Request for Information

RFQ Number: RFQ 2022 – 007

Professional Engineering Services to Perform a Sewer Feasibility Study for four (4) target areas within Spalding County, Georgia

RFI Number: 001

RFI Date: June 8, 2022

1. *Clarification:* Within the Instructions for Submittal of Statement of Qualifications Proposal section on page 8, the total number of proposals to be submitted is ten (10) hard copies and one (1) electronic copy. The first paragraph within the Instructions for Submittal of Statement of Qualifications Proposals should read.

   > **One (1) original** and **nine (9) copies** of the Proposal shall be prepared, for a total of **ten (10) sets**. One complete copy of the Proposal must be submitted electronically as a PDF via a flash drive. Each Proposal shall be identical and include a transmittal letter signed by a duly authorized officer of the firm.

2. *Clarification:* The City of Griffin does have sewer hydraulic models for the drainage basins serving their Shoal Creek, Cabin Creek, and Potato Creek Wastewater Treatment Plants. Any use of the sewer hydraulic models would have to be granted by the City of Griffin. The City of Griffin has already agreed to share its GIS sewer database on an as-need basis for this Sewer Feasibility Study.

3. *Clarification:* The NPDES permit (GA0050303) for Plant #1 currently planned to be decommissioned by the SCWSFA is attached for your use.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

EPD Director's Office
2 Martin Luther King, Jr. Drive
Suite 1456, East Tower
Atlanta, Georgia 30334
404-656-4713

Mr. David Lamb, Chairman
Spalding County Water and Sewerage Facilities Authority
Post Office Box 1087 02/17/2021
Griffin, Georgia 30224

RE: Permit Issuance
Plant #1 Water Pollution Control Plant (WPCP)
NPDES Permit No. GA0050303
Spalding County, Ocmulgee River Basin

Dear Mr. Lamb:

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.

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

Georgia Environmental Protection Division
Watershed Compliance Program
2 Martin Luther King Jr. Drive
Suite 1152 East
Atlanta, GA 30334

Please be advised that on and after the effective date indicated in the attached NPDES permit, the permittee must comply with all the terms, conditions and limitations of this permit.

If you have any questions, please contact Josh Hayes at 404-463-1834 or *josh.hayes@dnr.ga.gov*.

Sincerely,

Richard E. Dunn
Director

RED\jbh
Attachment: NPDES Permit No. GA0050303, Fact Sheet
cc: William Wilson, Spalding County Water and Sewerage Facilities Authority (wwilson@spaldingcounty.com)
Brian Upson, Paragon Consulting Group, Inc. (bupson@pcgeng.com)
Marzieh Shahbazaz, EPD Watershed Compliance (marzieh.shahbazaz@dnr.ga.gov)

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

SUMMARY PAGE

Name of Facility: Spalding County Water and Sewerage Facilities Authority (WSFA) – Plant #1 WPCP

NPDES Permit No.: GA0050303

This is a new individual NPDES permit (GA0050303) for Plant #1 WPCP (formerly known as Springs WPCP). Up to 0.04 MGD (monthly average) of treated domestic wastewater is being discharged to an unnamed tributary of Cabin Creek in the Ocmulgee River Basin. This existing discharge is currently covered under NPDES permit GA0003409, which was issued to a former textile company. Limitations in the current permit address pollutants that were present in the industrial effluent, not in domestic wastewater. In 2009, the NPDES permit was transferred to Spalding County WSFA. The treatment plant has been exclusively receiving domestic sewage from surrounding residential developments since that date. A new individual NPDES permit number has been assigned to reflect the change from industrial to domestic wastewater and appropriate effluent limitations for a domestic discharge have been included.

The NPDES Permit No. GA0003409 expired on October 31, 2004 and was administratively extended.

The permit was placed on public notice from December 4, 2020 to January 16, 2020.

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.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

PERMIT REVISIONS

Spalding County Water and Sewerage Facilities Authority / Plant #1 WPCP
NPDES Permit No. GA0050303
(Spalding County)

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

If yes, specify:

Part I.D.2.	Updated the new e-Reporting compliance date to December 21, 2025, per 40 CFR 127.16. The revision to the rule became effective on January 4, 2021.

Permit No. GA0050303
Issuance Date: 02/17/2021

GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

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,

Spalding County Water and Sewerage Facilities Authority
Post Office Box 1087
Griffin, Georgia 30224

is authorized to discharge from a facility located at

Plant #1 Water Pollution Control Plant
209 Cheatham Street
Griffin, Georgia 30224
(Spalding County)

to receiving waters

Unnamed Tributary of Cabin Creek
(Ocmulgee 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 December 20, 2019, 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 March 1, 2021.

This permit and the authorization to discharge shall expire at midnight, February 28, 2026.

STATE OF GEORGIA
CONSTITUTION
WISDOM JUSTICE MODERATION
1776

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. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Discharge to unnamed tributary to Cabin Creek - Outfall #001 (33.268093°, -84.277648°):

a. 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 9 months:

Parameters	Discharge limitations in mg/L (kg/day) unless otherwise specified		Monitoring Requirements		
	Monthly Average	Weekly Average	Measurement Frequency	Sample Type	Sample Location
Flow (MGD)	Report	Report	Seven Days/Week	Continuous Recording	Effluent
Five-Day Biochemical Oxygen Demand [1]	10.0 (1.5)	15.0 (1.9)	One Day/Week	Composite	Influent & Effluent
Total Suspended Solids [1]	20 (3.0)	30 (3.8)	One Day/Week	Composite	Influent & Effluent
Ammonia, as N [2]	1.7 (0.26)	2.6 (0.32)	One Day/Week	Composite	Effluent
Total Phosphorus, as P [3]	1.0 (0.15)	1.5 (0.19)	One Day/Week	Composite	Effluent
Fecal Coliform Bacteria (#/100 mL)	200	400	Two Day/Month	Grab	Effluent

[1] Numeric limits only apply to the effluent.

[2] 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.

[3] Total phosphorus and orthophosphate must be analyzed from the same sample.

(Effluent limitations continued on the next page)

B.1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

Discharge to unnamed tributary to Cabin Creek - Outfall #001 (33.268093°, -84.277648°):

Parameters	Discharge limitations in mg/L unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Five-Day Biochemical Oxygen Demand Removal, Minimum (%) (1)	85	See Below	See Below	See Below
Total Suspended Solids Removal, Minimum (%) (1)	85	See Below	See Below	See Below
pH, Daily Minimum – Daily Maximum (Standard Unit)	6.0 – 8.0	One Day/Week	Grab	Effluent
Total Residual Chlorine, Daily Maximum	0.014	One Day/Week	Grab	Effluent
Dissolved Oxygen, Daily Minimum	5.0	One Day/Week	Grab	Effluent
Orthophosphate, as P (2)	Report	One Day/Quarter	Composite	Effluent
Organic Nitrogen, as N (3)	Report	One Day/Quarter	Composite	Effluent
Nitrate-Nitrite, as N (3)	Report	One Day/Quarter	Composite	Effluent
Total Kjeldahl Nitrogen, as N (3)	Report	One Day/Quarter	Composite	Effluent
Total Recoverable Copper (µg/L) (4)	Report	One Day/Month	Grab	Effluent

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

(2) Total phosphorus and orthophosphate must be analyzed from the same sample.

(3) 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

(4) Refer to Part I.C.8. TOTAL RECOVERABLE COPPER COMPLIANCE SCHEDULE

(Monitoring requirements continued on the next page)

b. The monthly average, other than for fecal coliform bacteria, is the arithmetic mean of values obtained for samples collected during a calendar month.

c. The weekly average, other than for fecal coliform bacteria, 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.

d. Fecal coliform bacteria will be reported as the geometric mean of the values for the samples collected during the time periods in I.B.1.b. and I.B.1.c.

e. 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.

f. Effluent monitoring: Unless otherwise specified, effluent samples shall be collected after the final treatment process and before discharge to receiving waters.

g. 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.

h. 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 ± 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.

i. If secondary flow instruments malfunction or fail to maintain calibration as required in I.B.1.h., the flow shall be computed from manual measurements taken at the times specified for the collection of composite samples.

j. 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.2. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Discharge to unnamed tributary to Cabin Creek - Outfall #001 (33.268093°, -84.277648°):

a. The discharge from the water pollution control plant shall be limited and monitored by the permittee as specified below starting 9 months after the effective date of the permit:

Parameters	Discharge limitations in mg/L (kg/day) unless otherwise specified		Monitoring Requirements		
	Monthly Average	Weekly Average	Measurement Frequency	Sample Type	Sample Location
Flow (MGD)	0.04	0.05	Seven Days/Week	Continuous Recording	Effluent
Five-Day Biochemical Oxygen Demand [1]	10.0 (1.5)	15.0 (1.9)	One Day/Week	Composite	Influent & Effluent
Total Suspended Solids [1]	20 (3.0)	30 (3.8)	One Day/Week	Composite	Influent & Effluent
Ammonia, as N [2]	1.7 (0.26)	2.6 (0.32)	One Day/Week	Composite	Effluent
Total Phosphorus, as P [3]	1.0 (0.15)	1.5 (0.19)	One Day/Week	Composite	Effluent
Fecal Coliform Bacteria (#/100 mL)	200	400	Two Day/Month	Grab	Effluent

[1] Numeric limits only apply to the effluent.

[2] 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.

[3] Total phosphorus and orthophosphate must be analyzed from the same sample.

(Effluent limitations continued on the next page)

B.2. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

Discharge to unnamed tributary to Cabin Creek - Outfall #001 (33.268093°, -84.277648°):

Parameters	Discharge limitations in mg/L unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Five-Day Biochemical Oxygen Demand Removal, Minimum (%) (1)	85	See Below	See Below	See Below
Total Suspended Solids Removal, Minimum (%) (1)	85	See Below	See Below	See Below
pH, Daily Minimum – Daily Maximum (Standard Unit)	6.0 – 8.0	One Day/Week	Grab	Effluent
Total Residual Chlorine, Daily Maximum	0.014	One Day/Week	Grab	Effluent
Dissolved Oxygen, Daily Minimum	5.0	One Day/Week	Grab	Effluent
Orthophosphate, as P (2)	Report	One Day/Quarter	Composite	Effluent
Organic Nitrogen, as N (3)	Report	One Day/Quarter	Composite	Effluent
Nitrate-Nitrite, as N (3)	Report	One Day/Quarter	Composite	Effluent
Total Kjeldahl Nitrogen, as N (3)	Report	One Day/Quarter	Composite	Effluent
Total Recoverable Copper (µg/L) (4)	Report	One Day/Month	Grab	Effluent

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

(2) Total phosphorus and orthophosphate must be analyzed from the same sample.

(3) 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

(4) Refer to Part I.C.8. TOTAL RECOVERABLE COPPER COMPLIANCE SCHEDULE

(Monitoring requirements continued on the next page)

b. The monthly average, other than for fecal coliform bacteria, is the arithmetic mean of values obtained for samples collected during a calendar month.

c. The weekly average, other than for fecal coliform bacteria, 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.

d. Fecal coliform bacteria will be reported as the geometric mean of the values for the samples collected during the time periods in I.B.2.b. and I.B.2.c.

e. 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.

f. Effluent monitoring: Unless otherwise specified, effluent samples shall be collected after the final treatment process and before discharge to receiving waters.

g. 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.

h. 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 ± 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.

h. If secondary flow instruments malfunction or fail to maintain calibration as required in I.B.2.h., the flow shall be computed from manual measurements taken at the times specified for the collection of composite samples.

i. 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.3. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Discharge to unnamed tributary to Cabin Creek - Outfall #001 (33.268093°, -84.277648°):

a. 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 (kg/day) unless otherwise specified		Monitoring Requirements		
	Monthly Average	Weekly Average	Measurement Frequency	Sample Type	Sample Location
Flow (MGD)	0.04	0.05	Seven Days/Week	Continuous Recording	Effluent
Five-Day Biochemical Oxygen Demand [1]	10.0 (1.5)	15.0 (1.9)	One Day/Week	Composite	Influent & Effluent
Total Suspended Solids [1]	20 (3.0)	30 (3.8)	One Day/Week	Composite	Influent & Effluent
Ammonia, as N [2]	1.7 (0.26)	2.6 (0.32)	One Day/Week	Composite	Effluent
Total Phosphorus, as P [3]	1.0 (0.15)	1.5 (0.19)	One Day/Week	Composite	Effluent
Fecal Coliform Bacteria (#/100 mL)	200	400	Two Day/Month	Grab	Effluent
Total Recoverable Copper (µg/L)	9.2 (0.001)	11.7 (0.002)	One Day/Month	Grab	Effluent

(1) Numeric limits only apply to the effluent.

(2) 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.

(3) Total phosphorus and orthophosphate must be analyzed from the same sample.

(Effluent limitations continued on the next page)

B.3. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

Discharge to unnamed tributary to Cabin Creek - Outfall #001 (33.268093°, -84.277648°):

Parameters	Discharge limitations in mg/L unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Five-Day Biochemical Oxygen Demand Removal, Minimum (%) (1)	85	See Below	See Below	See Below
Total Suspended Solids Removal, Minimum (%) (1)	85	See Below	See Below	See Below
pH, Daily Minimum – Daily Maximum (Standard Unit)	6.0 – 8.0	One Day/Week	Grab	Effluent
Total Residual Chlorine, Daily Maximum	0.014	One Day/Week	Grab	Effluent
Dissolved Oxygen, Daily Minimum	5.0	One Day/Week	Grab	Effluent
Orthophosphate, as P (2)	Report	One Day/Quarter	Composite	Effluent
Organic Nitrogen, as N (3)	Report	One Day/Quarter	Composite	Effluent
Nitrate-Nitrite, as N (3)	Report	One Day/Quarter	Composite	Effluent
Total Kjeldahl Nitrogen, as N (3)	Report	One Day/Quarter	Composite	Effluent
Chronic Whole Effluent Toxicity (%) (4)	Report	See Below	Composite	Effluent

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

(2) Total phosphorus and orthophosphate must be analyzed from the same sample.

(3) 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

(4) Refer to Part I.C.9. CHRONIC WHOLE EFFLUENT TOXICITY

(Monitoring requirements continued on the next page)

b. The monthly average, other than for fecal coliform bacteria, is the arithmetic mean of values obtained for samples collected during a calendar month.

c. The weekly average, other than for fecal coliform bacteria, 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.

d. Fecal coliform bacteria will be reported as the geometric mean of the values for the samples collected during the time periods in I.B.3.b. and I.B.3.c.

e. 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.

f. Effluent monitoring: Unless otherwise specified, effluent samples shall be collected after the final treatment process and before discharge to receiving waters.

g. 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.

h. 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 ± 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.

h. If secondary flow instruments malfunction or fail to maintain calibration as required in I.B.3.h., the flow shall be computed from manual measurements taken at the times specified for the collection of composite samples.

i. 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. TOTAL RECOVERABLE COPPER COMPLIANCE SCHEDULE

The permittee shall comply with the total recoverable copper effluent limitations in Part I.B.3. of this permit in accordance with the following schedule:

a. Within 6 months of the effective date of the permit, the permittee shall submit a design development report (DDR) and an environmental information document (EID) to EPD for any modifications needed at the facility that will allow the facility to meet the total recoverable copper effluent limitations in Part I.B.3. of this permit.

b. Within 12 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 recoverable copper effluent limitations in Part I.B.3. of this permit.

c. Within 18 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 ammonia effluent limitations in Part I.B.3. of this permit.

d. Within 27 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 ammonia effluent limitations in Part I.B.3. of this permit.

e. Within 36 months of the effective date of the permit, the permittee shall comply with the total recoverable copper effluent limitations in Part I.B.3. 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 recoverable copper 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 recoverable copper effluent limitations from the date of EPD's letter and any future exceedance of those effluent limitations in Part I.B.3. 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 recoverable copper effluent limitations in Part I.B.3. 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 1152 East
Atlanta, Georgia 30334

9. CHRONIC WHOLE EFFLUENT TOXICITY (WET)

The permittee shall conduct one chronic whole effluent toxicity (WET) test for four consecutive quarters after starting operation under the Part I.B.3. effluent limitations. The testing must be conducted in accordance with the most current U.S. Environmental Protection Agency (EPA) chronic aquatic toxicity testing manuals. The referenced document is entitled Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4th Edition, U.S. EPA, 821-R-02-013, October 2002. Definitive tests must be run on the same samples concurrently using both an invertebrate species (i.e., *Ceriodaphnia dubia*) and a vertebrate species (i.e., *Pimephales promelas*). The testing must include an effluent concentration of 100%.

EPD will evaluate the WET tests submitted to determine whether toxicity has been demonstrated. The effluent discharge will not be considered toxic if the No Observed Effect Concentration (NOEC) is observed at an effluent concentration of 100%. The results of the tests shall be submitted to EPD with the permittee's monthly Discharge Monitoring Reports.

Within thirteen months of starting operation under Part I.B.3 effluent limitations, the permittee shall submit a report to EPD that includes a summary of the effluent data collected as well as copies of all the analytical laboratory reports. The report shall be submitted to EPD at the address below:

Environmental Protection Division
Wastewater Regulatory Program
2 Martin Luther King Jr. Drive SE
Suite 1152 East
Atlanta, Georgia 30334

Upon receipt of the report, EPD will evaluate the results. If the test results indicate effluent toxicity, the permittee may be required to perform additional tests or studies in accordance with Part I.C.5 of the permit and/or the permit may be modified to include a chronic WET limit.

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://netdmr.epa.gov/netdmr/public/home.htm

   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 15th 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:

1. Date of the spill or major spill;
2. Location and cause of the spill or major spill;
3. Estimated volume discharged and name of receiving waters; and
4. 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:

1. Dissolved Oxygen;
2. Fecal Coliform Bacteria;
3. pH;
4. Temperature; and
5. 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.

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

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:

Josh Hayes, Environmental Engineer
josh.hayes@dnr.ga.gov
404-463-1834

Draft permit:

- ☒ First issuance (facility currently covered under NPDES Permit No. GA0003409)
- ☐ Reissuance with no or minor modifications from previous permit
- ☐ Reissuance with substantial modifications from previous permit
- ☐ Modification of existing permit
- ☐ Requires EPA review
- ☐ Designated as a major (≥1MGD or approved industrial pre-treatment program)

This existing discharge is currently covered under NPDES Permit No. GA0003409. However, the facility was converted from an industrial wastewater treatment facility to a domestic wastewater facility in 2009. Therefore, a new permit has been drafted to reflect this change.

1. FACILITY INFORMATION

1.1 NPDES Permit No.: GA0050303

1.2 Name and Address of Owner/Applicant

Spalding County Water and Sewerage Facilities Authority (WSFA)
Post Office Box 1087
Griffin, Georgia 30224

1.3 Name and Address of Facility

Spalding County WSFA Plant #1 Water Pollution Control Plant (WPCP)
(formerly known as Springs WPCP)
209 Cheatham Street
Griffin, Georgia 30224

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

Outfall #	Latitude (°)	Longitude (°)	Receiving Waterbody
001	33.268093	-84.277648	Unnamed Tributary of Cabin Creek

1.5 Permitted Design Capacity

0.04 MGD

The monthly and weekly average flow limitations will only be applicable 9 months after the effective date of the permit to allow time for the permittee to build an equalization basin or to connect to the City of Griffin sewer.

1.6 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.

1.7 Description of the Water Pollution Control Plant

Wastewater treatment:

The treatment process consists of influent monitoring, screening, equalization basin, biological treatment (activated sludge with sequencing batch reactors), secondary clarification, chemical addition for phosphorus removal, tertiary filtration, chlorine disinfection, dechlorination, and post-aeration.

Solids processing:

Sludge is held in clarifier, then thickened in a digestor, and transported to a landfill for disposal.

1.8 Type of Wastewater Discharge

☐	Process wastewater	☐	Stormwater
☒	Domestic wastewater	☐	Combined (Describe)
☐	Other (Describe)		

1.9 Characterization of Effluent Discharge (as reported by applicant)

Discharge to unnamed tributary to Cabin Creek - Outfall #001 (33.268093°, -84.277648°):

Effluent Characteristics (as Reported by Applicant)	Maximum Daily Value	Average Daily Value
Flow (MGD)	0.04	0.03
Five-Day Biochemical Oxygen Demand (mg/L)	7.6	2.4
Total Suspended Solids (mg/L)	45	5
Fecal Coliform Bacteria (#/100mL)	0	0

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

Source	Activity	Applicable Regulation
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 use classifications, numeric and or narrative water quality criteria and an anti-degradation policy. The use classification system designates the beneficial 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 beneficial use classification for each water body. The antidegradation policy represents an approach to maintain and to protect various levels of water quality and uses.

3.1 Receiving Waterbody Classification and Information – Unnamed Tributary to Cabin Creek:

Specific Water Quality Criteria for Classified Water Usage [391-3-6-.03(6)]:

Fishing: Propagation of Fish, Shellfish, Game and Other Aquatic Life; secondary contact recreation in and on the water; 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. For the months of May through October, when water contact recreation activities are expected to occur, fecal coliform not to exceed a geometric mean of 200 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. Should water quality and sanitary studies show fecal coliform levels from non-human sources exceed 200/100 mL (geometric mean) occasionally, then the allowable geometric mean fecal coliform shall not exceed 300 per 100 mL in lakes and reservoirs and 500 per 100 mL in free-flowing freshwater streams. For the months of November through April, fecal coliform not to exceed a geometric mean of 1,000 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 and not to exceed a maximum of 4,000 per 100 mL for any sample. The State does not encourage swimming in these surface waters since several factors which are beyond the control of any State regulatory agency contribute to elevated levels of bacteria.

2. 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 $CaCO_3$/L)	Upstream Total Suspended Solids (mg/L)
001	0.037	0.018	0.016	0.2	25 [(1)]	10 [(2)]

(1) Not available. A conservative value of 25 mg/L will be used for the reasonable potential analysis calculations.

(2) 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

Cabin Creek	Headwaters, Griffin to Towaliga River	Ocmulgee	Not Supporting	Bio F, FC	16	4a	TMDLs completed Bio F (2002 & 2007), Tox (2002), FC (2002 & 2007), DO (2002).
GAR030701031103	Spalding	Fishing	1,3,4,10	UR	Miles		

Cabin Creek is listed on the 2020 305(b)/303(d) list as not supporting its designated use (fishing) but TMDLs have been completed for the impacted parameters (fecal coliform bacteria, dissolved oxygen, sediment, and toxicity).

3.4 Total Maximum Daily Loads (TMDLs)

A TMDL evaluation of the Ocmulgee River Basin for fecal coliform was completed in 2002. Additionally, a TMDL evaluations for 74 stream segments in the Ocmulgee River Basin for fecal coliform was completed in 2007. Both TMDLs recommended that all municipal treatment facilities with the potential for the occurrence of fecal coliform in their discharge will be given end of pipe limits equivalent to the water quality standard of 200 counts/100 ml or less. The fecal coliform bacteria limits in the draft permit are in accordance with the TMDL requirements.

A TMDL for dissolved oxygen in the Ocmulgee River Basin was completed in 2002. The TMDL limits the Ultimate Oxygen Demand (UOD) loading to Cabin Creek to 767 lb/day for the combined point sources and non-point sources. The TMDL estimated the non-point source load to be 44 lb/day. The City of Griffin – Cabin Creek WPCP (NPDES Permit No. GA0020214) current permitted load is 515 lb/day. The proposed UOD load from Spalding County WSFA - Plant # 1 WPCP is 10 lb/day. The total combined UOD load to Cabin creek from point sources and non-point sources is therefore 44 + 515 + 10 = 569 lb/day. The proposed BOD_5, and ammonia effluent limitations in the draft permit meet the TMDL requirements.

The Georgia Environmental Protection Division completed a TMDL evaluation for 41 stream segments for sediment in the Ocmulgee River Basin in 2002. Additionally, a TMDL was completed for 70 stream segments in the Ocmulgee River Basin in 2007 for sediment. Neither TMDL recommended point source sediments loads to be reduced. The proposed TSS effluent limits requirements in the draft permit meet the requirements of both TMDLs.

A TMDL evaluation of Cabin Creek in the Ocmulgee River Basin for toxicity was completed in 2002. The TMDL required that the No Observed Effect Concentration (NOEC) for the effluent from each discharger be 100%. For municipal dischargers, the TMDL allows EPD to conduct reasonable potential analysis in accordance with the WET strategy to determine the need for a NOEC limit. EPD will determine if effluent from Plant # 1 WPCP has a reasonable potential of discharging chronically toxic effluent by the evaluation of four quarterly Whole Effluent Toxicity (WET) tests. The effluent from the facility will not be considered toxic if NOEC is 100% for all tests. The WET testing requirements in the draft permit are in accordance with the TMDL requirements.

3.5 Wasteload Allocation (WLA)

The WLA for reissuance was issued on March 16, 2020. 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_5), 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_5	30 mg/L	45 mg/L
TSS	30 mg/L	45 mg/L
BOD_5 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." [emphasis added]

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_5), 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, fecal coliform (including *E. coli*), or volatile organics.

4.2 Whole Effluent Toxicity (WET)

The permittee must conduct one whole effluent toxicity (WET) test for four consecutive quarters during the first year after starting operation under Part I.B.3 effluent limitations.

EPD will evaluate the WET tests submitted to determine whether toxicity has been demonstrated. If the test results indicate effluent toxicity or if the tests are invalid, the permittee may be required to perform additional WET tests in accordance with Part I.C.5 of the permit and/or the permit may be modified to include a chronic WET limit.

4.4 Conventional Pollutants

Pollutants of Concern	Basis
pH	The instream wastewater concentration (IWC) is 77%. 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 and effluent pH should be limited to 6.0-8.5 SU (Daily minimum – Daily maximum). Additionally, since the instream ammonia toxicity criterion is pH and temperature dependent, the daily maximum pH limitation has been decreased to 8.0 S.U. to develop the reduced ammonia limit (refer to Section 4.5 below).
Five-Day Biochemical Oxygen Demand (BOD_5)	According to the steady-state dissolved oxygen Georgia DOSAG model, a monthly average BOD_5 limit of 10.0 mg/L, when combined with the ammonia limit (refer to Section 4.5 below), is protective of the instream Water Quality Standard for dissolved oxygen described in Section 3.1 above and the TMDL requirements in Section 3.4 above.. Refer to the WLA in *Appendix A* for model inputs.
Total Suspended Solids (TSS)	The facility is equipped with tertiary filters. A monthly average TSS limit of 20 mg/L has been included in the draft permit based on facility design (i.e., technology-based limit).
Fecal Coliform Bacteria (FCB)	In accordance with 40 C.F.R. §122.44(d)(1)(ii) of the federal regulations, 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 fecal coliform and *Escherichia coli*. EPD has determined these facilities discharge the conventional pollutant fecal coliform bacteria, wastewater treatment systems are consistently designed to treat fecal coliform bacteria, and fecal coliform bacterium 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. The monthly average FCB limit of 200 #/100mL is in accordance with the instream Water Quality Standards in Section 3.1 above and the TMDL requirements in Section 3.4 above.

4.5 Nonconventional Pollutants

Pollutants of Concern	Basis
Total Residual Chlorine (TRC)	Chlorine is used for disinfection. A daily maximum TRC limit of 0.014 mg/L has been determined using the US EPA's chronic TRC criterion of 11 µg/L in the receiving stream after dilution. Refer to Section 4.7.6 below for calculations.
Dissolved Oxygen (DO)	According to the steady-state dissolved oxygen Georgia DOSAG model, a minimum effluent DO of 5.0 mg/L is protective of the instream Water Quality Standard for dissolved oxygen described in Section 3.1 above.
Total Phosphorus (TP)	A monthly average limit of 1.0 mg/L is in accordance with EPD's *Strategy for Addressing Phosphorus in NPDES Permitting*, 2011.
Orthophosphate, Total Kjeldahl Nitrogen (TKN), Organic Nitrogen, Nitrate-Nitrite	Orthophosphate, TKN, organic nitrogen, and nitrate-nitrite monitoring has been included in the draft permit. The data will be used to determine nutrient speciation and to quantify nutrient loadings in the Ocmulgee River Basin.
Ammonia (NH_3)	A monthly average ammonia limit of 1.7 mg/L is in accordance with EPD's *NPDES Permitting Strategy for Addressing Ammonia Toxicity*, 2017. According to the steady-state dissolved oxygen Georgia DOSAG model, a monthly average ammonia limit of 1.7 mg/L, when combined with the monthly average BOD_5 limit (Refer to Section 4.4 above), is protective of the instream Water Quality Standard for dissolved oxygen described in Section 3.1 above.

4.6 Toxics & Manmade Organic Compounds

Two years of data from the Discharge Monitoring Reports (DMR), submitted under the current permit (GA0003409), were evaluated. All pollutants were "non-detect" except for the following:

Pollutants of Concern	Basis
	This parameter was evaluated, in accordance with the procedures provided in 391-3-6.06 of the Georgia Rules and Regulations for Water Quality Control, and its instream concentration was found to be greater than the acute instream standard and 50% of the chronic instream water quality standard. Refer to *Appendix B* of the Fact Sheet for reasonable potential evaluations.
Total Recoverable Copper	In accordance with EPD reasonable potential procedures, copper is considered a pollutant of concern and a monthly average limit of 9.2 µg/L has been included in the draft permit, along with a compliance schedule to meet this new limit. The limit has been determined based on an instream hardness of 20 mg/L. The limit may be revised if updated instream data (hardness, 7Q10, 1Q10) becomes available.
Total Recoverable Zinc	This parameter was evaluated, in accordance with the procedures provided in 391-3-6.06 of the Georgia Rules and Regulations for Water Quality Control, and its instream concentration was found to be less than the acute and 50% of chronic instream water quality standards. Refer to *Appendix B* of the Fact Sheet for reasonable potential evaluations. In accordance with EPD reasonable potential procedures, zinc is not considered a pollutant of concern and additional monitoring is not required.
Chloroform	This parameter was evaluated, in accordance with the procedures provided in 391-3-6.06 of the Georgia Rules and Regulations for Water Quality Control, and its instream concentration was found to be less than 50% of the instream water quality standards. Refer to *Appendix B* of the Fact Sheet for reasonable potential evaluations. In accordance with EPD reasonable potential procedures, chloroform is not considered a pollutant of concern and additional monitoring is not required.

Pollutants of Concern	Basis
Phenol	This parameter was evaluated, in accordance with the procedures provided in 391-3-6.06 of the Georgia Rules and Regulations for Water Quality Control, and its instream concentration was found to be less than 50% of the instream water quality standards. Refer to *Appendix B* of the Fact Sheet for reasonable potential evaluations. In accordance with EPD reasonable potential procedures, phenol is not considered a pollutant of concern and additional monitoring is not required.
Sulfide	In typical domestic wastewater, microbial reduction of the sulfate ion from septic conditions in the collection system is the dominant mechanism for sulfide formation. Sulfide then combine with hydrogen to produce hydrogen sulfide gas, which can lead to odor and corrosion issues. Sulfide reaching the wastewater treatment plant, if any, will be oxidized to sulfate under the aerobic conditions in the aeration basin. Therefore, effluent limitations for sulfide have not been included in draft permit.

4.7 Calculations for Effluent Limits

4.7.1 Instream Waste Concentration (IWC):

$$IWC = \frac{Q_{Effluent}\ (ft^3/sec)}{Q_{Effluent}\ (ft^3/sec) + 7Q10\ (ft^3/sec)} \quad \%$$

$$= \frac{0.06}{0.06 + 0.0175}$$

$$= 77\ \%$$

4.7.2 Flow:

Q = Flow
C = Concentration
M = Mass

- *Weekly Average Flow:*

Q_{Weekly} $= Q_{Monthly}$ (MGD) x 1.25

= 0.04 x 1.25

= 0.05 MGD

4.7.3 Five-Day Biochemical Oxygen Demand:

- *Weekly Average Concentration:*

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

= 10.0 x 1.5

= 15.0 mg/L

- *Monthly Average Mass Loading:*

$$M_{Monthly} = \frac{Q_{Monthly}\,(MGD) \times [C]_{Monthly}\,(mg/L \text{ or } ppm) \times 8.34\,(lbs/gal)}{2.2\,(lbs/Kg)}$$

$$= \frac{0.04 \times 10.0 \times 8.34}{2.2}$$

= 1.5 kg/day

- *Weekly Average Mass Loading:*

$$M_{Weekly} = \frac{Q_{Weekly}\,(MGD) \times [C]_{Monthly}\,(mg/L \text{ or } ppm) \times 8.34\,(lbs/gal)}{2.2\,(lbs/Kg)}$$

$$= \frac{0.05 \times 10.0 \times 8.34}{2.2}$$

= 1.9 kg/day

4.7.4 Total Suspended Solids:

- *Weekly Average Concentration:*

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

= 20 x 1.5

= 30 mg/L

- *Monthly Average Mass Loading:*

$$M_{Monthly} = \frac{Q_{Monthly}\,(MGD) \times [C]_{Monthly}\,(mg/L \text{ or } ppm) \times 8.34\,(lbs/gal)}{2.2\,(lbs/Kg)}$$

$$= \frac{0.04 \times 20 \times 8.34}{2.2}$$

$$= 3.0 \text{ kg/day}$$

- *Weekly Average Mass Loading:*

$$M_{Weekly} = \frac{Q_{Weekly}\,(MGD) \times [C]_{Monthly}\,(mg/L \text{ or } ppm) \times 8.34\,(lbs/gal)}{2.2\,(lbs/Kg)}$$

$$= \frac{0.05 \times 20 \times 8.34}{2.2}$$

$$= 3.8 \text{ kg/day}$$

4.7.5 Fecal Coliform Bacteria:

- *Weekly Average Concentration:*

$$C_{Weekly} = C_{Monthly}\,(\#/100\text{ mL}) \times 2$$

$$= 200 \times 2$$

$$= 400\ \#/100\text{ mL}$$

4.7.6. Total Residual Chlorine (TRC):

- *Daily Maximum Concentration:*

$$[TRC]_{Effluent} = \frac{[Q_{Effluent}\,(ft^3/sec) + 7Q10\,(ft^3/sec)] \times [TRC]_{Stream}\,(mg/L)}{Q_{Effluent}\,(ft^3/sec)}$$

$$= \frac{(0.06 + 0.017) \times 0.011}{0.06}$$

$$= 0.014 \text{ mg/L}$$

4.7.7 Ammonia:

- *Toxicity Analysis:*

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

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

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:

$$\frac{\left(Q_{\text{Effluent}}\,(ft^3/sec) + 30Q3\,(ft^3/sec)\right) \times CCC\,(mg/L) - 30Q3\,(ft^3/sec) \times [NH_3]_{\text{Stream Background}}\,(mg/L)}{Q_{\text{Effluent}}\,(ft^3/sec)}$$

Refer to *Appendix C* for detailed calculations.

- *Weekly Average Concentration:*

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

$$= 1.7 \times 1.5$$

$$= 2.6 \text{ mg/L}$$

- *Monthly Average Mass Loading:*

$$M_{\text{Monthly}} = \frac{Q_{\text{Monthly}}\,(MGD) \times [C]_{\text{Monthly}}\,(mg/L \text{ or } ppm) \times 8.34\,(lbs/gal)}{2.2\,(lbs/Kg)}$$

$$= \frac{0.04 \times 1.7 \times 8.34}{2.2}$$

$$= 0.26 \text{ kg/day}$$

- *Weekly Average Mass Loading:*

$$M_{\text{Weekly}} = \frac{Q_{\text{Weekly}}\,(MGD) \times [C]_{\text{Monthly}}\,(mg/L \text{ or } ppm) \times 8.34\,(lbs/gal)}{2.2\,(lbs/Kg)}$$

$$= \frac{0.05 \times 1.7 \times 8.34}{2.2}$$

$$= 0.32 \text{ kg/day}$$

4.7.8 Total Phosphorus:

- *Weekly Average Concentration:*

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

$= 1.0 \times 1.5$

$= 1.5\ mg/L$

- *Monthly Average Mass Loading:*

$$M_{Monthly} = \frac{Q_{Monthly}\ (MGD) \times [C]_{Monthly}\ (mg/L \text{ or } ppm) \times 8.34\ (lbs/gal)}{2.2\ (lbs/Kg)}$$

$$= \frac{0.04 \times 1.0 \times 8.34}{2.2}$$

$= 0.15\ kg/day$

- *Weekly Average Mass Loading:*

$$M_{Weekly} = \frac{Q_{Weekly}\ (MGD) \times [C]_{Monthly}\ (mg/L \text{ or } ppm) \times 8.34\ (lbs/gal)}{2.2\ (lbs/Kg)}$$

$$= \frac{0.05 \times 1.0 \times 8.34}{2.2}$$

$= 0.19\ kg/day$

4.7.8 Metals

Refer to *Appendix B* for metal calculations.

4.8 Applicable Technology Based Effluent Limits (TBELS)

Technology-based effluent limitations 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 United States. TBELs are developed independently of the potential impact of a discharge on the receiving water, which is addressed through water quality standards and water quality-based effluent limitations. The NPDES regulations at Title 40 of the Code of Federal Regulations 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 indicates that permit writers must include in permits additional or more stringent effluent limitations and conditions, including those necessary to protect water quality.

For pollutants not specifically regulated by Federal Effluent Limit Guidelines, the permit writer must identify any needed Technology-based effluent limitations and utilizes best professional judgment to establish technology-based limits or determine other appropriate means to control its discharge.

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_5), 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_5	30 mg/L	45 mg/L
TSS	30 mg/L	45 mg/L
BOD_5 and TSS removal (concentration)	≥ 85%	--
pH (Daily Minimum – Daily Maximum)	6.0-9.0 S.U.	

4.9 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 [1]	TBELS [1]
	Monthly Average	*Monthly Average*
Five-Day Biochemical Oxygen Demand (mg/L)	**10.0**	30.0
Total Suspended Solids (mg/L)	None	**20**
Total Phosphorus (mg/L)	**1.0**	None
Ammonia (mg/L)	**1.7**	None
Fecal Coliform Bacteria (#/100 mL)	**200**	None
Dissolved Oxygen (mg/L), Daily Minimum	**6.0**	None
Total Residual Chlorine (mg/L), Daily Maximum	**0.015**	None
Total Recoverable Copper (µg/L)	**9.5**	None
pH (S.U.), Daily Minimum and Daily Maximum	**6.0 – 8.0**	6.0 – 9.0

[1] Effluent limits in bold were included in the permit. Refer to Sections 4.4, 4.5, 4.6, 4.7, and 4.8 above for more information.

5. OTHER PERMIT REQUIREMENTS AND CONSIDERATIONS

5.1 Industrial Pretreatment Program (IPP)

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

5.2 Sludge Management Plan (SMP)

Sludge is disposed of in the Republic Services – Pine Ridge Recycling landfill located at 105 Bailey Jester Road, Griffin, Georgia 30223; therefore, a SMP is not required.

5.3 Antidegradation

This existing discharge is currently covered under NPDES Permit No. GA0003409. However, the facility was converted from an industrial wastewater treatment facility to a domestic wastewater facility in 2009. Therefore, a new permit has been drafted to reflect this change. In accordance with EPD's *Antidegradation Implementation Guidelines, Section 2.2*, 2019, since this existing discharge is currently covered under an NPDES permit and there will be no increase in pollutant loading or wastewater discharge volume, an antidegradation analysis is not required for this proposed draft permit.

5.4 Watershed Protection Plan (WPP)

The Authority does not have an approved WPP. A WPP is only required for new or expanding facilities, as well as for facilities with design permitted flow greater or equal to 1.0 MGD. The Spalding County WSFA Plant #1 WPCP is an existing facility.

5.5 Service Delivery Strategy

The Authority is in compliance with the Department of Community Affairs approved Service Delivery Strategy for Spalding County.

5.6 Compliance Schedules

A 9-month compliance schedule to meet the new limitation for effluent flow 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

A 36-month compliance schedule to meet the new limitation for total recoverable copper 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.

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
Watershed Compliance Program
2 Martin Luther King Jr. Drive
Suite 1152 East
Atlanta, Georgia 30334

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 1152 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* 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

Springs Water Pollution Control Plant
NPDES Permit No. GA0050303

Waste Load Allocation (WLA)

National Pollutant Discharge Elimination System
Wasteload Allocation Form

Part I: Background Information

WLA Request Type: Reissuance ☐ Expansion ☐ Relocation ☐ Modification ☒ New Discharge ☐

Facility Name: **Spalding County Springs WRF** County: **Spalding** WQMU: **0501**

NPDES Permit No.: **GA0003409** Expiration Date: Outfall Number: **001**

Receiving Water: **Unnamed trib. to Cabin Creek** River Basin: **Ocmulgee River** 10-Digit HUC: **0307010311**

Discharge Type: Domestic ☐ Industrial ☐ Both ☒ Proportion (D:I): Flow(s) Requested (MGD): **0.04**

Industrial Contributions Type(s): **Currently no industrial input as textile plant is shut-down**

Treatment Process Description: **Old plant includes influent screening, load & flow equalization, aeration basin with flow equalization and second aeration basin, clarification with return activated sludge, chlorination and flow metering.**

Additional Information: (history, special conditions, other facilities):

Requested by: **Benoit Causse** Title: **EE** Program: **WRP**

Telephone: **404-463-4958** Date: **2/21/2020**

Part II: Receiving Water Information

Receiving Water: **Unnamed tributary to Cabin Creek** Designated Use Classification: **Fishing**

Integrated 305(b)/303(d) List: Yes ☐ No ☒ Partial Support: ☐ Not Support: ☐ Criteria:

Total Maximum Daily Load: Yes ☒ No ☐ Parameter(s) **FC, TSS, DO** WLA Complies with TMDL Yes ☒ No ☐

The unnamed tributary is not on the 2018 integrated 305b/303d list, however the downstream Cabin Creek is. The 2007 Fecal Coliform TMDL requires future point source effluent to be given equivalent to 200 counts/ 100 mL limits or lower. No point source sediment loads are to be reduced in the 2002 and 2007 sediment TMDL (Biota Impacted). For the 2002 DO TMDL, a combined limit of 767 lbs/day was assessed for Cabin Creek. This facility will contribute 8.3 lbs/day of load to Cabin Creek watershed.

Part Water Quality Model Review Information

Model Type: Uncalibrated ☒ Calibrated ☐ Verified ☐ Cannot be Modeled ☐ Model Length (mi): **17.6**

Field Data: None ☒ Fair ☐ Good ☐ Excellent ☐

Model and Field Data Description: **Steady-state Georgia DOSAG model, Updated Ocmulgee River DOSAG model**

Critical Water Temperature:(°C):	**26**	Drainage Area (mi²):	**0.2**			Mean annual streamflow at discharge (cfs):	**0.27**
7Q10 Yield (cfs/mi²):	**0.086**	Velocity (range fps):	**0.07-0.66**			30Q3 streamflow at discharge (cfs):	**0.037**
Effluent Flow Rate (cfs):	**0.06**	7Q10 IWC (%):	**78**			7Q10 streamflow at discharge (cfs):	**0.017**
Slope (range - fpm):	**6.7-64.4**	K1: **0.15**	K3 **1.5**	K2 (range):	**5.4-15.4**	1Q10 streamflow at discharge (cfs):	**0.015**
SOD: **0.2**	f-Ratio (BOD_u/BOD_5) **2.5**	Escape Coef. (ft^{-1}): **0.08**					

The minimum dissolved oxygen concentration is 5.1 mg/L, occurring 1.53 miles downstream from the discharge.

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

Rationale: Same as current ☐ Revised ☒ New ☐

Location: **Current discharge location on unnamed tributary approximately 0.6 mile upstream from its junction with Cabin Creek.**

Effluent Flow (MGD)	BOD_5	NH_3-N	DO	TSS	Fecal Coliform (No./100ml)	TRC	pH (std. units)	Total Phosph.	Ortho Phosph.	Organic Nitrogen	Total Kjeldahl Nitrogen	Nitrate-Nitrite
0.04	10	1.7	5	20	200	0.014	6-8	5.0	Monitor	Monitor	Monitor	Monitor

Additional Comments:

- **Priority pollutants 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.**
- **Total-P and Ortho-P should be analyzed from the same effluent sample. Ortho-P is a component of TP and should always be less than or equal to TP. Nitrogen constituents should be analyzed from the same effluent sample. Organic Nitrogen should be calculated as TKN minus NH3.**
- **The revised TRC limit applies only when chlorine is used in the facility.**
- **The revised Ammonia limit meets the EPA's Aquatic Life Ambient Water Quality Criteria for Ammonia-Freshwater 2013.**
- **The 30Q3 is estimated at 0.037 cfs, this flow is used in the ammonia toxicity evaluation for this facility and is calculated from data at USGS gage 02211375 Cabin Creek at N. 2nd St 5, near Griffin Ga.**
- **The flow capacity of this discharge location is limited to 33% of the Mean Annual Flow (MAF) of the unnamed tributary which is estimated at 0.274 cfs; or 0.09 cfs.**

Prepared by: **William Wang** WW Date: **3/5/2020** | Reviewed by: **Josh Welte** JW Date: 12.MAR.20

Part V: Program Manager Comments

Elizabeth Booth Elizabeth A. Booth Date: 3/16/20

FACT SHEET

Appendix B

Spalding County WSFA Plant #1 WPCP
NPDES Permit No. GA0050303

Stream Data (upstream of the discharge):

TSS:	**10**	mg/L
7Q10:	**0.0175**	ft^3/s
1Q10:	**0.0156**	ft^3/s
Mean flow:	**0.06**	ft^3/s

Effluent Data:

TSS:	**20.0**	mg/L
Flow:	**40,000**	gal/day
Flow:	0.06	ft^3/s

Stream data (downstream of the discharge):

Hardness (at 7Q10):	**20.0**	mg/L		
TSS (at 7Q10):	17.80	mg/L		
Dilution factor (at average flow):	2.0		IWC (at average flow):	51
Dilution factor (at 7Q10):	1.28		IWC (at 7Q10):	78
Dilution factor (at 1Q10):	1.25		IWC (at 1Q10):	80

Acute Water Quality Criteria (WQC_{Acute}) - Metals:

Metal	K_{PO}	α	f_D	**Maximum** effluent C_T (µg/L)	Instream C_D (µg/L)	WQC_{Acute} (µg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00		0.0	340.00	no
Cadmium	4.00.E+06	-1.131	0.000		0.0	0.42	no
Chromium III	3.36.E+06	-0.930	0.20	**21.3**	3.3	152.49	no
Chromium VI	3.36.E+06	-0.930	0.20	**21.3**	3.3	16.00	no
Copper	1.04.E+06	-0.744	0.31	**75.0**	18.86	2.95	**yes**
Lead	2.80.E+06	-0.800	0.00		0.0	10.79	no
Mercury					0.0000	1.40	no
Nickel	4.90.E+05	-0.572	0.00		0.0	119.99	no
Zinc	1.25.E+06	-0.704	0.25	**74.0**	15.03	29.97	**no**

$$f_D = \frac{1}{1 + K_{PO} \times TSS_{Instream}(mg/L)^{(1+\alpha)} \times 10^{-6}} \qquad \text{Instream } C_D = \frac{\text{Effluent } C_T(mg/L) \times f_D}{DF} \text{ mg/L}$$

$$\text{Dilution Factor} = \frac{Q_{Stream}(ft^3/sec) + Q_{Effluent}(ft^3/sec)}{Q_{Effluent}(ft^3/sec)}$$

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Appendix B

Spalding County WSFA Plant #1 WPCP
NPDES Permit No. GA0050303

Chronic Water Quality Criteria ($WQC_{Chronic}$) - Metals:

Metal	K_{PO}	α	f_D	Average effluent C_T (µg/L)	Instream C_D (µg/L)	$WQC_{Chronic}$ (µg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00		0.0	150.00	no
Cadmium	4.00.E+06	-1.131	0.000		0.0	0.08	no
Chromium III	3.36.E+06	-0.930	0.20	**13.3**	2.0	19.84	no
Chromium VI	3.36.E+06	-0.930	0.20	**13.3**	2.0	11.00	no
Copper	1.04.E+06	-0.744	0.31	**34.7**	8.53	2.26	**yes**
Lead	2.80.E+06	-0.800	0.00		0.0	0.42	no
Mercury					0.00	0.012	no
Nickel	4.90.E+05	-0.572	0.00		0.0	13.33	no
Zinc	1.25.E+06	-0.704	0.25	**33.4**	6.61	30.21	no

$$f_D = \frac{1}{1 + K_{PO} \times TSS_{Instream}(mg/L)^{(1+\alpha)} \times 10^{-6}}$$

$$\text{Instream } C_D = \frac{\text{Effluent } C_T(mg/L) \times f_D}{DF} \quad mg/L$$

Water Quality Criteria (WQC) - Non Metals:

Pollutant	Effluent C_T (µg/L)	Instream Concentration (µg/L)	WQC (µg/L)	WQC/2 (µg/L)	Action needed?
Chloroform	**23.0**	11.68	470.0	235.0	**no**
Phenol	**213.0**	108.16	857000.00	428,500.0	**no**

NOTES:

- Water Quality Criteria (WQC) from State of Georgia Rules and Regulations 391-3-6-.03.
- If the calculated instream concentration is less than 50% of the instream water quality criteria, then the constinuent will be considered not to be present at levels of concern.
- If the calculated instream concentration is greater than 50% of the instream water quality criteria, then additional monitoring may be required or a permit limit for that constinuent may be included in the permit.

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Appendix B

Spalding County WSFA Plant #1 WPCP
NPDES Permit No. GA0050303

Total Recoverable Metal Effluent Limit

Metal	C_S (µg/L)	Chronic C_T (µg/L)	Chronic C_T (Kg/day)	Acute C_T (µg/L)	Acute C_T (Kg/day)
Arsenic	0.0	N/A	N/A	N/A	N/A
Cadmium	0.0	N/A	N/A	N/A	N/A
Chromium III	0.0	N/A	N/A	N/A	N/A
Chromium VI	0.0	N/A	N/A	N/A	N/A
Copper	0.0	9.22	0.001	11.73	0.002
Lead	0.0	N/A	N/A	N/A	N/A
Mercury	0.0	N/A	N/A	N/A	N/A
Nickel	0.0	N/A	N/A	N/A	N/A
Zinc	0.0	N/A	N/A	N/A	N/A

NOTES:

(1) Chronic and acute total recoverable metal effluent concentration (C_T) from **EPA 823-B-96-007, June 1996, page 33:**

$$\text{Chronic } C_T = \frac{\frac{WQC_{\text{Chronic}}}{f_D} \times (Q_E + 7Q10) - (7Q10 \times C_S)}{Q_E} \qquad \text{Acute } C_T = \frac{\frac{WQC_{\text{Acute}}}{f_D} \times (Q_E + 1Q10) - (1Q10 \times C_S)}{Q_E}$$

(2) Assuming background dissolved metal concentration (C_S) in the stream is 0 µg/L, equations above become:

$$\text{Chronic } C_T = \frac{\frac{WQC_{\text{Chronic}}}{f_D} \times (Q_E + 7Q10)}{Q_E} \qquad \text{Acute } C_T = \frac{\frac{WQC_{\text{Acute}}}{f_D} \times (Q_E + 1Q10)}{Q_E}$$

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Appendix C

Springs Water Pollution Control Plant
NPDES Permit No. GA0050303

Ammonia Toxicity Analysis

Ammonia Toxicity Analysis
for
Wasteload Allocation Development

Date: 12/29/2015
Facility: Spalding Co. WPCP
NPDES Permit Number: GA0003409
Receiving Stream: Cabin Creek
Engineer: William Wang PE
Comments: Critical Condition

Stream and Facility Data:

Background Stream pH (standard units): 7.0
Effluent pH (standard units): 8.0
Final Stream pH (standard units): 7.36
Stream Temperature (Celsius): 26.0
30Q3 Streamflow (cfs): 0.04
Stream background concentration (Total NH3-N, mg/L): 0.03
Facility Discharge (MGD/cfs): 0.04 0.06
Total Combined Flow (cfs): 0.10

Effluent concentration (Total NH3-N, mg/L) = 1.67

If 1.67 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):

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

Allowable instream concentration CCC (Total NH3-N, mg/l) = 1.06

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.