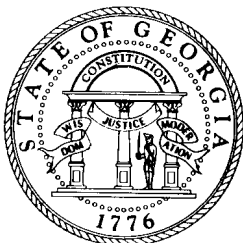
Horse Branch  
(Oconee River Basin)

in accordance with effluent limitations, monitoring requirements and other conditions set forth in the permit.

This permit is issued in reliance upon the permit application signed on April 2, 2022, any other applications upon which this permit is based, supporting data entered therein or attached thereto, and any subsequent submittal of supporting data.

This permit shall become effective on December 1, 2024.

This permit and the authorization to discharge shall expire at midnight, November 30, 2029.



*Jeffrey W. Cunn*

Director,  
Environmental Protection Division

## PART I

EPD is the Environmental Protection Division of the Department of Natural Resources.

The Federal Act referred to is The Clean Water Act.

The State Act referred to is The Water Quality Control Act (Act No. 870).

The State Rules referred to are The Rules and Regulations for Water Quality Control (Chapter 391-3-6).

### A. SPECIAL CONDITIONS

#### 1. SLUDGE DISPOSAL REQUIREMENTS

Sludge shall be disposed of according to the regulations and guidelines established by the EPD and the Federal Act section 405(d) and (e), and the Resource Conservation and Recovery Act (RCRA). In land applying nonhazardous municipal sewage sludge, the permittee shall comply with the general criteria outlined in the most current version of the EPD "Guidelines for Land Application of Sewage Sludge (Biosolids) at Agronomic Rates" and with the State Rules, Chapter 391-3-6-.17. Before disposing of municipal sewage sludge by land application or any method other than co-disposal in a permitted sanitary landfill, the permittee shall submit a sludge management plan to EPD for written approval. This plan will become a part of the NPDES Permit after approval and modification of the permit. The permittee shall notify the EPD of any changes planned in an approved sludge management plan.

If an applicable management practice or numerical limitation for pollutants in sewage sludge is promulgated under Section 405(d) of the Federal Act after approval of the plan, then the plan shall be modified to conform with the new regulations.

#### 2. SLUDGE MONITORING REQUIREMENTS

The permittee shall develop and implement procedures to ensure adequate year-round sludge disposal. The permittee shall monitor and maintain records documenting the quantity of sludge removed from the facility. Records shall be maintained documenting that the quantity of solids removed from the facility equals the solids generated on an average day. The total quantity of sludge removed from the facility during the reporting period shall be reported each month with the Discharge Monitoring Reports as required under Part I.D.1. of this permit. The quantity shall be reported on a dry weight basis (dry tons).

#### 3. INTRODUCTION OF POLLUTANTS INTO THE PUBLICLY OWNED TREATMENT WORKS (POTW)

The permittee must notify EPD of:

- a. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the Federal Act if the pollutants were directly discharged to a receiving stream; and

- b. Any substantial change in the volume or character of pollutants from a source that existed when the permit was issued.

This notice shall include information on the quality and quantity of the indirect discharge introduced and any anticipated impact on the quantity or quality of effluent to be discharged from the POTW.

#### 4. EFFLUENT TOXICITY AND BIOMONITORING REQUIREMENTS

The permittee shall comply with effluent standards or prohibitions established by section 307(a) of the Federal Act and with Chapter 391-3-6-.03(5)(e) of the State Rules and may not discharge toxic pollutants in concentrations or combinations that are harmful to humans, animals, or aquatic life.

If toxicity is suspected in the effluent, the EPD may require the permittee to perform any of the following actions:

- a. Acute biomonitoring tests;
- b. Chronic biomonitoring tests;
- c. Stream studies;
- d. Priority pollutant analyses;
- e. Toxicity reduction evaluations (TRE); or
- f. Any other appropriate study.

The EPD will specify the requirements and methodologies for performing any of these tests or studies. Unless other concentrations are specified by the EPD, the critical concentration used to determine toxicity in biomonitoring tests will be the effluent instream wastewater concentration (IWC) based on the permitted monthly average flow of the facility and the critical low flow of the receiving stream (7Q10). The endpoints that will be reported are the effluent concentration that is lethal to 50% of the test organisms (LC50) if the test is for acute toxicity and the no observed effect concentration (NOEC) of effluent if the test is for chronic toxicity.

The permittee must eliminate effluent toxicity and supply the EPD with data and evidence to confirm toxicity elimination.

B.1.a. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Discharge to Horse Branch - Outfall #001 (33.586556°, -84.448833°):

- i. The discharge from the water pollution control plant shall be limited and monitored by the permittee as specified below starting on the effective date of the permit and continuing for 36 months:

Parameters	Discharge limitations in mg/L (lbs/day) unless otherwise specified		Monitoring Requirements		
	Monthly Average	Weekly Average	Measurement Frequency	Sample Type	Sample Location
Flow (MGD)	0.66	0.83	Seven Days/Week	Continuous Recording	Effluent
Five-Day Biochemical Oxygen Demand <sup>(1)</sup>	25 (138)	37.5 (172)	Two Days/Week	Composite	Influent & Effluent
Total Suspended Solids <sup>(1)</sup>	20 (110)	30 (138)	Two Days/Week	Composite	Influent & Effluent
Ammonia, as N <sup>(2)(3)</sup>	2.5 (14)	3.8 (17)	Two Days/Week	Composite	Effluent
<i>E. coli</i> (counts/100 mL)	126	410	One Day/Week	Grab	Effluent

<sup>(1)</sup> Numeric limits only apply to the effluent.

<sup>(2)</sup> Ammonia, organic nitrogen, nitrate-nitrite, and total Kjeldahl nitrogen (TKN) must be analyzed or calculated from the same sample. Organic nitrogen, as N = TKN – ammonia, as N. Total nitrogen is the sum of all nitrogen and calculated as follows:  
TN = TKN + nitrite + nitrate.

(Effluent limitations continued on the next page)

B.1.a. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

(CONTINUED)

Discharge to Horse Branch - Outfall #001 (33.586556°, -84.448833°):

Parameters	Discharge limitations in mg/L unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Five-Day Biochemical Oxygen Demand Removal, Minimum (%) <sup>(1)</sup>	85	See Below	See Below	See Below
Total Suspended Solids Removal, Minimum (%) <sup>(1)</sup>	85	See Below	See Below	See Below
pH, Daily Minimum – Daily Maximum (Standard Unit)	6.0 – 8.5	Five Days/Week	Grab	Effluent
Total Residual Chlorine, Daily Maximum	0.013	Five Days/Week	Grab	Effluent
Dissolved Oxygen, Daily Minimum	6.0	Five Days/Week	Grab	Effluent
Total Phosphorus, as P <sup>(2) (3)</sup>	Report	One Day/Month	Composite	Effluent
Orthophosphate, as P <sup>(3)</sup>	Report	One Day/Month	Composite	Effluent
Organic Nitrogen, as N <sup>(4) (5)</sup>	Report	One Day/Month	Calculated	Effluent
Nitrate-Nitrite, as N <sup>(4) (5)</sup>	Report	One Day/Month	Composite	Effluent
Total Kjeldahl Nitrogen, as N <sup>(4) (5)</sup>	Report	One Day/Month	Composite	Effluent
Total Nitrogen, as N <sup>(4) (5)</sup>	Report	One Day/Month	Calculated	Effluent
Effluent Testing Data (Permit Reissuance) <sup>(6)</sup>	See Below	See Below	See Below	Effluent

<sup>(1)</sup> Percent removal shall be calculated from monthly average influent and effluent concentrations. Influent and effluent samples shall be collected at approximately the same time.

<sup>(2)</sup> Refer to Part I.C.10. TOTAL PHOSPHORUS COMPLIANCE SCHEDULE.

<sup>(3)</sup> Total phosphorus and orthophosphate must be analyzed from the same sample.

<sup>(4)</sup> Ammonia, organic nitrogen, nitrate-nitrite, and total Kjeldahl nitrogen (TKN) must be analyzed or calculated from the same sample. Organic nitrogen, as N = TKN – ammonia, as N. Total nitrogen is the sum of all nitrogen and calculated as follows: TN = TKN + nitrite + nitrate.

<sup>(5)</sup> Refer to Part I.C.11. COMPREHENSIVE NUTRIENT OPTIMIZATION PLAN.

<sup>(6)</sup> Refer to Part I.C.9. EFFLUENT TESTING DATA (PERMIT REISSUANCE).

- ii. The monthly average, other than for *E. coli*, is the arithmetic mean of values obtained for samples collected during a calendar month.
- iii. The weekly average, other than for *E. coli*, is the arithmetic mean of values obtained for samples collected during a 7-day period. The week begins 12:00 midnight Saturday and ends at 12:00 midnight the following Saturday. To define a different starting time for the sampling period, the permittee must notify the EPD in writing. For reporting required by Part I.D.1. of this permit, a week that starts in one month and ends in another month shall be considered part of the second month. The permittee may calculate and report the weekly average as a 7-day moving average.
- iv. *E. coli* will be reported as the geometric mean of the values for the samples collected during the time periods in I.B.1.a.ii. and I.B.1.a.iii.
- v. Influent monitoring: Unless otherwise specified, influent samples shall be collected before any return or recycle flows. These flows include returned activated sludge, supernatants, centrates, filtrates, and backwash.
- vi. Effluent monitoring: Unless otherwise specified, effluent samples shall be collected after the final treatment process and before discharge to receiving waters.
- vii. A composite sample shall consist of a minimum of 5 subsamples collected at least once every 2 hours for at least 8 hours and shall be composited proportionately to flow.
- viii. Flow measurements shall be conducted using the flow measuring device(s) in accordance with the approved design of the facility. If instantaneous measurements are required, then the permittee shall have a primary flow measuring device that is correctly installed and maintained. If continuous recording measurements are required, then flow measurements must be made using continuous recording equipment. Calibration shall be maintained of the continuous recording instrumentation to  $\pm 10\%$  of the actual flow.

Flow shall be measured manually to check the flow meter calibration at a frequency of once a month. If secondary flow instruments are in use and malfunction or fail to maintain calibration as required, the flow shall be computed from manual measurements or by other method(s) approved by EPD until such time as the secondary flow instrument is repaired. For facilities which utilize alternate technologies for measuring flow, the flow measurement device must be calibrated semi-annually by qualified personnel.

Records of the calibration checks shall be maintained.

- ix. If secondary flow instruments malfunction or fail to maintain calibration as required in I.B.1.a.viii., the flow shall be computed from manual measurements taken at the times specified for the collection of composite samples.
- x. Some parameters will be reported as "not detected" when they are below the detection limit and will then be considered in compliance with the effluent limit. The detection limit will also be reported.

B.1.b. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Discharge to Horse Branch - Outfall #001 (33.586556°, -84.448833°):

- i. The discharge from the water pollution control plant shall be limited and monitored by the permittee as specified below starting 36 months after the effective date of the permit:

Parameters	Discharge limitations in mg/L (lbs/day) unless otherwise specified		Monitoring Requirements		
	Monthly Average	Weekly Average	Measurement Frequency	Sample Type	Sample Location
Flow (MGD)	0.66	0.83	Seven Days/Week	Continuous Recording	Effluent
Five-Day Biochemical Oxygen Demand <sup>(1)</sup>	25 (138)	37.5 (172)	Two Days/Week	Composite	Influent & Effluent
Total Suspended Solids <sup>(1)</sup>	20 (110)	30 (138)	Two Days/Week	Composite	Influent & Effluent
Ammonia, as N <sup>(2)</sup>	2.5 (14)	3.8 (17)	Two Days/Week	Composite	Effluent
Total Phosphorus, as P <sup>(3)(4)</sup>	0.76 (4.2)	1.1 (5.2)	Two Days/Week	Composite	Effluent
<i>E. coli</i> (counts/100 mL)	126	410	One Day/Week	Grab	Effluent

<sup>(1)</sup> Numeric limits only apply to the effluent.

<sup>(2)</sup> Ammonia, organic nitrogen, nitrate-nitrite, and total Kjeldahl nitrogen (TKN) must be analyzed or calculated from the same sample. Organic nitrogen, as N = TKN – ammonia, as N. Total nitrogen is the sum of all nitrogen and calculated as follows:  
TN = TKN + nitrite + nitrate.

<sup>(3)</sup> Total phosphorus and orthophosphate must be analyzed from the same sample.

<sup>(4)</sup> Refer to Part I.C.10. TOTAL PHOSPHORUS COMPLIANCE SCHEDULE.

(Effluent limitations continued on the next page)

B.1.b. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

(CONTINUED)

Discharge to Horse Branch - Outfall #001 (33.586556°, -84.448833°):

Parameters	Discharge limitations in mg/L unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Five-Day Biochemical Oxygen Demand Removal, Minimum (%) <sup>(1)</sup>	85	See Below	See Below	See Below
Total Suspended Solids Removal, Minimum (%) <sup>(1)</sup>	85	See Below	See Below	See Below
pH, Daily Minimum – Daily Maximum (Standard Unit)	6.0 – 8.5	Five Days/Week	Grab	Effluent
Total Residual Chlorine, Daily Maximum	0.013	Five Days/Week	Grab	Effluent
Dissolved Oxygen, Daily Minimum	6.0	Five Days/Week	Grab	Effluent
Orthophosphate, as P <sup>(2)</sup>	Report	One Day/Month	Composite	Effluent
Organic Nitrogen, as N <sup>(3)(4)</sup>	Report	One Day/Month	Calculated	Effluent
Nitrate-Nitrite, as N <sup>(3)(4)</sup>	Report	One Day/Month	Composite	Effluent
Total Kjeldahl Nitrogen, as N <sup>(3)(4)</sup>	Report	One Day/Month	Composite	Effluent
Total Nitrogen, as N <sup>(3)(4)</sup>	Report	One Day/Month	Calculated	Effluent
Effluent Testing Data (Permit Reissuance) <sup>(5)</sup>	See Below	See Below	See Below	Effluent

<sup>(1)</sup> Percent removal shall be calculated from monthly average influent and effluent concentrations. Influent and effluent samples shall be collected at approximately the same time.

<sup>(2)</sup> Total phosphorus and orthophosphate must be analyzed from the same sample.

<sup>(3)</sup> Ammonia, organic nitrogen, nitrate-nitrite, and total Kjeldahl nitrogen (TKN) must be analyzed or calculated from the same sample. Organic nitrogen, as N = TKN – ammonia, as N. Total nitrogen is the sum of all nitrogen and calculated as follows: TN = TKN + nitrite + nitrate.

<sup>(4)</sup> Refer to Part I.C.11. COMPREHENSIVE NUTRIENT OPTIMIZATION PLAN.

<sup>(5)</sup> Refer to Part I.C.9. EFFLUENT TESTING DATA (PERMIT REISSUANCE).



- ii. The monthly average, other than for *E. coli*, is the arithmetic mean of values obtained for samples collected during a calendar month.
- iii. The weekly average, other than for *E. coli*, is the arithmetic mean of values obtained for samples collected during a 7-day period. The week begins 12:00 midnight Saturday and ends at 12:00 midnight the following Saturday. To define a different starting time for the sampling period, the permittee must notify the EPD in writing. For reporting required by Part I.D.1. of this permit, a week that starts in one month and ends in another month shall be considered part of the second month. The permittee may calculate and report the weekly average as a 7-day moving average.
- iv. *E. coli* will be reported as the geometric mean of the values for the samples collected during the time periods in I.B.1.b.ii. and I.B.1.b.iii.
- v. Influent monitoring: Unless otherwise specified, influent samples shall be collected before any return or recycle flows. These flows include returned activated sludge, supernatants, centrates, filtrates, and backwash.
- vi. Effluent monitoring: Unless otherwise specified, effluent samples shall be collected after the final treatment process and before discharge to receiving waters.
- vii. A composite sample shall consist of a minimum of 5 subsamples collected at least once every 2 hours for at least 8 hours and shall be composited proportionately to flow.
- viii. Flow measurements shall be conducted using the flow measuring device(s) in accordance with the approved design of the facility. If instantaneous measurements are required, then the permittee shall have a primary flow measuring device that is correctly installed and maintained. If continuous recording measurements are required, then flow measurements must be made using continuous recording equipment. Calibration shall be maintained of the continuous recording instrumentation to  $\pm 10\%$  of the actual flow.

Flow shall be measured manually to check the flow meter calibration at a frequency of once a month. If secondary flow instruments are in use and malfunction or fail to maintain calibration as required, the flow shall be computed from manual measurements or by other method(s) approved by EPD until such time as the secondary flow instrument is repaired. For facilities which utilize alternate technologies for measuring flow, the flow measurement device must be calibrated semi-annually by qualified personnel.

Records of the calibration checks shall be maintained.

- ix. If secondary flow instruments malfunction or fail to maintain calibration as required in I.B.1.b.viii., the flow shall be computed from manual measurements taken at the times specified for the collection of composite samples.
- x. Some parameters will be reported as "not detected" when they are below the detection limit and will then be considered in compliance with the effluent limit. The detection limit will also be reported.

C. MONITORING AND REPORTING

1. REPRESENTATIVE SAMPLING

Samples and measurements of the monitored waste shall represent the volume and nature of the waste stream. The permittee shall maintain a written sampling and monitoring schedule.

2. SAMPLING PERIOD

- a. Unless otherwise specified in this permit, quarterly samples shall be taken during the periods January-March, April-June, July-September, and October-December.
- b. Unless otherwise specified in this permit, semiannual samples shall be taken during the periods January-June and July-December.
- c. Unless otherwise specified in this permit, annual samples shall be taken during the period of January-December.

3. MONITORING PROCEDURES

All analytical methods, sample containers, sample preservation techniques, and sample holding times must be consistent with the techniques and methods listed in 40 CFR Part 136. The analytical method used shall be sufficiently sensitive. EPA-approved methods must be applicable to the concentration ranges of the NPDES permit samples.

4. RECORDING OF RESULTS

For each required parameter analyzed, the permittee shall record:

- a. The exact place, date, and time of sampling, and the person(s) collecting the sample. For flow proportioned composite samples, this shall include the instantaneous flow and the corresponding volume of each sample aliquot, and other information relevant to document flow proportioning of composite samples;
- b. The dates and times the analyses were performed;
- c. The person(s) who performed the analyses;
- d. The analytical procedures or methods used; and
- e. The results of all required analyses.

5. ADDITIONAL MONITORING BY PERMITTEE

If the permittee monitors required parameters at the locations designated in I.B. more frequently than required, the permittee shall analyze all samples using approved analytical methods specified in I.C.3. The results of this additional monitoring shall be included in calculating and reporting the values on the Discharge Monitoring Report forms. The permittee shall indicate the monitoring frequency on the report. The EPD may require in writing more frequent monitoring, or monitoring of other pollutants not specified in this permit.

6. RECORDS RETENTION

The permittee shall retain records of:

- a. All laboratory analyses performed including sample data, quality control data, and standard curves;
- b. Calibration and maintenance records of laboratory instruments;
- c. Calibration and maintenance records and recordings from continuous recording instruments;
- d. Process control monitoring records;
- e. Facility operation and maintenance records;
- f. Copies of all reports required by this permit;
- g. All data and information used to complete the permit application; and
- h. All monitoring data related to sludge use and disposal.

These records shall be kept for at least three years. Sludge handling records must be kept for at least five years. Either period may be extended by EPD written notification.

7. PENALTIES

Both the Federal and State Acts provide that any person who falsifies or tampers with any monitoring device or method required under this permit, or who makes any false statement, representation, or certification in any record submitted or required by this permit shall, if convicted, be punished by a fine or by imprisonment or by both. The Acts include procedures for imposing civil penalties for violations or for negligent or intentional failure or refusal to comply with any final or emergency order of the Director of the EPD.

8. WATERSHED PROTECTION PLAN

The permittee has a Watershed Protection Plan that has been approved by EPD. The permittee's approved Watershed Protection Plan shall be enforceable through this permit.

- a. The Watershed Protection Plan provides for the following:
  - i. The Watershed Protection Plan applies to all basins and subbasins that are served by the facility. The plan utilizes the information generated in the permittee's watershed assessment to establish a baseline of watershed conditions and to provide ongoing long-term monitoring according to the approved plan to either verify that the plan is effective or to modify the plan such that water quality standards will be achieved.
  - ii. The Watershed Protection Plan includes a schedule for correcting current water quality problems that are causing water quality standards violations. The permittee provides ongoing monitoring to verify that the actions taken to correct the water quality problems are effective.
  - iii. The permittee has developed and put in place best management practices (BMPs) to prevent future water quality standards violations.
  - iv. The permittee provides ongoing monitoring to verify that the BMPs are working or to provide the information necessary to modify the BMPs to achieve water quality standards.
- b. Each June 30<sup>th</sup> the permittee is to submit the following to EPD:
  - i. An annual certification statement documenting that the plan is being implemented as approved. The certification statement shall read as follows: "I certify, under penalty of law, that the Watershed Protection Plan is being implemented. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."
  - ii. All Watershed Plan data collected during the previous year in an electronic format. This data shall be archived using a digital format such as a spreadsheet developed in coordination with EPD. All archived records, data, and information pertaining to the Watershed Protection Plan shall be maintained permanently.
  - iii. A progress report that provides a summary of the BMPs that have been implemented and documented water quality improvements. The progress report shall also include any necessary changes to the Watershed Protection Plan.

The report and other information shall be submitted to EPD at the address below:

Environmental Protection Division  
Watershed Planning and Monitoring Program  
2 Martin Luther King Jr. Drive SE  
Suite 1462 East  
Atlanta, Georgia 30334

9. EFFLUENT TESTING DATA (PERMIT REISSUANCE)

The application for the next permit renewal may include effluent data requirements for parameters that are not currently included in this NPDES permit, such as:

1. Oil and grease
2. Total dissolved solids
3. Temperature
4. Metals, Cyanide, and Total Phenols (Mercury must be analyzed using EPA Method 1631E)
5. Volatiles Organic Compounds
6. Acid Extractable Compounds
7. Base-Neutral Compounds
8. Etc.

A complete list of effluent parameters needed for the next permit reissuance can be found in EPA NPDES Application Form 2A. The latest version of EPA application form may be available at the following link:

<https://www.epa.gov/npdes/npdes-application-forms>

For parameters not included in this permit, test results from at least 3 samples must be summarized in the application (average and maximum). The data must be no more than 4.5-year-old at the time the renewal application is submitted.

For parameters included in this permit, test results from the last 12 months must be summarized in the application (average and maximum).

In the event the permittee chooses not to reapply for coverage under this permit, this effluent testing requirement does not apply.

10. TOTAL PHOSPHORUS COMPLIANCE SCHEDULE

The permittee shall comply with the total phosphorus effluent limitations in Part I.B.1.b. of this permit in accordance with the following schedule:

- a. Within 9 months of the effective date of the permit, the permittee shall submit an environmental information document (EID) and a design development report (DDR) to EPD for any modifications needed at the facility that will allow the facility to meet the total phosphorus effluent limitations in Part I.B.1.b. of this permit.

- b. Within 15 months of the effective date of the permit, the permittee shall submit plans and specifications for any modifications needed at the facility that will allow it to meet the total phosphorus effluent limitations in Part I.B.1.b. of this permit.
- c. Within 24 months of the effective date of the permit, the permittee shall submit a report to EPD that outlines the progress towards completing construction of the treatment process modifications. The report shall include an estimate of what percentage of the construction is complete and is to describe what work remains to be completed in order to meet the total phosphorus effluent limitations in Part I.B.1.b. of this permit.
- d. Within 30 months of the effective date of the permit, the permittee shall submit a report to EPD that outlines the progress towards completing construction of the treatment process modifications. The report shall include an estimate of what percentage of the construction is complete and is to describe what work remains to be completed in order to meet the total phosphorus effluent limitations in Part I.B.1.b. of this permit.
- e. Within 36 months of the effective date of the permit, the permittee shall comply with the total phosphorus effluent limitations in Part I.B.1.b. of this permit.

If at any time during the compliance schedule the permittee believes that the facility will be able to consistently meet the total phosphorus effluent limitations without having to make any plant modifications, then the permittee may choose to write a letter to EPD stating this. The letter needs to include data supporting the permittee's position. Upon written notification by EPD, the permittee may be excused from completing any remaining items in the above compliance schedule. However, the permittee will also be subject to the total phosphorus effluent limitations from the date of EPD's letter and any future exceedance of those effluent limitations in Part I.B.1.b. will be considered to be a permit violation. If the permittee does not receive written notification from EPD releasing it from the compliance schedule, then the permittee is required to complete all items in the schedule by the dates indicated and will be required to attain compliance with the total phosphorus effluent limitations in Part I.B.1.b. within 36 months of the effective date of the permit.

All correspondences and documents shall be submitted to EPD at the address below:

Environmental Protection Division  
Wastewater Regulatory Program  
2 Martin Luther King Jr. Drive SE  
Suite 1462 East  
Atlanta, Georgia 30334

11. COMPREHENSIVE NUTRIENT OPTIMIZATION PLAN

- a. Within 24 months of the effective date of this permit, the Permittee shall develop and submit to EPD a Comprehensive Nutrient Optimization Plan (CNOP). Wastewater treatment efficiency optimization is an adaptive management strategy the Permittee shall use to limit the discharge of total nitrogen. The CNOP will include a suite of site specific best management practices. The CNOP shall, at a minimum, identify and quantify sources of nutrients entering the wastewater treatment plant, evaluate potential source reductions, identify and implement operational adjustments aimed to reduce nutrients, and establish annual nutrient reduction goals. The CNOP shall be updated annually and retained on site. Prior to the submittal of the CNOP, the permittee will submit semi-annual progress reports detailing the status of the development and implementation of the CNOP to the assigned EPD Compliance Office.
- b. Annual Report: Each June 30<sup>th</sup> the permittee is to submit the following to EPD:
  - i. An annual certification statement documenting that the CNOP is being implemented. The certification statement and signatory requirements shall comply with Part I.D.5 in this permit.
  - ii. A detailed progress report that provides a summary of the reduction goals and numeric targets developed for the previous year and discussion of how the goals and targets were achieved, BMPs that have been implemented, new reduction goals and targets for the following year. The progress report shall also include any necessary changes made to CNOP.
- c. Once EPD has completed the statewide Nutrient Permitting Strategy, EPD may reopen this permit to include numeric or narrative effluent limits for nutrients.

D. REPORTING REQUIREMENTS

1. The permittee must electronically report the DMR, OMR and additional monitoring data using the web based electronic NetDMR reporting system, unless a waiver is granted by EPD.
  - a. The permittee must comply with the Federal National Pollutant Discharge Elimination System Electronic Reporting regulations in 40 CFR §127. The permittee must electronically report the DMR, OMR, and additional monitoring data using the web based electronic NetDMR reporting system online at: <https://npdes-ereporting.epa.gov/net-netdmr>
  - b. Monitoring results obtained during the calendar month shall be summarized for each month and reported on the DMR. The results of each sampling event shall be reported on the OMR and submitted as an attachment to the DMR.
  - c. The permittee shall submit the DMR, OMR and additional monitoring data no later than 11:59 p.m. on the 15<sup>th</sup> day of the month following the sampling period.

- d. All other reports required herein, unless otherwise stated, shall be submitted to the EPD Office listed on the permit issuance letter signed by the Director of EPD.
- 2. **No later than December 21, 2025,** the permittee must electronically report the following compliance monitoring data and reports using the online web based electronic system approved by EPD, unless a waiver is granted by EPD:
  - a. Sewage Sludge/Biosolids Annual Program Reports provided that the permittee has an approved Sewage Sludge (Biosolids) Plan;
  - b. Pretreatment Program Reports provided that the permittee has an approved Industrial Pretreatment Program in this permit;
  - c. Sewer Overflow/Bypass Event Reports;
  - d. Noncompliance Notification;
  - e. Other noncompliance; and
  - f. Bypass

3. OTHER REPORTS

All other reports required in this permit not listed above in Part I.D.2 or unless otherwise stated, shall be submitted to the EPD Office listed on the permit issuance letter signed by the Director of EPD.

4. OTHER NONCOMPLIANCE

All instances of noncompliance not reported under Part I.B. and Part II. A. shall be reported to EPD at the time the monitoring report is submitted.

5. SIGNATORY REQUIREMENTS

All reports, certifications, data or information submitted in compliance with this permit or requested by EPD must be signed and certified as follows:

- a. Any State or NPDES Permit Application form submitted to the EPD shall be signed as follows in accordance with the Federal Regulations, 40 C.F.R. 122.22:
  - 1. For a corporation, by a responsible corporate officer. A responsible corporate officer means:
    - i. a president, secretary, treasurer, or vice president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision making functions for the corporation, or



- ii. the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
  - 2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
  - 3. For a municipality, State, Federal, or other public facility, by either a principal executive officer or ranking elected official.
- b. All other reports or requests for information required by the permit issuing authority shall be signed by a person designated in (a) above or a duly authorized representative of such person, if:
- 1. The representative so authorized is responsible for the overall operation of the facility from which the discharge originates, e.g., a plant manager, superintendent or person of equivalent responsibility;
  - 2. The authorization is made in writing by the person designated under (a) above; and
  - 3. The written authorization is submitted to the Director.
- c. Any changes in written authorization submitted to the permitting authority under (b) above which occur after the issuance of a permit shall be reported to the permitting authority by submitting a copy of a new written authorization which meets the requirements of (b) and (b.1) and (b.2) above.
- d. Any person signing any document under (a) or (b) above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

## **PART II**

### **A. MANAGEMENT REQUIREMENTS**

#### **1. PROPER OPERATION AND MAINTENANCE**

The permittee shall properly maintain and operate efficiently all treatment or control facilities and related equipment installed or used by the permittee to achieve compliance with this permit. Efficient operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. Back-up or auxiliary facilities or similar systems shall be operated only when necessary to achieve permit compliance.

#### **2. PLANNED CHANGE**

Any anticipated facility expansions, or process modifications which will result in new, different, or increased discharges of pollutants requires the submission of a new NPDES permit application. If the changes will not violate the permit effluent limitations, the permittee may notify EPD without submitting an application. The permit may then be modified to specify and limit any pollutants not previously limited.

#### **3. TWENTY-FOUR HOUR REPORTING**

If, for any reason the permittee does not comply with, or will be unable to comply with any effluent limitations specified in the permittee's NPDES permit, the permittee shall provide EPD with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

- a. A description of the noncompliance and its cause; and
- b. The period of noncompliance, including the exact date and times; or, if not corrected, the anticipated time the noncompliance is expected to continue; and
- c. The steps taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

#### **4. ANTICIPATED NONCOMPLIANCE NOTIFICATION**

The permittee shall give written notice to the EPD at least 10 days before:

- a. Any planned changes in the permitted facility; or
- b. Any activity which may result in noncompliance with the permit.

5. OTHER NONCOMPLIANCE

The permittee must report all instances of noncompliance not reported under other specific reporting requirements, at the time monitoring reports are submitted. The reports shall contain the information required under conditions of twenty-four hour reporting.

6. OPERATOR CERTIFICATION REQUIREMENTS

The person responsible for the daily operation of the facility must be a Class III Certified Operator in compliance with the Georgia State Board of Examiners for Certification of Water and Wastewater Plant Operators and Laboratory Analysts Act, as amended, and as specified by Subparagraph 391-3-6-.12 of the Rules and Regulations for Water Quality Control. All other operators must have the minimum certification required by this Act.

7. LABORATORY ANALYST CERTIFICATION REQUIREMENTS

Laboratory Analysts must be certified in compliance with the Georgia State Board of Examiners for Certification of Water and Wastewater Treatment Plant Operators and Laboratory Analysts Act, as amended.

8. BYPASSING

Any diversion of wastewater from or bypassing of wastewater around the permitted treatment works is prohibited, except if:

- a. Bypassing is unavoidable to prevent loss of life, personal injury, or severe property damage;
- b. There are no feasible alternatives to bypassing; and
- c. The permittee notifies the EPD at least 10 days before the date of the bypass.

Feasible alternatives to bypassing include use of auxiliary treatment facilities and retention of untreated waste. The permittee must take all possible measures to prevent bypassing during routine preventative maintenance by installing adequate back-up equipment.

The permittee shall operate the facility and the sewer system to minimize discharge of pollutants from combined sewer overflows or bypasses and may be required by the EPD to submit a plan and schedule to reduce bypasses, overflows, and infiltration.

Any unplanned bypass must be reported following the requirements for noncompliance notification specified in II.A.3. The permittee may be liable for any water quality violations that occur as a result of bypassing the facility.

9. POWER FAILURES

If the primary source of power to this water pollution control facility is reduced or lost, the permittee shall use an alternative source of power to reduce or control all discharges to maintain permit compliance.

10. DUTY TO MITIGATE

The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge disposal which might adversely affect human health or the environment.

11. NOTICE CONCERNING ENDANGERING WATERS OF THE STATE

Whenever, because of an accident or otherwise, any toxic or taste and color producing substance, or any other substance which would endanger downstream users of the waters of the State or would damage property, is discharged into such waters, or is so placed that it might flow, be washed, or fall into them, it shall be the duty of the person in charge of such substances at the time to forthwith notify EPD in person or by telephone of the location and nature of the danger, and it shall be such person's further duty to immediately take all reasonable and necessary steps to prevent injury to property and downstream users of said water.

Spills and Major Spills:

A "spill" is any discharge of raw sewage by a Publicly Owned Treatment Works (POTW) to the waters of the State.

A "major spill" means:

1. The discharge of pollutants into waters of the State by a POTW that exceeds the weekly average permitted effluent limit for biochemical oxygen demand (5-day) or total suspended solids by 50 percent or greater in one day, provided that the effluent discharge concentration is equal to or greater than 25 mg/L for biochemical oxygen demand or total suspended solids.
2. Any discharge of raw sewage that 1) exceeds 10,000 gallons or 2) results in water quality violations in the waters of the State.

"Consistently exceeding effluent limitation" means a POTW exceeding the 30 day average limit for biochemical oxygen demand or total suspended solids for at least five days out of each seven day period during a total period of 180 consecutive days.

The following specific requirements shall apply to POTW's. If a spill or major spill occurs, the owner of a POTW shall immediately:

- a. Notify EPD, in person or by telephone, when a spill or major spill occurs in the system.
- b. Report the incident to the local health department(s) for the area affected by the incident. The report at a minimum shall include the following:

- i. Date of the spill or major spill;
  - ii. Location and cause of the spill or major spill;
  - iii. Estimated volume discharged and name of receiving waters; and
  - iv. Corrective action taken to mitigate or reduce the adverse effects of the spill or major spill.
- c. Post a notice as close as possible to where the spill or major spill occurred and where the spill entered State waters and also post additional notices along portions of the waterway affected by the incident (i.e. bridge crossings, boat ramps, recreational areas, and other points of public access to the affected waterway). The notice at a minimum shall include the same information required in 11(b)(1-4) above. These notices shall remain in place for a minimum of seven days after the spill or major spill has ceased.
- d. Within 24 hours of becoming aware of a spill or major spill, the owner of a POTW shall report the incident to the local media (television, radio, and print media). The report shall include the same information required in 11(b)(1-4) above.
- e. Within 5 days (of the date of the spill or major spill), the owner of a POTW shall submit to EPD a written report which includes the same information required in 11(b)(1-4) above.
- f. Within 7 days (after the date of a major spill), the owner of a POTW responsible for the major spill, shall publish a notice in the largest legal organ of the County where the incident occurred. The notice shall include the same information required in 11(b)(1-4) above.
- g. The owner of a POTW shall immediately establish a monitoring program of the receiving waters affected by a major spill or by consistently exceeding an effluent limit, with such monitoring being at the expense of the POTW for at least one year. The monitoring program shall include an upstream sampling point as well as sufficient downstream locations to accurately characterize the impact of the major spill or the consistent exceedence of effluent limitations described in the definition of “Consistently exceeding effluent limitation” above. As a minimum, the following parameters shall be monitored in the receiving stream:
  - i. Dissolved Oxygen;
  - ii. Bacteria;
  - iii. pH;
  - iv. Temperature; and
  - v. Other parameters required by the EPD.

The monitoring and reporting frequency as well as the need to monitor additional parameters, will be determined by EPD. The results of the monitoring will be provided by the POTW owner to EPD and all downstream public agencies using the affected waters as a source of a public water supply.

- h. Within 24 hours of becoming aware of a major spill, the owner of a POTW shall provide notice of a major spill to every county, municipality, or other public agency whose public water supply is within a distance of 20 miles downstream and to any others which could be potentially affected by the major spill.

12. UPSET PROVISION

Provision under 40 CFR 122.41(n)(1)-(4), regarding “Upset” shall be applicable to any civil, criminal, or administrative proceeding brought to enforce this permit.

B. RESPONSIBILITIES

1. DUTY TO COMPLY

The permittee must comply with all conditions of this permit. Any permit noncompliance is a violation of the Federal Clean Water Act, State Act, and the State Rules, and is grounds for:

- a. Enforcement action;
- b. Permit termination, revocation and reissuance, or modification; or
- c. Denial of a permit renewal application.

2. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

It shall not be a defense of the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the conditions of this permit.

3. INSPECTION AND ENTRY

The permittee shall allow the Director of the EPD, the Regional Administrator of EPA, and their authorized representatives, agents, or employees after they present credentials to:

- a. Enter the permittee's premises where a regulated activity or facility is located, or where any records required by this permit are kept;
- b. Review and copy any records required by this permit;
- c. Inspect any facilities, equipment, practices, or operations regulated or required by this permit; and
- d. Sample any substance or parameter at any location.

4. DUTY TO PROVIDE INFORMATION

The permittee shall furnish any information required by the EPD to determine whether cause exists to modify, revoke and reissue, or terminate this permit or to determine compliance with this permit. The permittee shall also furnish the EPD with requested copies of records required by this permit.

5. TRANSFER OF OWNERSHIP

A permit may be transferred to another person by a permittee if:

- a. The permittee notifies the Director in writing at least 30 days in advance of the proposed transfer;
- b. An agreement is written containing a specific date for transfer of permit responsibility including acknowledgment that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on. This agreement must be submitted to the Director at least 30 days in advance of the proposed transfer; and
- c. The Director does not notify the current permittee and the new permittee within 30 days of EPD intent to modify, revoke and reissue, or terminate the permit. The Director may require that a new application be filed instead of agreeing to the transfer of the permit.

6. AVAILABILITY OF REPORTS

Except for data determined to be confidential by the Director of EPD under O.C.G.A. 12-5-26 or by the Regional Administrator of EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared to comply with this permit shall be available for public inspection at an EPD office. Effluent data, permit applications, permittees' names and addresses, and permits shall not be considered confidential.

7. PERMIT ACTIONS

This permit may be modified, terminated, or revoked and reissued in whole or in part during its term for causes including, but not limited to:

- a. Permit violations;
- b. Obtaining this permit by misrepresentation or by failure to disclose all relevant facts;
- c. Changing any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;
- d. Changes in effluent characteristics; and
- e. Violations of water quality standards.

The filing of a request by the permittee for permit modification, termination, revocation and reissuance, or notification of planned changes or anticipated noncompliance does not negate any permit condition.

8. CIVIL AND CRIMINAL LIABILITY

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

9. PROPERTY RIGHTS

The issuance of this permit does not convey any property rights of either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, or any infringement of Federal, State or local laws or regulations.

10. DUTY TO REAPPLY

The permittee shall submit an application for permit reissuance at least 180 days before the expiration date of this permit. The permittee shall not discharge after the permit expiration date. To receive authorization to discharge beyond the expiration date, the permittee shall submit the information, forms, and fees required by the EPD no later than 180 days before the expiration date.

11. CONTESTED HEARINGS

Any person aggrieved or adversely affected by any action of the Director of the EPD shall petition the Director for a hearing within 30 days of notice of the action.

12. SEVERABILITY

The provisions of this permit are severable. If any permit provision or the application of any permit provision to any circumstance is held invalid, the provision does not affect other circumstances or the remainder of this permit.

13. OTHER INFORMATION

Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report form to the Director, it shall promptly submit such facts or information.

14. PREVIOUS PERMITS

All previous State wastewater permits issued to this facility, whether for construction or operation, are hereby revoked on the effective date of this permit. This action is taken to assure compliance with the Georgia Water Quality Control Act, as amended, and the Federal Clean Water Act, as amended. Receipt of the permit constitutes notice of such action. The conditions, requirements, terms and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System govern discharges from this facility.



### **PART III**

#### **INDUSTRIAL PRETREATMENT PROGRAM FOR PUBLICLY OWNED TREATMENT WORKS (POTW)**

1. The permittee may establish and operate an approved industrial pretreatment program.
2. If the EPD determines that the permittee is required to develop a local industrial pretreatment program, the permittee will be notified in writing. The permittee shall immediately begin development of an industrial pretreatment program and shall submit it to the EPD for approval no later than one year after the notification.
3. During the interim period between determination that a program is needed and approval of the program, all industrial pretreatment permits shall be issued by the EPD.
4. The permittee shall notify the EPD of all industrial users connected to the system or proposing to connect to the system from the date of issuance of this permit.
5. Implementation of the Pretreatment Program developed by the State can be delegated to the permittee following the fulfillment of requirements detailed in 391-3-6-.09 of the Rules and Regulations for Water Quality Control.

## PART IV

### APPROVED SLUDGE MANAGEMENT PLAN

1. The permittee's approved Sludge Management Plan (SMP) was developed and shall be implemented in accordance with Chapter 391-3-6-.17 of the State Rules, EPD's "*Guidelines for Land Application of Sewage Sludge (Biosolids) at Agronomic Rates*", June 2006 as amended and the site-specific requirements in the approved SMP, as amended unless a more stringent requirement is stated in this Permit, and shall be enforceable through this Permit.
2. The permittee will submit an annual report pertaining to the most recent calendar year, as required under Chapter 391-3-6-.17(14) of the State Rules. The annual report shall be submitted to EPD no later than February 19<sup>th</sup> of the following year.
3. The permittee will maintain records of the amount of sludge land applied to each site, at a minimum for 5 (five) years as required in Chapter 391-3-6-.17(13) of the State Rules. The amount of sludge land applied during each calendar year will be reported in the annual report in units of dry tons per year.
4. The permittee will monitor in accordance with the following requirements and provide the information as prescribed in the Permit and State Rules:
  - a. The pH of the sludge and soil mixture from each field within each land application site will be measured once per year. The sample will be a separate, composite sample of each soil type present and will be representative of field conditions.
  - b. The sewage sludge shall be monitored for the following parameters at the frequencies specified in Part IV.A.5 of this permit:

Parameter	Units <sup>(1), (2)</sup>
Total nitrogen	Percent
Ammonia-nitrogen	Percent
Nitrate-nitrogen	Percent
Volatile solids	Percent
Total solids	Percent
pH	Standard units
Arsenic	mg/kg
Cadmium	mg/kg
Copper	mg/kg
Lead	mg/kg
Mercury	mg/kg
Molybdenum	mg/kg
Nickel	mg/kg
Selenium	mg/kg
Zinc	mg/kg

- (1) Units must be reported on a dry weight basis with the exception of pH.  
(2) Pollutants shall meet applicable limits in Chapter 391-3-6.17(5)

- c. The pathogen density requirements and specific criteria listed in Chapter 391-3-6-.17(7) of the State Rules shall be monitored at the frequency listed in Part IV.A.5 of this permit.
  - d. The vector attraction reduction requirements and specific criteria, referenced in the approved SMP, listed in Chapter 391-3-6-.17(8)(a) through (8)(h) of the State Rules shall be monitored at the frequency listed in Part IV.A.5 of this permit.
5. The permittee will monitor the sewage sludge as required in Chapter 391-3-6.17(11)(a) of the State Rules at the below frequencies:

<u>Amount of Sewage Sludge<sup>1</sup> (dry tons/year)</u>	<u>Frequency</u>
0-300	Once/year
300-1,600	Once/quarter
1,600-16,000	Once/two months
>16,000	Once/month

<sup>1</sup>The amount of sewage sludge refers to either the amount of bulk sewage sludge (dry weight) applied to the land or the amount of sewage sludge (dry weight) received by a preparer that sells or otherwise distributes sewage sludge in a bag or other container for application to the land.

6. In accordance with Chapter 391-3-6-.17(12) of the State Rules, sewage sludge samples shall be analyzed using EPA approved methods contained in 40 CFR Part 503.8.
7. A proposed addition or removal of land application site(s) will be subject to EPD's review and approval process as outlined in the *Guidelines for Land Application of Sewage Sludge (Biosolids) at Agronomic Rates*, June 2006 as amended and in accordance with the State Rules. Upon approval of the SMP or an amendment of a SMP and the corresponding modification of the permit by the Director, the permittee may start land applying treated sewage sludge on the proposed sites.

8. The following table only reflects the sites approved during this permit issuance and or permit modification:

Site or Property Name	Site Address	Field ID	Usable Acreage (acres)	Site Coordinates (approximate centroid of field)	Crop(s)	Ungrazed Application Rate <sup>(1)</sup> (dry tons /acre/year)	Grazed Application Rate <sup>(1)</sup> (dry tons /acre/year)	Approval Date <sup>(2)</sup>
Cunningham Property	3120 Greensboro Rd, Madison, GA 30650	Field 1	12.55	33.610554, -83.387222	Bermuda	17.4	13.0	Permit effective date

- (1) The application rate(s) listed in the above table is the maximum application rate that can be applied during the first year. The application rate(s) will be adjusted annually by the permittee based upon the sludge analysis, updated soil analysis, crop(s) and any additions to the site such as fertilizers or soil amendments.
- (2) The site approval date is the permit effective date. The permittee may begin land applying treated sewage sludge in accordance with the State Rules and approved SMP on or after the effective date of the permit or permit modification.
- a. The sludge application shall be in accordance with EPD's *Guidelines for Land Application of Sewage Sludge (Biosolids) at Agronomic Rates*, June 2006 as amended and the approved SMP, as amended, unless a more stringent requirement is stated in this document or is required by federal regulations.
  - b. For slopes of 6-12%, liquid sludge must be incorporated or injected except for closed drainage basins or where runoff is controlled. Sludge shall not be applied to areas with slopes greater than 12%. No sludge may be applied in a manner which allows it to run off-site or into waters of the State.
  - c. The pH of the sludge and soil mixture must be maintained at 6.5 or above to prevent metals migration. Lime addition or other pH adjustment shall be practiced to maintain that minimum pH.
  - d. No grazing may be done on the site for at least 30 days after the sludge application. Food, feed, and fiber crops may not be harvested for 30 days after sludge application.

9. The following table reflects the previously approved sites:

Site or Property Name	Site Address	Field ID	Usable Acreage (acres)	Site Coordinates (approximate centroid of field)
Lee Nunn Farms	Eatonton Road, Madison, GA 30650	Farm 2024	14.2	33.561175, -83.474289
	Indian Creek Road, Madison, GA 30650	Farm 2373	7.2	33.554792, -83.487472 33.553836, -83.485636
	Pierce Dairy Road, Madison, GA 30650	Farm 2025	45.8	33.544836, -83.483711
Briar Creek Farm	1220 Log Cabin Rd, Madison, GA 30650	#1	34.8	33.606333, -83.417531
		#2	6.3	33.605815, -83.418872
		#3	6.3	33.605181, -83.419655
		#4	48.5	33.608908, -83.400808
		#5	29.7	33.608564, -83.409667

- a. The sludge application shall be in accordance with EPD's *Guidelines for Land Application of Sewage Sludge (Biosolids) at Agronomic Rates*, June 2006 as amended and the approved SMP, as amended, unless a more stringent requirement is stated in this document or is required by federal regulations.
- b. For slopes of 6-12%, liquid sludge must be incorporated or injected except for closed drainage basins or where runoff is controlled. Sludge shall not be applied to areas with slopes greater than 12%. No sludge may be applied in a manner which allows it to run off-site or into waters of the State.
- c. The pH of the sludge and soil mixture must be maintained at 6.5 or above to prevent metals migration. Lime addition or other pH adjustment shall be practiced to maintain that minimum pH.
- d. No grazing may be done on the site for at least 30 days after the sludge application. Food, feed, and fiber crops may not be harvested for 30 days after sludge application.



The Georgia Environmental Protection Division proposes to issue an NPDES permit to the applicant identified below. The draft permit places conditions on the discharge of pollutants from the wastewater treatment plant to waters of the State.

**Technical Contact:**

August Lutkehus, Environmental Engineer  
*august.lutkehus@dnr.ga.gov*  
470-524-0733

**Draft permit:**

- ☐ First issuance
- ☐ Reissuance with no or minor modifications from previous permit
- ☒ Reissuance with substantial modifications from previous permit
- ☐ Modification of existing permit
- ☐ Requires EPA review (Major POTW/non-POTW and/or POTW with an approved industrial pre-treatment program and/or Facility for which the permit includes pollutant trading)

**1. FACILITY INFORMATION**

**1.1 NPDES Permit No.:** GA0023141

**1.2 Name and Address of Owner/Applicant**

City of Madison  
Post Office Box 32  
Madison, Georgia 30650

**1.3 Name and Address of Facility**

Southside Water Pollution Control Plant (WPCP)  
1612 Four Lakes Drive  
Madison, Georgia 30650  
(Morgan County)

**1.4 Location and Description of the Discharge (as reported by applicant)**

Outfall #	Latitude (°)	Longitude (°)	Receiving Waterbody
001	33.586556	-83.448833	Horse Branch

**1.5 Permitted Design Capacity**

0.66 MGD

**1.6 Facility Classification**Designated as a major facility? ☐ Yes ☒ No**1.7 SIC Code and Description**

SIC Code 4952 – Sewerage systems: Establishments primarily engaged in the collection and disposal of wastes conducted through a sewer system, including such treatment processes as may be provided.

**1.8 Description of the Water Pollution Control Plant***Wastewater treatment:*

The treatment process consists of screening, grit removal, equalization tank, biological treatment (aeration basins), secondary clarification, chlorine disinfection, and dechlorination. Treated effluent is then discharged to Horse Branch.

*Solids processing:*

Sludge is aerobically digested, dewatered using a rotary press, dried using a sludge storage pad, and then land applied to dedicated sites in Morgan County.

**1.9 Type of Wastewater Discharge**

- |   |  |
|---|--|
| <input type="checkbox"/> Process wastewater             | <input type="checkbox"/> Stormwater          |
| <input checked="" type="checkbox"/> Domestic wastewater | <input type="checkbox"/> Combined (Describe) |
| <input type="checkbox"/> Other (Describe)               |  |

**1.10 Characterization of Effluent Discharge (as reported by applicant)**Outfall No. 001:

<b>Effluent Characteristics (as Reported by Applicant)</b>	<b>Maximum Daily Value</b>	<b>Average Daily Value</b>
Flow (MGD)	1.728	0.6345
Five-Day Biochemical Oxygen Demand (mg/L)	13	6.25
Total Suspended Solids (mg/L)	22	7
Fecal Coliform Bacteria (#/100mL)	200	7.75
Ammonia, as N (mg/L)	5	1.05
Total Phosphorus, as P (mg/L)	4.1	3.13

**2. APPLICABLE REGULATIONS****2.1 State Regulations**

Chapter 391-3-6 of the Georgia Rules and Regulations for Water Quality Control

**2.2 Federal Regulations**

<b>Source</b>	<b>Activity</b>	<b>Applicable Regulation</b>
Municipal/Domestic/POTW	Municipal/Domestic Effluent Discharge	40 CFR 122
		40 CFR 125
		40 CFR 127
		40 CFR 133
		40 CFR 136
	Non-Process Water Discharges	40 CFR 122
		40 CFR 125
		40 CFR 127
		40 CFR 136
	Municipal/Domestic Sludge Use and Disposal	40 CFR 122
		40 CFR 127
		40 CFR 136
		40 CFR 257
		40 CFR 501 & 503



### 3. WATER QUALITY STANDARDS & RECEIVING WATERBODY INFORMATION

Section 301(b)(1)(C) of the Clean Water Act (CWA) requires the development of limitations in permits necessary to meet water quality standards. Federal Regulations 40 CFR 122.4(d) require that conditions in NPDES permits ensure compliance with the water quality standards which are composed of designated use classifications, numeric and or narrative water quality criteria and an antidegradation policy. The designated use classification system identifies the designated uses that each waterbody is expected to achieve, such as drinking water, fishing, or recreation. The numeric and narrative water quality criteria are deemed necessary to support the designated use for each water body. The antidegradation policy represents an approach to maintain and to protect various levels of water quality and uses. Section 391-3-6-.3(5) of the GA Water Quality Control Act provide General Criteria for All Waters, commonly referred to as the narrative water quality standards, and Specific Criteria for Specific Designated Uses. In addition to the General Criteria the Specific Criteria in Section 3.1 below are deemed necessary for this waterbody and shall be required for the specific designated uses.

#### 3.1 Receiving Waterbody Name and Specific Designated Use:

**Name:** Horse Branch

**Specific Designated Use(s) [391-3-6-.03(6)]:**

*Fishing:*

Propagation of Fish, Shellfish, Game and Other Aquatic Life; primary contact recreation in and on the water for the months of May – October, secondary contact recreation in and on the water for the months of November – April; or for any other use requiring water of a lower quality.

- (i) Dissolved Oxygen: A daily average of 6.0 mg/L and no less than 5.0 mg/L at all times for water designated as trout streams by the Wildlife Resources Division. A daily average of 5.0 mg/L and no less than 4.0 mg/L at all times for waters supporting warm water species of fish.
- (ii) pH: Within the range of 6.0 - 8.5.
- (iii) Bacteria:

##### 1. Estuarine waters:

For the months of May through October, when primary water contact recreation activities are expected to occur, culturable enterococci not to exceed a geometric mean of 35 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. There shall be no greater than a ten percent excursion frequency of an enterococci statistical threshold value (STV) of 130 counts per 100 mL the same 30-day interval.

For the months of November through April, culturable enterococci not to exceed a geometric mean of 74 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. There shall be no greater than a ten percent excursion frequency of an enterococci statistical threshold value (STV) of 273 counts per 100 mL in the same 30-day interval.

2. All other fishing waters:

For the months of May through October, when primary water contact recreation activities are expected to occur, culturable *E. coli* not to exceed a geometric mean of 126 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. There shall be no greater than a ten percent excursion frequency of an *E. coli* statistical threshold value (STV) of 410 counts per 100 mL in the same 30-day interval.

For the months of November through April, culturable *E. coli* not to exceed a geometric mean of 265 counts per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. There shall be no greater than a ten percent excursion frequency of an *E. coli* statistical threshold value (STV) of 861 counts per 100 mL in the same 30-day interval.

3. The State does not encourage swimming in these surface waters since a number of factors which are beyond the control of any State regulatory agency contribute to elevated levels of bacteria.
  4. For waters designated as shellfish growing areas by the Georgia DNR Coastal Resources Division, the requirements will be consistent with those established by the State and Federal agencies responsible for the National Shellfish Sanitation Program. The requirements are found in National Shellfish Sanitation Program Guide for the Control of Molluscan Shellfish, 2007 Revision (or most recent version), Interstate Shellfish Sanitation Conference, U.S. Food and Drug Administration.
- (iv) Temperature: Not to exceed 90°F. At no time is the temperature of the receiving waters to be increased more than 5°F above intake temperature except that in estuarine waters the increase will not be more than 1.5°F. In streams designated as primary trout or smallmouth bass waters by the Wildlife Resources Division, there shall be no elevation of natural stream temperatures. In streams designated as secondary trout waters, there shall be no elevation exceeding 2°F natural stream temperatures.

### 3.2 Ambient Information

Outfall ID	30Q3 (cfs)	7Q10 (cfs)	1Q10 (cfs)	Annual Average Flow (cfs)	Hardness (mg CaCO <sub>3</sub> /L)	Upstream Total Suspended Solids (mg/L)
001	0.67	0.23	0.19	2.3	12 <sup>(1)</sup>	10 <sup>(2)</sup>

<sup>(1)</sup> Hardness value based on EPD's *Hardness in Georgia Waterbodies*, 2021, for Ecoregion 45b – Southern Outer Piedmont (10<sup>th</sup> percentile).

<sup>(2)</sup> Not available. A conservative value of 10 mg/L will be used for the reasonable potential analysis calculations.

### 3.3 Georgia 305(b)/303(d) List Documents

Horse Branch is listed on the 2022 305(b)/303(d) list as not supporting its designated use (fishing) but TMDLs have been completed for the impacted parameters (fecal coliform bacteria).

Horse Branch	Headwaters to North Sugar Creek	Oconee	Not Supporting	Bio F	4	5	Bio F TMDL drafted 2021.
GAR030701011314	Morgan	Fishing	1,4	NP, UR	Miles	2021	

### 3.4 Total Maximum Daily Loads (TMDLs)

#### *Sediment:*

The Georgia Environmental Protection Division (EPD) completed a TMDL for sediment (biota impacted) for 20 stream segments in the Oconee River Basin in 2022. The TMDL recommended a TSS limit of 20 mg/L for the Southside WPCP. The TSS limits in the draft permit are in accordance with the TMDL requirements.

#### *Fecal Coliform:*

The Georgia EPD completed a TMDL for fecal coliform bacteria for 72 stream segments in the Oconee River Basin in 2007. The TMDL calculated WLA loads for each point source discharging into listed segments using the permitted flows and fecal coliform bacteria limits. The TMDL did not assign a load to the Southside WPCP, but the facility had a permitted fecal bacteria coliform limit of 200 counts/100mL at the time the TMDL was written. The TMDL further states that if a facility increases its permitted flow, the WLA for the facility would increase in proportion to the flow. In accordance with EPD's Bacteria Equivalency Strategy for Using the Optimal Indicator Organisms for WQS and NPDES Permitting, September 2022 (Bacteria Strategy) the TMDL was amended to replace fecal coliform bacteria with *E. coli*. The *E. coli* limits of 126 counts/100 mL in the draft permit are in accordance with the amended TMDL requirements.

### 3.5 Wasteload Allocation (WLA)

WLA for reissuance was issued on April 19, 2022. Refer to *Appendix A* of the Fact Sheet for a copy of the WLA.

## 4. PERMIT CONDITIONS AND EFFLUENT LIMITATIONS

### 4.1 Water Quality Based Effluent Limitations (WQBELs) & Technology Based Effluent Limits (TBELs)

When drafting a National Pollutant Discharge Elimination System (NPDES) permit, a permit writer must consider the impact of the proposed pollutants in a discharge on the quality of the receiving water. Water quality goals for a waterbody are defined by state water quality criteria or standards. By analyzing the effect of a pollutant in the discharge on the receiving water, a permit writer could find that technology-based effluent limitations (TBELs) alone will not achieve the applicable water quality standards or protect downstream users. In such cases, the Clean Water Act (CWA) and its implementing regulations require development of water quality-based effluent limitations (WQBELs). WQBELs help meet the CWA objective of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters and the goal of water quality that provides for the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water (fishable/swimmable).

WQBELs are designed to protect water quality by ensuring water quality standards are met in the receiving water and the designated use and downstream uses are protected. On the basis of the requirements of 40 C.F.R. §125.3(a), additional or more stringent effluent limitations and conditions, such as WQBELs, are imposed when TBELs are not sufficient to protect water quality.

TBELs aim to prevent pollution by requiring a minimum level of effluent quality that is attainable using demonstrated technologies for reducing discharges of pollutants or pollution into the waters of the State. TBELs are developed independently of the potential impact of a discharge on the receiving water, which is addressed through water quality standards and WQBELs. The NPDES regulations at 40 C.F.R. §125.3(a) require NPDES permit writers to develop technology-based treatment requirements, consistent with CWA section 301(b), that represent the minimum level of control that must be imposed in a permit. The regulation also requires permit writers to include in permits additional or more stringent effluent limitations and conditions, including those necessary to protect water quality.

40 CFR Part §122.44(a)(1) requires that NPDES permits include applicable technology-based limitations and standards, while regulations at § 125.3(a)(1) state that TBELs for publicly owned treatment works must be based on secondary treatment standards and the "equivalent to secondary treatment standards" (40 CFR Part 133). The regulation applies to all POTWs and identifies the technology-based performance standards achievable based on secondary treatment for five-day biochemical oxygen demand (BOD<sub>5</sub>), total suspended solids (TSS), and pH.

The table below shows the secondary treatment standards:

Parameter	Secondary Treatment Standards	
	30-day Average	7-day Average
BOD <sub>5</sub>	30 mg/L	45 mg/L
TSS	30 mg/L	45 mg/L
BOD <sub>5</sub> and TSS removal (concentration)	≥ 85%	--
pH (Daily Minimum – Daily Maximum)	6.0-9.0 S.U.	

## 4.2 Reasonable Potential Analysis (RPA)

EPA regulations at 40 C.F.R. §122.44(d)(1)(i) state, “Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level that will *cause*, have the *reasonable potential to cause*, or *contribute* to an excursion above any [s]tate water quality standard, including [s]tate narrative criteria for water quality.”

EPA regulations at 40 C.F.R. §122.44(d)(1)(ii) require States to develop procedures for determining whether a discharge causes, has the reasonable potential to cause, or contributes to an instream excursion above a narrative or numeric criterion within a state water. If such reasonable potential is determined to exist, the NPDES permit must contain pollutant effluent limits and/or effluent limits for whole effluent toxicity. Georgia has reasonable potential procedures, based upon the specific category of pollutants and/or specific pollutant of concern. Chemical specific and biomonitoring data and other pertinent information in EPD’s files will be considered in accordance with the review procedures specified in the GA Rules and Regulations for Water Quality Control, Chapter 391-3-6 in the evaluation of a permit application and in the evaluation of the reasonable potential for a discharge to cause an exceedance in the numeric or narrative criteria.

The term “pollutant” is defined in CWA section 502(6) and 40 C.F.R. §122.2. Pollutants are grouped into three categories under the NPDES program: conventional, toxic, and nonconventional. Conventional pollutants are those defined in CWA section 304(a)(4) and 40 C.F.R. §401.16 (five day-biochemical oxygen demand (BOD<sub>5</sub>), total suspended solids (TSS), fecal coliform, pH, and oil and grease). Toxic (priority) pollutants are those defined in CWA section 307(a)(1) and include 126 metals and manmade organic compounds. Nonconventional pollutants are those that do not fall under either of the above categories (conventional or toxic pollutants) and include parameters such as, but not limited to, chlorine, ammonia, nitrogen, phosphorus, chemical oxygen demand (COD), and whole effluent toxicity (WET).

EPD evaluates the data provided in the application and supporting documents. If a pollutant is listed in the following sections of this fact sheet below, the permit writer determined the pollutant is a pollutant of concern and there may be a reasonable potential to cause or contribute to an instream violation of the Georgia water quality standards. If a pollutant is not listed below, EPD determined the pollutant is not a pollutant of concern or has determined, based on the data provided in the application, there is no reasonable potential to cause or contribute to an instream violation of the Georgia water quality standards. An example may be if the applicant reported “not detect” or “below detection limit”.

Upon identification of a pollutant of concern by the permit writer, in accordance with 40 C.F.R. §122.44(d)(1)(ii), the permit writer must then perform a reasonable potential analysis using a procedure which has accounted for any combination of the following criteria: existing controls on point and nonpoint sources of pollution, the variability of the pollutant or pollutant parameter in the effluent, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water to determine if the pollutant and its discharge has the reasonable potential to cause, or contribute to an in-stream excursion above the allowable ambient concentration of a state narrative or numeric criteria within the state’s water quality standard for an individual pollutant.

In accordance with 40 C.F.R. §122.44(d)(1)(iii), if the permit writer has determined, using a reasonable potential procedure the pollutant of concern in the discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above the allowable ambient concentration of a state numeric or narrative criteria within a state water quality standard for an individual pollutant, the permit must contain effluent limits for that pollutant. If the permit writer has determined there is insufficient data, the permit writer might also consider monitoring requirements to collect the additional data related to the presence or absence of a specific pollutant to provide information for further analyses for the development of appropriate numeric or narrative standard.

The conventional, nonconventional, and toxic pollutants listed in the following sections have been identified by the permit writer as pollutants of concern and the permit writer has determined through current practices and procedures one of the following: no additional monitoring or numeric and/or narrative effluent limits are needed; additional monitoring is required; or numeric and/or narrative effluent limits are necessary to protect the receiving water body and its downstream users and those limits have been included in the permit.

The monitoring and sampling locations are prescribed in the permit and determined by the permit writer after considering, at a minimum, the following: type of discharge, specific pollutant, discharge frequency, location of the discharge, receiving waterbody, downstream users, etc.

The sample type, grab vs. composite, is prescribed in the permit and determined by the permit writer after considering, at a minimum, the analytical method required in 40 C.F.R. §136, the type of pollutant, retention time, etc. Grab samples are required for the analysis of pH, temperature, cyanide, total phenols, residual chlorine, oil and grease, *E. coli*, or volatile organics.

### **4.3 Whole Effluent Toxicity (WET)**

WET tests are not required for facilities with a permitted design flow less than 1.0 MGD and without an approved pre-treatment program; therefore, no WET test results were submitted with the application and the draft permit does not include any WET testing requirements.

**4.4 Conventional Pollutants**

Pollutants of Concern	Basis
pH	<p>The instream wastewater concentration (IWC) is 82%. When the IWC is greater than 50%, there is reasonable potential for pH to cause or contribute to violations of the instream Georgia Water Quality Standard; therefore, pH limits of 6.0-8.5 SU (daily minimum-daily maximum) were maintained in the draft permit. Refer to Section 4.7.1 below for calculations.</p>
Five-Day Biochemical Oxygen Demand (BOD <sub>5</sub> )	<p>The current monthly average BOD<sub>5</sub> limit of 25 mg/L has been maintained in the draft permit. According to the steady-state dissolved oxygen Georgia DOSAG model, the proposed limit, when combined with the ammonia and dissolved oxygen limits (refer to Section 4.5 below), is protective of the instream Water Quality Standard for dissolved oxygen described in Section 3.1 above. Refer to the WLA in <i>Appendix A</i> for model inputs.</p>
Total Suspended Solids (TSS)	<p>The monthly average TSS limit has been decreased from 30 to 20 mg/L in the draft permit in accordance with the 2022 TMDL requirements. A review of Discharge Monitoring Report data indicates that the plant is able to consistently meet this proposed limit. The proposed limit is also in accordance with EPD's <i>Guidelines for Establishing Technology-Based Total Suspended Solids (TSS) Limits in Domestic Wastewater NPDES Permits</i>, 2020 for mechanical plants.</p>



## 4.4 Conventional Pollutants

(continued)

Pollutants of Concern	Basis
<i>Escherichia coli (E. coli)</i>	<p>EPD considers all POTWs, Private and Institutional Developments, and CSO Control Facilities, discharging all or a portion of domestic sanitary wastewater, to have the reasonable potential to cause or contribute to instream water quality standard violations for bacteria, including the conventional pollutant fecal coliform, but also <i>Escherichia coli</i>, and Enterococci. EPD has determined these facilities discharge bacteria, wastewater treatment systems are designed to limit bacteria levels in the effluent, and bacteria are highly variable in the receiving stream after treatment. Furthermore, dilution is not considered in EPD's analysis as bacteria have the inherent ability to reproduce in the receiving stream.</p> <p>As part of the 2019 Triennial Review, approved by US EPA on August 31, 2022, EPD adopted new bacterial indicators (<i>E. coli</i> and Enterococci) for waterbodies with a designated use of fishing, coastal fishing, and drinking water to protect secondary contact recreators who may inadvertently ingest water.</p> <p>In accordance with EPD's <i>Bacteria Equivalency Strategy for Using the Optimal Indicator Organisms for WQS and NPDES Permitting</i>, 2022 for discharges into freshwaters, a monthly average <i>E. coli</i> limit of 126 counts/100 mL and a weekly average limit of 410 counts/100 mL (equivalent to the Statistical Threshold Value) have been included in the draft permit.</p> <p>The proposed limits also meet the TMDL requirements in Section 3.4 of the fact sheet.</p> <p>The facility is equipped with a disinfection system, therefore a compliance schedule to meet the updated bacteria limit has not been included in the draft permit.</p>



#### 4.5 Nonconventional Pollutants

Pollutants of Concern	Basis
Total Residual Chlorine (TRC)	Chlorine is used for disinfection. A daily maximum TRC limit of 0.013 mg/L has been maintained in the draft permit. The proposed limit has been determined using the US EPA's chronic TRC criterion of 11 µg/L in the receiving stream after dilution. Refer to Section 4.7.7 below for calculations.
Dissolved Oxygen (DO)	A daily minimum DO limit of 6.0 mg/L has been maintained in the draft permit. According to the steady-state dissolved oxygen Georgia DOSAG model, the proposed limit, when combined with the five-day biochemical oxygen demand limit (refer to Section 4.4 above) and the ammonia limit is protective of the instream Water Quality Standard for dissolved oxygen described in Section 3.1 above.
Ammonia (NH <sub>3</sub> )	<p>The current monthly average ammonia limit of 2.5 mg/L has been maintained in the draft permit. The proposed limit is in accordance with EPD's <i>NPDES Permitting Strategy for Addressing Ammonia Toxicity</i>, 2017.</p> <p>According to the steady-state dissolved oxygen Georgia DOSAG model, the proposed limit, when combined with the BOD<sub>5</sub> and dissolved oxygen limit, is also protective of the instream Water Quality Standard for dissolved oxygen described in Section 3.1 above.</p>

## 4.5 Nonconventional Pollutants

(continued)

Pollutants of Concern	Basis
Total Nitrogen (TN), Total Kjeldahl Nitrogen (TKN), Organic Nitrogen, Nitrate-Nitrite	<p>Discharges of total nitrogen directly to or within the watershed upstream from waterbodies with total nitrogen water quality standards must undergo an analysis to determine if the discharge has the reasonable potential to cause or contribute to instream water quality standard violations.</p> <p>Based on the pollutant being present in the wastestream, EPD has identified total nitrogen as a pollutant of concern for the following: POTWs, Private and Institutional Developments, CSO Control Facilities, and applicable Non POTWs. Monitoring for TKN, organic nitrogen, and nitrate-nitrite has been included in the permit to calculate total nitrogen, quantify nutrient loadings in the Oconee River Basin, and provide information for further analyses and development of appropriate numeric or narrative effluent limits. Additionally, the permittee will be required to develop and maintain a Comprehensive Nutrient Optimization Plan.</p> <p>Total nitrogen is the sum of all nitrogen forms or <math>TN = TKN + \text{nitrite} + \text{nitrate}</math>.</p> <p>Organic nitrogen, as N = <math>TKN - \text{ammonia, as N}</math>.</p> <p>Ammonia, organic nitrogen, nitrate-nitrite, and TKN must be analyzed or calculated from the same sample to correctly calculate total nitrogen. See Section 5.8 and 5.9 of this Fact Sheet for additional information.</p>

**4.5 Nonconventional Pollutants****(continued)**

Pollutants of Concern	Basis
Total Phosphorus (TP), Orthophosphate	<p>Total phosphorus measures all forms of phosphorus in a sample (orthophosphate, condensed phosphate, and organic phosphate). Orthophosphate, or reactive phosphorus is the amount of phosphorus available to chemically or biologically react in the environment.</p>
	<p>Discharges of total phosphorus directly to or within the watershed upstream from waterbodies with total phosphorus water quality standards must undergo an analysis to determine if the discharge of the pollutants has the reasonable potential to cause or contribute to instream water quality standard violations.</p>
	<p>Based on the pollutant being present in the wastestream, EPD has identified total phosphorus as a pollutant of concern for the following: POTWs, Private and Institutional Developments, CSO Control Facilities, and applicable Non POTWs. An effluent limit for total phosphorus and monitoring for orthophosphate has been included in the permit to provide information for further analyses and development of appropriate numeric or narrative effluent limits.</p>
	<p>Orthophosphate monitoring has been included in the draft permit in accordance with EPD's <i>Strategy for Addressing Phosphorus in NPDES Permitting</i>, 2011.</p>
	<p>A monthly average TP limit of 0.76 mg/L has been included in the draft permit. The proposed limit has been included in the draft permit to meet the chlorophyll a standards for Lake Oconee.</p> <p>A compliance schedule to meet the new limit has been included in the draft permit.</p>

**4.6 Toxics & Manmade Organic Compounds**

Expanded effluent testing data in EPA Form 3510-2A is not required for facilities with a permitted design flow less than 1.0 MGD and without an approved pre-treatment program; therefore, no test results were submitted with the application.

## 4.7 Calculations for Effluent Limits

### 4.7.1 Instream Waste Concentration (IWC):

$$\begin{aligned} \text{IWC} &= \frac{Q_{\text{Effluent}} (\text{ft}^3/\text{sec})}{Q_{\text{Effluent}} (\text{ft}^3/\text{sec}) + 7Q_{10} (\text{ft}^3/\text{sec})} \% \\ &= \frac{1.02}{1.02 + 0.23} \\ &= 82 \% \end{aligned}$$

### 4.7.2 Flow:

*Weekly Average Flow:*

$$Q_{\text{Weekly}} = Q_{\text{Monthly}} (\text{MGD}) \times 1.25$$

Refer to *Appendix B* for the calculated results.

Q = Flow  
C = Concentration  
M = Mass

### 4.7.3 Five-Day Biochemical Oxygen Demand:

*Weekly Average Concentration:*

$$[C]_{\text{Weekly}} = [C]_{\text{Monthly}} (\text{mg/L}) \times 1.5$$

*Monthly Average Mass Loading:*

$$M_{\text{Monthly}} = Q_{\text{Monthly}} (\text{MGD}) \times [C]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})$$

*Weekly Average Mass Loading:*

$$M_{\text{Weekly}} = Q_{\text{Weekly}} (\text{MGD}) \times [C]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})$$

Refer to *Appendix B* for the calculated results.

### 4.7.4 Total Suspended Solids:

*Weekly Average Concentration:*

$$[C]_{\text{Weekly}} = [C]_{\text{Monthly}} (\text{mg/L}) \times 1.5$$

*Monthly Average Mass Loading:*

$$M_{\text{Monthly}} = Q_{\text{Monthly}} (\text{MGD}) \times [C]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})$$

*Weekly Average Mass Loading:*

$$M_{\text{Weekly}} = Q_{\text{Weekly}} (\text{MGD}) \times [C]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})$$

Refer to *Appendix B* for the calculated results.

#### 4.7.5 Ammonia:

*Weekly Average Concentration:*

$$[C]_{\text{Weekly}} = [C]_{\text{Monthly}} (\text{mg/L}) \times 1.5$$

*Monthly Average Mass Loading:*

$$M_{\text{Monthly}} = Q_{\text{Monthly}} (\text{MGD}) \times [C]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})$$

*Weekly Average Mass Loading:*

$$M_{\text{Weekly}} = Q_{\text{Weekly}} (\text{MGD}) \times [C]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})$$

Refer to *Appendix B* for the calculated results.

*Ammonia Toxicity Analysis (freshwater stream only):*

The chronic criterion based on *Villosa iris* (rainbow mussel) is determined as follows:

$$CCC = 0.8876 \times \left( \frac{0.0278}{1 + 10^{7.688 - \text{pH}}} + \frac{1.1994}{1 + 10^{\text{pH} - 7.688}} \right) \times 2.126 \times 10^{0.028 \times (20 - \text{MAX}(T, 7))} \text{ mg/L}$$

Where: pH : pH of receiving stream and discharge  
T : Temperature of receiving stream  
CCC : Chronic Continuous Concentration

The ammonia effluent limit (monthly average) is then calculated as follows:

$$[\text{NH}_3]_{\text{Effluent}} =$$

$$\frac{(Q_{\text{Effluent}} (\text{ft}^3/\text{sec}) + 30Q_3 (\text{ft}^3/\text{sec})) \times CCC (\text{mg/L}) - 7Q_{10} (\text{ft}^3/\text{sec}) \times [\text{NH}_3]_{\text{Stream Background}} (\text{mg/L})}{Q_{\text{Effluent}} (\text{ft}^3/\text{sec})}$$

Refer to *Appendix C* for detailed calculations.

**4.7.6 Total Phosphorus:***Weekly Average Concentration:*

$$[C]_{\text{Weekly}} = [C]_{\text{Monthly}} (\text{mg/L}) \times 1.5$$

*Monthly Average Mass Loading:*

$$M_{\text{Monthly}} = Q_{\text{Monthly}} (\text{MGD}) \times [C]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})$$

*Weekly Average Loading:*

$$M_{\text{Weekly}} = Q_{\text{Weekly}} (\text{MGD}) \times [C]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})$$

Refer to *Appendix B* for the calculated results.**4.7.7 Total Residual Chlorine (TRC):***Daily Maximum Concentration (Water Quality-Based Effluent Limitation):*

$$[TRC]_{\text{Effluent}} = \frac{[Q_{\text{Effluent}} (\text{ft}^3/\text{sec}) + 7Q_{10} (\text{ft}^3/\text{sec})] \times [TRC]_{\text{Stream}} (\text{mg/L})}{Q_{\text{Effluent}} (\text{ft}^3/\text{sec})}$$

with  $[TRC]_{\text{Stream}} = 0.011 \text{ mg/L}$ Refer to *Appendix B* for the calculated results.

If calculated limit above exceeds 0.5 mg/L, a daily maximum limit of 0.5 mg/L (technology-based effluent limitation) will be included in the draft permit in accordance with EPD's *Total Residual Chlorine Strategy*, 2010.

**4.7.8 Metals**

Not applicable

#### 4.8 Comparison & Summary of Water Quality vs. Technology Based Effluent Limits

After determining applicable technology-based effluent limitations and water quality-based effluent limitations, the most stringent limits are applied in the permit:

Parameter	WQBELS <sup>(1)</sup>	TBELS <sup>(1)</sup>
	<i>Monthly Average</i>	<i>Monthly Average</i>
Five-Day Biochemical Oxygen Demand (mg/L)	<b>25</b>	30.0
Total Suspended Solids (mg/L)	<b>20</b>	30
Total Phosphorus (mg/L)	<b>0.76</b>	None
Ammonia (mg/L)	<b>2.5</b>	None
<i>Escherichia coli</i> (counts/100 mL)	<b>126</b>	None
Dissolved Oxygen (mg/L), Daily Minimum	<b>6.0</b>	None
Total Residual Chlorine (mg/L), Daily Maximum	<b>0.013</b>	0.5
pH (SU), Daily Minimum-Daily Maximum	<b>6.0 - 8.5</b>	6.0 - 9.0

<sup>(1)</sup> Effluent limits in bold were included in the permit. Refer to Sections 4.4, 4.5, and 4.7 above for more information.

## 5. OTHER PERMIT REQUIREMENTS AND CONSIDERATIONS

### 5.1 Mass Loading Limits

All mass loading limits expressed in kg/day in the current permit have been converted to lbs/day in the draft permit.

### 5.2 Industrial Pretreatment Program (IPP)

The City does not have an approved IPP; therefore, language for establishing an IPP, if necessary, has been included in the draft permit.

### 5.3 Sludge Management Plan (SMP)

The City has an approved SMP to land apply sludge at agronomic rates and is currently authorized to land apply sludge at the following locations:

- Lee Nunn Farms
  - Eatonton Road, Madison, GA 30650
  - Indian Creek Road, Madison, GA 30650
  - Pierce Dairy Road, Madison, GA 30650
- Briar Creek Farm, Greensboro Road, Madison, GA 30650

The City recently requested that the Cunningham Property located at 3120 Greensboro Hwy, Madison, GA 30650 be added to their SMP for Southside WPCP and Indian Creek Water Reclamation Facility (NPDES Permit No. GA0038741). Additionally, Farm 2622 of Lee Nunn Farms (20.1 acres) will be removed from the SMP due to construction on the site. Refer to *Appendix D* for a location map of the approved sites and *Appendix E* for a location map of the proposed sites.

### 5.4 Watershed Protection Plan (WPP)

The City has an approved WPP; therefore, language has been included in the draft permit to reflect the approved plan.

### 5.5 Service Delivery Strategy

City of Madison is in compliance with the Department of Community Affairs approved Service Delivery Strategy for Morgan County.

### 5.6 Compliance Schedules

A 36-month compliance schedule to meet the new limitation for total phosphorus has been included in the draft permit. Based on best professional judgment, the proposed compliance schedule represents the shortest reasonable period of time to allow the permittee to upgrade the treatment process and test new equipment before the limit becomes effective. Language has also been included in the permit for the new limitation to become effective prior to the end of the schedule if the permittee can consistently meet the new limitation. All other effluent limitations are applicable immediately upon the effective date of the permit.



## 5.7 Anti-Backsliding

The limits in this permit are in compliance with the 40 C.F.R. 122.44(l), which requires a reissued permit to be as stringent as the previous permit.

The replacement of the fecal coliform effluent limit with either *E. coli* or Enterococci effluent limits is considered equivalently protective of the instream water quality fecal coliform criteria. The *E. coli* or Enterococci effluent limits apply water quality criteria at the “end-of-pipe” and a discharge in compliance with the effluent limits will not cause or contribute to excursions above the new water quality criteria for *E. coli* or Enterococci criteria. Therefore, EPD believes that the replacement of fecal coliform effluent limits with *E. coli* or Enterococci effluent limits is compliant with Section 303(d)(4)(A) and Section 303(d)(B) of the CWA as the existing effluent limitations are based on either a WLA or TMDL, and the water quality modeling indicates that attainment of the water quality standards is assured. EPD does not believe that the change in bacteria indicator will result in further degradation of the receiving water(s) or have any effect whatsoever regarding the protection of designated uses. Hence, changing the pathogen indicator and associated effluent limits in NPDES point source permits for fecal coliform is not considered backsliding. The inclusion of *E. coli* and Enterococci effluent limits simply use a different pathogen indicator to provide the same level of protection for the designated use of primary and secondary contact recreation as is currently required in Section 301(b)(1)(C) of the CWA and at 40 CFR 122.44(d).

## 5.8 Development of a Comprehensive Permitting Strategy for Nutrients

The Clean Water Act (CWA) authorizes EPA and delegated states to develop and implement water quality standards to protect human health and the environment. In 1990, the Georgia General Assembly passed the “Lake Law” (OCGA 12-5-23.1) that authorizes the Environmental Protection Division (EPD) to establish water quality standards for each publicly owned lake or reservoir located wholly or partially within the state of Georgia that have a normal pool level surface average of 1,000 or more acres. The law requires that a comprehensive study of each lake be conducted prior to the adoption of lake and major tributary water quality standards. Since that time, Georgia has evaluated all our waterbodies for nutrients and developed water quality models for our watershed, lakes, and estuaries.

EPD is developing a comprehensive Permitting Strategy for Nutrients (Nutrient Permitting Strategy). The development of the Nutrient Permitting Strategy will allow EPD to update the 2011 Phosphorus Strategy; develop a comprehensive nutrient reduction approach to tackle phosphorus, nitrogen, and their effect on chlorophyll a; and solicit stakeholder and permittee feedback on key strategy elements. EPD anticipates the Nutrient Permitting Strategy will provide some degree of regulatory certainty for point source dischargers and minimize the regulatory burden whereby EPD will be evaluating and establishing WLAs for nitrogen and phosphorus. The Nutrient Permitting Strategy will complement the work completed over the last several decades and build upon the Nutrient WQS Plan, analyze available ambient and permitted discharge data, determine limiting factors, develop a reasonable potential analysis for total nitrogen and total phosphorus, develop TBELs, and provide a NPDES permit implementation schedule.

Upon completion of the Nutrient Management Strategy, EPD would begin implementing the Strategy by including site-specific nitrogen effluent limits and potentially new and reduced phosphorus limits, as applicable, in point source discharge permits, based on the results of lake and watershed models for those lakes with water quality standards. The development of effluent limits for point source dischargers into or upstream from lakes that currently do not have numeric nutrient criteria will be challenging. For these lakes, EPD may have to develop numeric nutrient targets ahead of establishing lake standards. This will allow a comprehensive evaluation to be performed to assess the discharge of phosphorus and nitrogen from point source dischargers and their effects on chlorophyll a in lakes.

In lieu of including numeric nutrient effluent limits for nitrogen (unless required in a TMDL or wasteload allocation), EPD will include a nutrient optimization permit condition, as appropriate in all domestic wastewater permits and non-POTW permits where nitrogen has been identified as a pollutant of concern or where there is a potential to discharge nutrients. Additionally, EPD will include a specific permit condition to reopen the permit during the 5-year term to include applicable nutrient effluent limits upon completion and implementation of the Nutrient Permitting Strategy.

## **5.9 Comprehensive Nutrient Optimization Plan**

40 CFR 122.44(k) states that best management practices (BMPs) to control or abate the discharge of pollutants are acceptable when numeric effluent limitations are infeasible. While EPD develops a comprehensive Nutrient Permit Strategy, continues to develop water quality standards resulting in wasteload allocations and the development of numeric WQBELs, EPD is including a permit condition requiring the development of a Comprehensive Nutrient Optimization Plan (CNOP). Wastewater treatment efficiency optimization is an adaptive management strategy the Permittee shall use to limit the discharge of total nitrogen. The CNOP will include a suite of site specific BMPs that EPD believe meets the intent of 40 CFR 122.44(k).

The proposed permit requires the permittee to develop, implement, and maintain a Comprehensive Nutrient Optimization Plan due 24 months following the permit effective date. The Permittee must use the CNOP to evaluate existing treatment processes for nutrient reduction. This must include identifying opportunities through influent source identification, operational adjustments designed to enhance nitrification and denitrification, minor retrofits such as the incorporation of anoxic zones, side-stream management opportunities, and minor upgrades. The Permittee must update the plan annually to evaluate effectiveness of the adopted strategies, reduction goals, and established targets.

**6. REPORTING****6.1 Compliance Office**

The facility has been assigned to the following EPD office for reporting, compliance and enforcement:

Georgia Environmental Protection Division  
Northeast District Office  
745 Gaines School Road  
Athens, Georgia 30605

**6.2 E-Reporting**

The permittee is required to electronically submit documents in accordance with 40 CFR Part 127.

**7. REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS**

Not applicable

**8. PERMIT EXPIRATION**

The permit will expire five years from the effective date.

**9. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS****9.1 Comment Period**

The Georgia Environmental Protection Division (EPD) proposes to issue a permit to this applicant subject to the effluent limitations and special conditions outlined above. These determinations are tentative.

The permit application, draft permit, and other information are available for review at 2 Martin Luther King Jr. Drive, Suite 1462 East, Atlanta, Georgia 30334, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday and on EPD's website accessible through the publicly available Georgia EPD Online System (GEOS) at: <https://geos.epd.georgia.gov/GA/GEOS/Public/GovEnt/Shared/Pages/Main/Login.aspx>  
For additional information, you can contact 404-463-1511.

**9.2 Public Comments**

Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the EPD address above, or via e-mail at [EPDcomments@dnr.ga.gov](mailto:EPDcomments@dnr.ga.gov) within 30 days of the initiation of the public comment period. All comments received prior to that date will be considered in the formulation of final determinations regarding the application. The permit number should be placed on the top of the first page of comments to ensure that your comments will be forwarded to the appropriate staff.

### 9.3 Public Hearing

Any applicant, affected state or interstate agency, the Regional Administrator of the U.S. Environmental Protection Agency (EPA) or any other interested agency, person or group of persons may request a public hearing with respect to an NPDES permit application if such request is filed within thirty (30) days following the date of the public notice for such application. Such request must indicate the interest of the party filing the request, the reasons why a hearing is requested, and those specific portions of the application or other NPDES form or information to be considered at the public hearing.

The Director shall hold a hearing if he determines that there is sufficient public interest in holding such a hearing. If a public hearing is held, notice of same shall be provided at least thirty (30) days in advance of the hearing date.

In the event that a public hearing is held, both oral and written comments will be accepted; however, for the accuracy of the record, written comments are encouraged. The Director or a designee reserves the right to fix reasonable limits on the time allowed for oral statements and such other procedural requirements, as deemed appropriate.

Following a public hearing, the Director, unless it is decided to deny the permit, may make such modifications in the terms and conditions of the proposed permit as may be appropriate and shall issue the permit.

If no public hearing is held, and, after review of the written comments received, the Director determines that a permit should be issued and that the determinations as set forth in the proposed permit are substantially unchanged, the permit will be issued and will become final in the absence of a request for a contested hearing. Notice of issuance or denial will be made available to all interested persons and those persons that submitted written comments to the Director on the proposed permit.

If no public hearing is held, but the Director determines, after a review of the written comments received, that a permit should be issued but that substantial changes in the proposed permit are warranted, public notice of the revised determinations will be given and written comments accepted in the same manner as the initial notice of application was given and written comments accepted pursuant to EPD Rules, Water Quality Control, subparagraph 391-3-6-.06(7)(b). The Director shall provide an opportunity for public hearing on the revised determinations. Such opportunity for public hearing and the issuance or denial of a permit thereafter shall be in accordance with the procedures as are set forth above.

### 9.4 Final Determination

At the time that any final permit decision is made, the Director shall issue a response to comments. The issued permit and responses to comments can be found at the following address:

*<http://epd.georgia.gov/watershed-protection-branch-permit-and-public-comments-clearinghouse-0>*

## 9.5 Contested Hearings

Any person who is aggrieved or adversely affected by the issuance or denial of a permit by the Director of EPD may petition the Director for a hearing if such petition is filed in the office of the Director within thirty (30) days from the date of notice of such permit issuance or denial. Such hearing shall be held in accordance with the EPD Rules, Water Quality Control, subparagraph 391-3-6-.01.

Petitions for a contested hearing must include the following:

1. The name and address of the petitioner;
2. The grounds under which petitioner alleges to be aggrieved or adversely affected by the issuance or denial of a permit;
3. The reason or reasons why petitioner takes issue with the action of the Director;
4. All other matters asserted by petitioner which are relevant to the action in question.

# **FACT SHEET**

## **Appendix A**

### **Southside Water Pollution Control Plant NPDES Permit No. GA0023141**

Waste Load Allocation (WLA)

# National Pollutant Discharge Elimination System Waste Load Allocation Form

## Part I: Background Information

WLA Request Type: Reissuance ☒ Expansion ☐ Relocation ☐ New Discharge ☐  
 Facility Name: **Madison Southside WPCP** County: **Morgan** WQMU: **0309**  
 NPDES Permit No.: **GA0023141** Expiration Date: **September 30, 2022** Outfall: **001**  
 Receiving Water: **Horse Branch** River Basin: **Oconee** 10-Digit HUC: **0307010110**  
 Discharge Type: Domestic ☒ Industrial ☐ Both ☐ Proportion (D:I): \_\_\_\_\_ Flow(s) Requested: (MGD): **0.66**  
 Level IV Ecoregion: **45b - Southern Outer Piedmont**  
 Industrial Contributions Type(s): **Unknown**  
 Treatment Process Description: **Influent screening, grit removal, two aeration basins, two final clarifiers, wastewater holding tank, chlorine contact chamber, and sludge drying bed.**  
 Additional Information (history, special conditions, other facilities): \_\_\_\_\_  
 Requested by: **Benoit Causse** Program: **WRP** Date: **4/2/2022**

## Part II: Receiving Water Information

Receiving Water: **Horse Branch, tributary to Sugar Creek, tributary to Lake Oconee** Designated Use Classification: **Fishing**  
 Integrated 305(b)/303(d) List: Yes ☒ No ☐ Supporting: ☐ Not Supporting: ☒ Criteria: **Bio F**  
 Total Maximum Daily Load: Yes ☐ No ☒ Parameter(s): **FC, Bio F** WLA Complies with TMDL Yes ☒ No ☐  
**Fecal Coliform TMDLs for downstream segment of Sugar Creek were completed in 1998 and 2007. An effluent FC limit of 200 counts/100 mL for NPDES permitted discharges was recommended. Sediment TMDL has not yet been completed.**

## Part III: Water Quality Model Review Information

Model Type: Uncalibrated ☒ Calibrated ☐ Verified ☐ Cannot be Modeled ☐ Model Length (mi): **12**  
 Field Data: None ☐ Fair ☒ Good ☐ Excellent ☐  
 Model and Field Data Description: **Steady-state dissolved oxygen Georgia DOSAG model**  
 Critical Water Temperature (°C): **25** Drainage Area (mi²): **2.3** Mean annual streamflow at discharge (cfs): **2.3**  
 7Q10 Yield (cfs/mi²): **0.1** Velocity (range fps): **0.19 - 0.30** 30Q3 streamflow at discharge (cfs): **0.67**  
 Effluent Flow Rate (cfs): **1.02** IWC (%): **82** 7Q10 streamflow at discharge (cfs): **0.23**  
 Slope (range - fpm): **5.5-19** K1: **0.3** K3: **0.3** K2 (range): **2 - 15** 1Q10 streamflow at discharge (cfs): **0.19**  
 SOD: **0.3** Escape Coef. (ft⁻¹): **0.11** f-Ratio (BOD<sub>u</sub>/BOD<sub>5</sub>): **2**  
**The predicted minimum dissolved oxygen concentration is 5.75 mg/L, occurring downstream in the Sugar Creek Arm at Lake Oconee.**

## Part IV: Recommended Permit Limitations and Conditions (mg/L as a monthly average except as noted)

Rationale: Same as current ☐ Revised ☒ New ☐  
 Location: **Horse Branch**

Effluent Flow Rate (MGD)	BOD <sub>5</sub>	NH <sub>3</sub> -N	DO (minimum)	FC (No./100mL)	TRC (daily max.)	pH (std. units)	TP	Ortho-P, TKN and Nitrate-Nitrite	Organic Nitrogen
<b>0.66</b>	<b>25</b>	<b>2.5</b>	<b>6.0</b>	<b>200</b>	<b>0.01</b>	<b>6.0-8.5</b>	<b>0.76</b>	<b>Monitor</b>	<b>Calc</b>

• **Additional Comments:**  
 • Priority pollutant permit limits, aquatic toxicity testing requirements, and other parameters required by categorical effluent guidelines or identified during review of permit application are to be determined by WRP.  
 • The pH limits are based on GA EPD permitting guidelines for pH when instream wastewater concentration is greater than 50%.  
 • The current ammonia limit meets the U.S. EPA Aquatic Life Ambient Water Quality Criteria-Freshwater 2013 using 30Q3.  
 • Effluent monitoring of Ortho-P, TKN, nitrate-nitrite, and organic nitrogen is recommended. Phosphorus & nitrogen constituents should be analyzed from the same sample. Ortho-P is a component of Total-P and should always be less than or equal to Total-P. Organic N is calculated as Org N=TKN - NH<sub>3</sub>.  
 • The new phosphorous limit is needed to meet GA EPD lake standards for Lake Oconee.

Prepared by: **Sarah Couture** *SC* Date: **4/4/2022** Reviewed by: **Josh Welte JW** Date: **18.Apr.22**

## Part V: Program Manager Comments

*Elizabeth C. Booth*  
**Elizabeth Booth** Date: **04/19/2022**

# **FACT SHEET**

## **Appendix B**

**Southside Water Pollution Control Plant  
NPDES Permit No. GA0023141**

Effluent Limit Calculations



# FACT SHEET

## Appendix B

### Southside WPCP

NPDES Permit No. GA0023141

#### Effluent Limitations Calculations:

7Q10: 0.23 cfs

	Monthly Average Limits				Weekly Average Limits			
Permitted Flow (MGD):	0.66	MGD			0.83	MGD		
	Concentration		Mass Loading		Concentration		Mass Loading	
Five-Day Biochemical Oxygen Demand	25.0	mg/L	138	lb/day	37.5	mg/L	172	lb/day
Total Suspended Solids	20	mg/L	110	lb/day	30	mg/L	138	lb/day
Ammonia, as N	2.5	mg/L	14	lb/day	3.8	mg/L	17	lb/day
Total Phosphorus, as P	0.76	mg/L	4.2	lb/day	1.1	mg/L	5.2	lb/day
	Daily Maximum Limits							
Total Residual Chlorine	0.013	mg/L						

Refer to Section 4.0 of the Fact Sheet for conversion factors and equations used.

# **FACT SHEET**

## **Appendix C**

**Southside Water Pollution Control Plant  
NPDES Permit No. GA0023141**

*Ammonia Toxicity Analysis*

# Ammonia Toxicity Analysis for Waste Load Allocation Development (Updated 2013)

Date: 23.Feb.22

Facility: Madison - Southside WPCP

NPDES Permit Number: GA0023141

Receiving Stream: Horse Branch

Engineer: Sarah Couture

Comments: Used the background pH that was used in the DOSAG model. Current permit limit is 2.5 mg/L. No updates to ammonia limit are needed.

## Stream and Facility Data:

Background Stream pH (standard units): 6.7

Effluent pH (standard units): 8.5

Final Stream pH (standard units): 7.04

Stream Temperature (Celsius): 22.4

30Q3 Streamflow (cfs): 0.67

Stream background concentration (Total NH3-N, mg/L): 0.06

Facility Discharge (MGD/cfs): 0.66 1.02

Total Combined Flow (cfs): 1.69

Effluent concentration (Total NH3-N, mg/L) = 2.6

If 2.6 is greater than 17.4 mg/L, use 17.4 mg/L in WLA modeling.

## Chronic Criterion based on Villosa iris (Rainbow mussel):

Instream CCC = criterion continuous concentration (chronic criterion):

$$CCC = 0.8876 \times (0.0278 / (1 + 10^{(7.688 - pH)})) + 1.1994 / (1 + 10^{(pH - 7.688)}) \times (2.126 \times 10^{0.028 \times (20 - \text{MAX}(T, 7))})$$

Allowable instream concentration CCC (Total NH3-N, mg/l) = 1.59

Based on National Criterion For Ammonia In Fresh Water As Revised In Year 2013

Source: Aquatic Life Ambient Water Quality Criteria for Ammonia - Freshwater 2013, U.S. Environmental Protection Agency, Office of Water, Office of Science and Technology, EPA-822-R-13-001. April 2013. Washington, D.C.

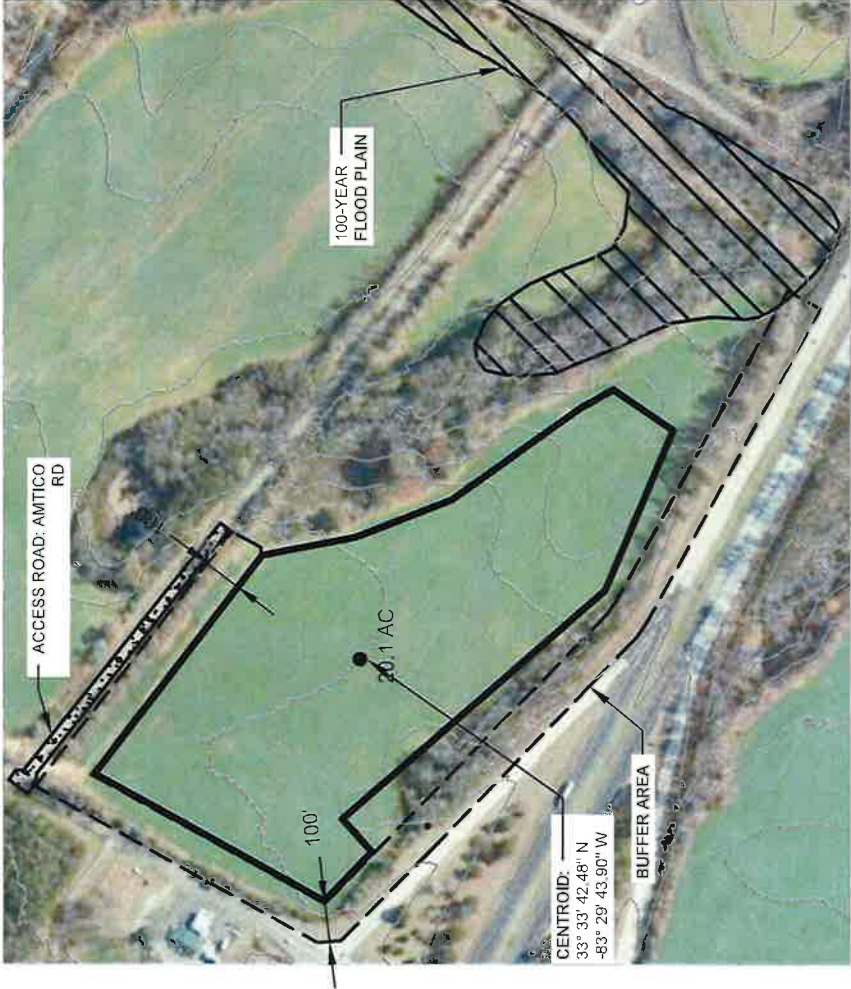
# **FACT SHEET**

## **Appendix D**

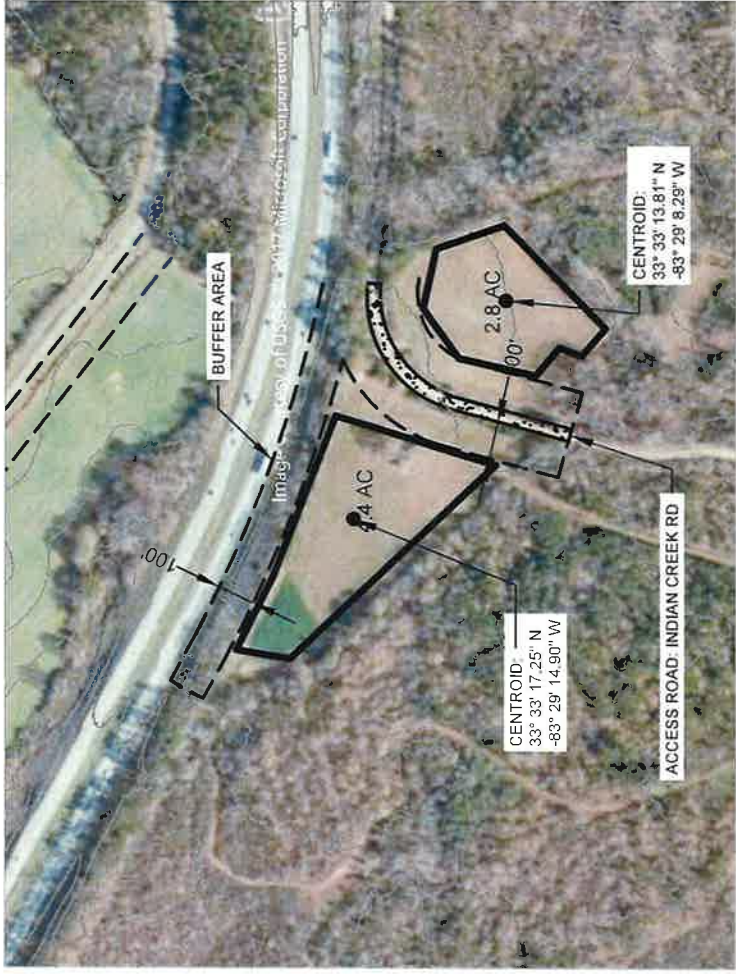
### **Southside Water Pollution Control Plant NPDES Permit No. GA0023141**

Existing Sludge Application Site Locations

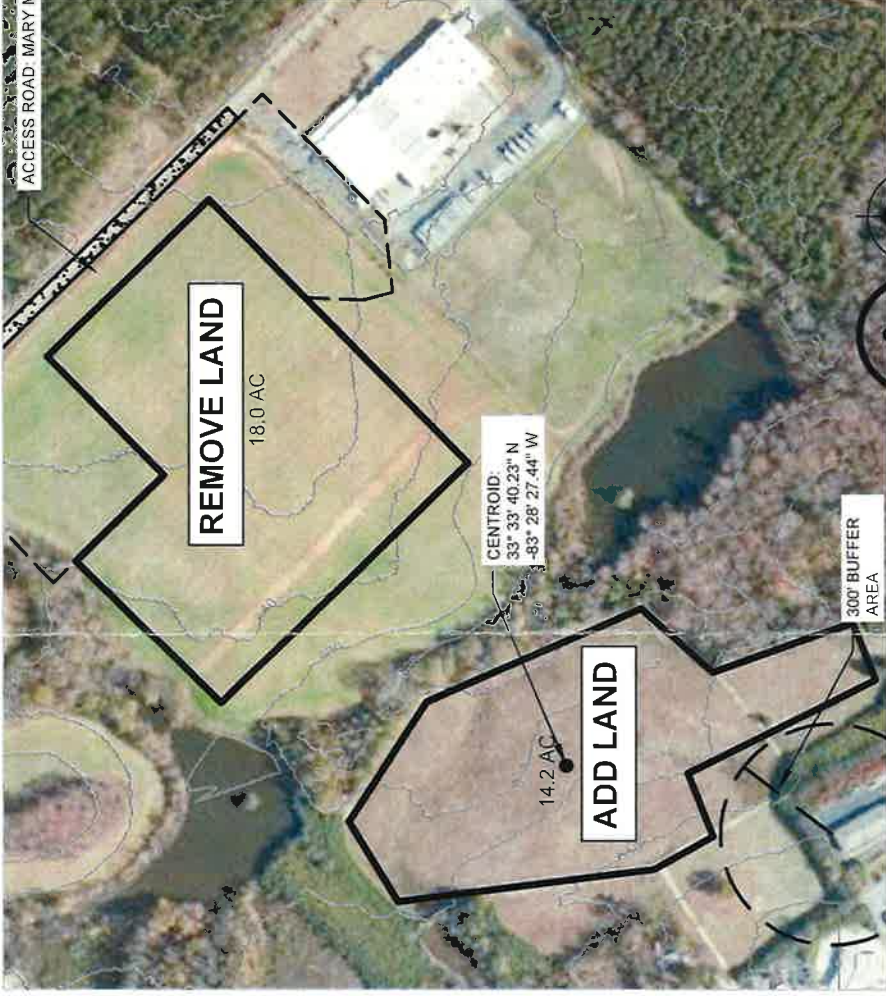




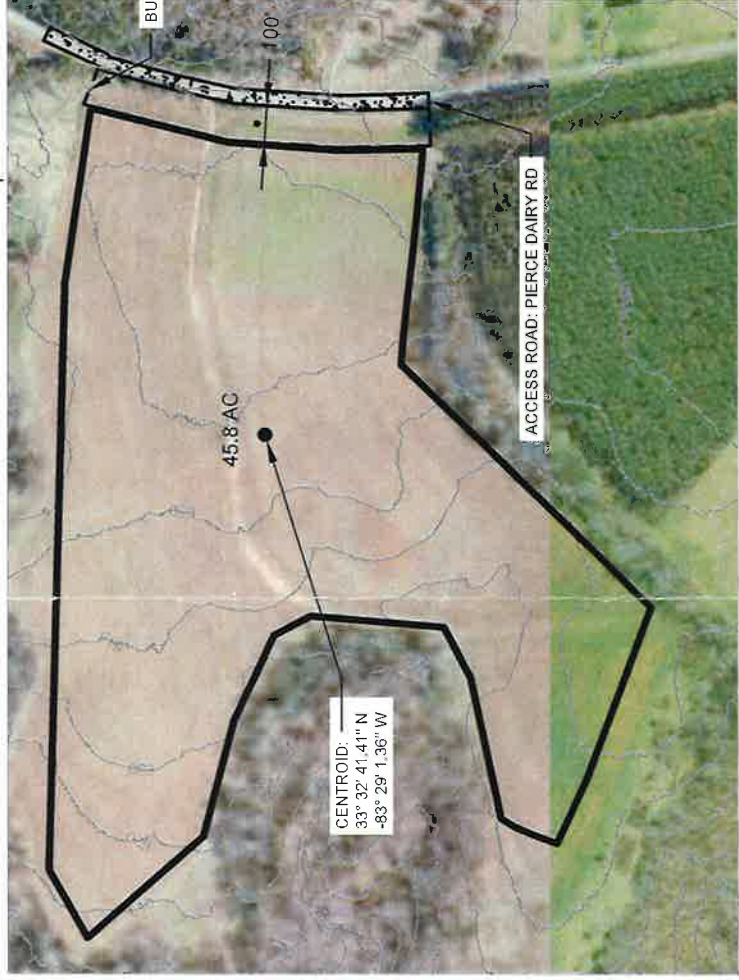
FARM 2622 (20.1 ACRES)  $\frac{1}{2}$



FARM 2373 (7.2 ACRES)  $\frac{3}{2}$



FARM 2024 (45.8 ACRES)  $\frac{2}{2}$



FARM 2025 (14.2 ACRES)  $\frac{4}{2}$

NOTE:  
1. APPLICATION AREAS

FARM NUMBER	APPROVED ACREAGE	PROPOSED ACREAGE
2622	20.1	20.1
2024	18.0	14.2
2373	7.2	7.2
2025	45.8	45.8
TOTAL	91.1	87.3

2. BUFFER REQUIREMENTS

FEATURE	DISTANCE (FT)
OCCUPIED DWELLINGS	300.0
WATER SUPPLY WELLS AND SPRINGS	500.0
PROPERTY LINES	100.0
SURFACE WATERS EXCEPT INTERMITTENT STREAMS	100.0



LEGEND

- SLUDGE APPLICATION AREAS
- 100-YEAR FLOOD PLAIN
- BUFFER AREA
- ACCESS ROADS



ATTACHMENT  
NUNN FARM  
APPLICATION AREA  
FARM 2024 PROPOSED REV.



Figure 1: Briar Creek Farm land application sites



# **FACT SHEET**

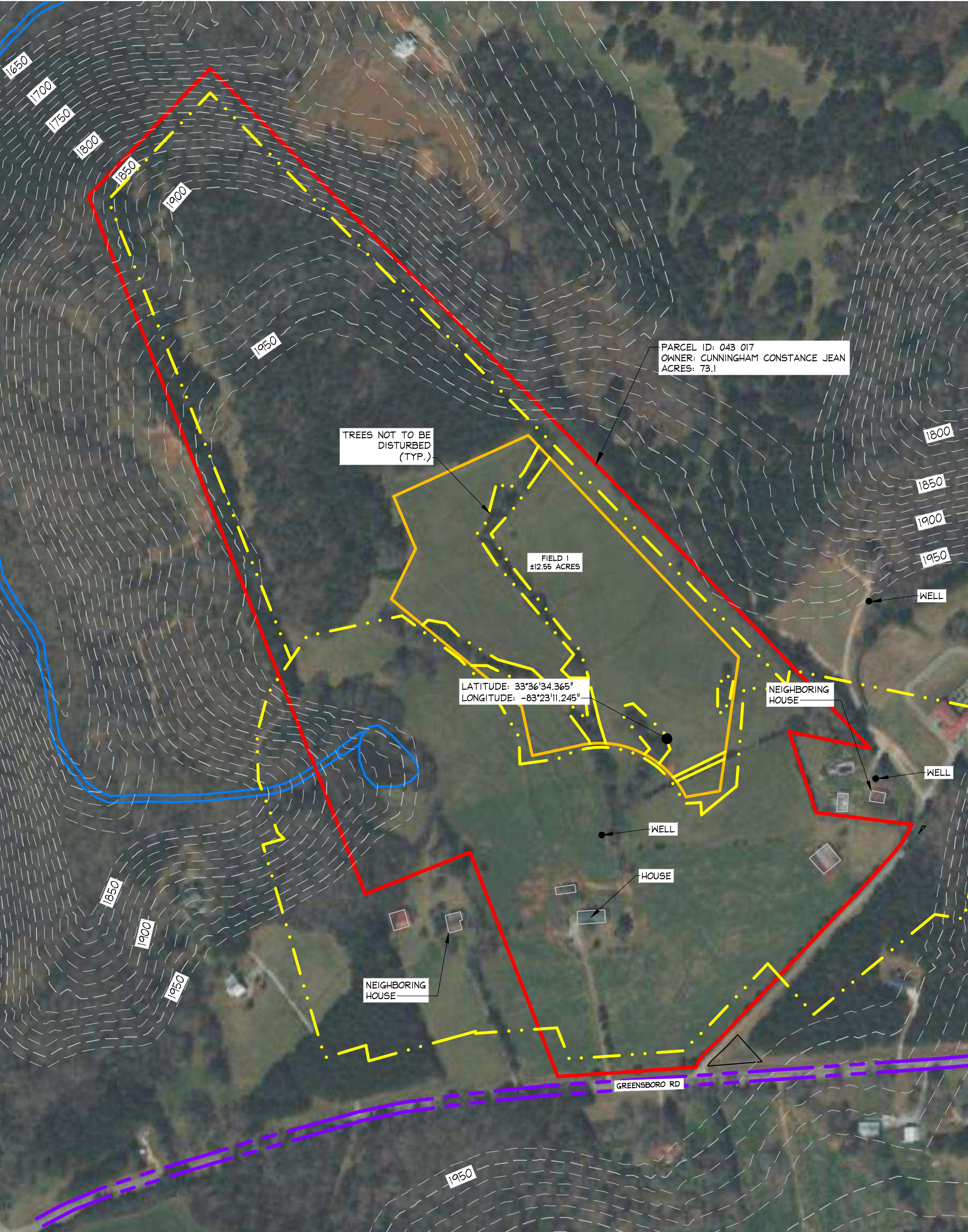
## **Appendix E**

### **Southside Water Pollution Control Plant NPDES Permit No. GA0023141**

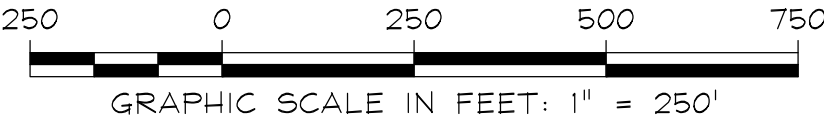
Proposed Sludge Application Site Locations



# CUNNINGHAM FIELD MAP



ALL FIELDS HAVE BEEN OFFSET FROM THE FOLLOWING:  
50' FROM ANY PROPERTY LINES OR EXTERIOR ROADWAYS  
50' FROM ANY WATERS OF THE STATE  
500' FROM PUBLIC WELLS  
250' FROM PRIVATE WELLS  
150' FROM DWELLINGS  
AREAS CONTAINING TREES WILL NOT BE DISTURBED AND DO NOT COUNT TOWARDS THE FIELD AREA.



LEGEND	
WATERS OF THE STATE	
PROPERTY LINE	
BUFFER	
FIELD AREA	
ACCESS ROAD	