

SUMMARY PAGE

Name of Facility: Pumpkinvine Creek WRF

NPDES Permit No.: GA0039021

This is a reissuance and modification of the NPDES permit for the Pumpkinvine WRF. The facility discharges a maximum of 1.5 MGD of treated domestic wastewater to Pumpkinvine Creek in the Coosa River Basin. Effluent limitations and monitoring requirements for the discharge to the reuse distribution system previously covered under LAS Permit No. GAJ020296 have been added to the permit. LAS Permit GAJ020296 will be terminated once NPDES Permit No. GA0039021 becomes effective. The permit expired on August 31, 2018 and was administratively extended.

The permit was placed on public notice from October 4, 2018 to November 7, 2018

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

Part I.B.1: Discharge from Plant #2 to Pumpkinvine Creek

- Reformatted effluent limitations and monitoring requirements for the discharge to Pumpkinvine Creek and for the discharge to the reuse distribution system into two separate sections (Refer to Part I.B.2 below) to improve permit clarity.
- Added Organic Nitrogen, Nitrate-Nitrite, and Total Kjeldahl Nitrogen nutrient monitoring to determine nutrient speciation and to quantify and manage nutrient loadings in the Coosa River Basin.
- Removed Long-Term Biochemical Oxygen Demand as it was performed in the previous permit cycle

Part I.B.2: Discharge from Plant #2 to the reuse distribution system

- Included effluent limitations and monitoring requirements for the discharge to the reuse distribution system

Part I.B.3: Discharge from Plant #1 to the reuse distribution system

- Added effluent limitations and monitoring requirements for the discharge to the reuse distribution system (Previously covered under LAS Permit No. GAJ020296)

Standard Conditions & Boilerplate Modifications:

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

Language was also added for electronic reporting (Part I.D.).

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 addendum and/or permit fact sheet addendum.



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

NOV 19 2018

Ms. Laurie Ashmore, P.E., Director
Paulding County Water Systems
240 Constitution Blvd, 2nd Floor
Dallas, Georgia 30132

RE: Permit Issuance
Pumpkinvine Water Reclamation Facility
NPDES Permit No. GA0039021
Paulding County, Coosa River Basin

Dear Ms. Ashmore:

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
Mountain District – Cartersville Office
P.O. Box 3250
Cartersville, Georgia 30120-3250

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 Alyssa Thomson at 404-463-4946 or alyssa.thomson@dnr.ga.gov.

Sincerely,

A handwritten signature in black ink that reads "Richard E. Dunn".

Richard E. Dunn
Director

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Attachment: Permit Addendum, NPDES Permit No. GA0039021, Fact Sheet

cc: Mick Smith, EPD Mountain District (mick.smith@dnr.ga.gov)
Russell Kelly, Paulding County Water Systems (rkelly@paulding.gov)



PERMIT ADDENDUM

Pumpkinvine Water Reclamation Facility NPDES Permit No. GA0039021 (Paulding County)

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

If yes, specify:

- Part I.B.1 Corrected monitoring frequency ortho-phosphate, organic nitrogen, nitrate-nitrite, and Total Kjeldahl Nitrogen from Three Days/Week to One Day/Month. The revised frequency is in accordance with EPD monitoring guidelines.
- Part I.B.1. Added 85% removal requirements for Five-Day Biochemical Oxygen Demand Total Suspended Solids. These technology-based effluent limitations were inadvertently omitted in the draft permit.
- Part I.B.2. Removed weekly average limitations for the treated effluent distributed to reuse customers to be consistent with other reuse permits
- Part I.B.3. Removed weekly average limitations for the treated effluent distributed to reuse customers to be consistent with other reuse permits



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,

**Paulding County Water System
240 Constitution Blvd
Dallas, Georgia 30132**

is authorized to discharge from a facility located at

**Pumpkinvine Creek WRF
229 Graves Road Spur
Acworth, GA 30101**

to receiving waters

**Pumpkinvine Creek
(Coosa 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 February 6, 2018, any other applications upon which this permit is based, supporting data entered therein or attached thereto, and any subsequent submittal of supporting data.

This permit shall become effective on December 1, 2018.

This permit and the authorization to discharge shall expire at midnight, November 30, 2023




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. MONITORING

The concentration of pollutants in the discharge will be limited as indicated by the table(s) labeled "Effluent Limitations and Monitoring Requirements."

- a. The monthly average, other than for fecal coliform bacteria, is the arithmetic mean of values obtained for samples collected during a calendar month.
- b. 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 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.
- c. Fecal coliform bacteria will be reported as the geometric mean of the values for the samples collected during the time periods in I.A.1.a. and I.A.1.b.
- d. Untreated wastewater influent samples required by I.B. shall be collected before any return or recycle flows. These flows include returned activated sludge, supernatants, centrates, filtrates, and backwash.
- e. Effluent samples required by I.B. of this permit shall be collected after the final treatment process and before discharge to receiving waters. Composite samples may be collected before disinfection with written EPD approval.
- f. 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.
- g. Flow measurements shall be conducted using the flow measuring device(s) in accordance with the approved design of the facility. If instantaneous measurements are required, then the permittee shall have a primary flow measuring device that is correctly installed and maintained. If continuous recording measurements are required, then flow measurements must be made using continuous recording equipment. Calibration shall be maintained of the continuous recording instrumentation to $\pm 10\%$ of the actual flow.

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

Records of the calibration checks shall be maintained.

- h. If secondary flow instruments malfunction or fail to maintain calibration as required in I.A.1.g., 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.

2. 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.

3. 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).

4. 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.

5. 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.

6. URBAN WATER REUSE

a. DEFINITIONS

1. **Designated User or User:** any site or facility, where reclaimed water is beneficially used under a contract with the permittee. User may also be defined as the customer to be supplied with reclaimed water who has a written user agreement with the permittee. In addition, a designated user may also be a purveyor that provides reclaimed water to other customers.
2. **Non-restricted Access:** landscaped areas where reclaimed wastewater is used for irrigation purposes and public access cannot be controlled and adequate buffer zones cannot be maintained. Reclaimed wastewater used to irrigate non-restricted access areas must be treated to urban water reuse standards.
3. **Preapplication Treatment System:** the wastewater treatment facility which reduces high strength organic waste to low levels prior to application to the sprayfield area. The preapplication treatment system can consist of a mechanical plant or a pond system.
4. **Restricted Access:** landscaped areas where reclaimed wastewater is used for irrigation purposes and public access is restricted to specific and controlled periods of time. Wastewater used to irrigate restricted access areas must be pretreated to secondary levels and receive disinfection.
5. **Urban Water Reuse:** the use of reclaimed water as a substitute for other water sources for the beneficial irrigation of areas that may be accessible to the public, such as golf courses, residential and commercial landscaping, parks, athletic fields, roadway medians, and landscape impoundments.
6. **Reclaimed Water:** wastewater that has received treatment to urban water reuse standards, meets the treatment criteria specific in the Guidelines for Water Reclamation and Urban Water Reuse, and is utilized at a reuse area or is sent to a designated user for reuse.
7. **Reject Water:** wastewater that does not meet the 3 NTU criteria or water treated after the disinfection system has failed.

b. DESIGNATED USERS

After issuance of this permit, the permittee may provide reuse water to designated users. The permittee may provide reuse water to additional designated users as long as prior written notice is provided to the EPD and a public notice is provided to the community. The additional users list will be considered an addendum to the permit, but the permit will not be reopened to add new designated users. The permittee must keep records of the volume of reuse water provided to designated users.

c. USER AGREEMENT

Any designated user receiving reuse water from the permittee must enter into an agreement with the permittee. At a minimum the agreement must address all items which are in EPD's Guidelines for Water Reclamation and Urban Water Reuse (Section 9.2).

B.1 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Discharge to Pumpkinvine Creek – Outfall 001 (34.069533, -84.770521):

The discharge from the water reclamation facility (Plant #2) shall be limited and monitored by the permittee as specified below:

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) ⁽¹⁾	1.5	1.875	Seven Days/Week	Continuous Recording	Effluent
Five-Day Biochemical Oxygen Demand ⁽²⁾	5.0 (28.4)	7.5 (35.5)	Three Days/Week	Composite	Influent & Effluent
Total Suspended Solids ⁽²⁾	5 (28.4)	7.5 (35.5)	Three Days/Week	Composite	Influent & Effluent
Ammonia, as N ⁽³⁾	0.5 (2.8)	0.75 (3.6)	Three Days/Week	Composite	Effluent
Total Phosphorus, as P ⁽⁴⁾	1.0 (5.7)	1.5 (7.1)	Three Days/Week	Composite	Effluent
Fecal Coliform Bacteria (#/100 mL)	23	46	One Day/Week	Grab	Effluent

(1) The combined monthly average and weekly average flow to Pumpkinvine Creek and to the reuse distribution system shall not exceed 1.5 MGD and 1.875 MGD, respectively

(2) Numeric limits only apply to the effluent

(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) Total Phosphorus and Ortho-Phosphate must be analyzed from the same sample

B.1 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

(CONTINUED)

Discharge to Pumpkinvine Creek – Outfall 001 (34.069533, -84.770521):

The discharge from the water reclamation facility (Plant #2) shall be limited and monitored by the permittee as specified below:

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 – 8.5	Seven Days/Week	Grab	Effluent
Dissolved Oxygen, Daily Minimum	6.0	Five Days/Week	Grab	Effluent
Ortho-Phosphate, as P ⁽²⁾	Report	One Day/Month	Composite	Effluent
Organic Nitrogen, as N ⁽³⁾	Report	One Day/Month	Composite	Effluent
Nitrate-Nitrite, as N ⁽³⁾	Report	One Day/Month	Composite	Effluent
Total Kjeldahl Nitrogen, as N ⁽³⁾	Report	One Day/Month	Composite	Effluent
Chronic Whole Effluent Toxicity (%) ⁽⁴⁾	Report NOEC	Annually	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 Ortho-Phosphate 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

B.2 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Discharge from Plant #2 to the Reuse Distribution System:

The discharge from the water reclamation facility (Plant #2) shall be limited and monitored by the permittee as specified below:

Parameters	Discharge Limitations, Monthly (Weekly) Average Unless Otherwise Specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow (MGD) ⁽¹⁾	1.5 (1.875)	Seven Days/Week	Continuous	Effluent
Five-Day Biochemical Oxygen Demand (mg/L) ⁽²⁾	5.0	Three Days/Week	Composite	Influent & Effluent
Total Suspended Solids (mg/L) ⁽²⁾	5	Three Days/Week	Composite	Influent & Effluent
Fecal Coliform Bacteria (#/100mL, geometric mean) ⁽³⁾	23	Seven Days/Week	Grab	Effluent

- (1) The combined monthly average and weekly average flow to Pumpkinvine Creek and to the reuse distribution system shall not exceed 1.5 MGD and 1.875 MGD, respectively
- (2) Numeric limits only apply to the effluent
- (3) Fecal Coliform Bacteria counts per individual sample shall not exceed 100/100 mL.

Parameters	Discharge Limitations	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Turbidity, Daily Maximum (NTU) ⁽⁴⁾	3	Seven Days/Week	Continuous	Effluent
pH, Daily Minimum – Daily Maximum (Standard Units)	6.0 – 9.0	Seven Days/Week	Grab	Effluent

- (4) This is an instantaneous maximum limitation. Continuous turbidity monitoring prior to disinfection is required. Treated effluent exceeding 3 NTU shall be directed to reject pond or discharged to Pumpkinvine Creek

B.3 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Discharge from Plant #1 to the Reuse Distribution System:

The discharge from the water reclamation facility (Plant #1) shall be limited and monitored by the permittee as specified below:

Parameters	Discharge Limitations, Monthly (Weekly) Average Unless Otherwise Specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow (MGD)	1.0 (1.25)	Seven Days/Week	Continuous	Effluent
Five-Day Biochemical Oxygen Demand (mg/L) ⁽¹⁾	5.0	Three Days/Week	Composite	Influent & Effluent
Total Suspended Solids (mg/L) ⁽¹⁾	5	Three Days/Week	Composite	Influent & Effluent
Fecal Coliform Bacteria (#/100mL, geometric mean) ⁽²⁾	23	Seven Days/Week	Grab	Effluent

⁽¹⁾ Numeric limits only apply to the effluent.

⁽²⁾ Fecal Coliform Bacteria counts per individual sample shall not exceed 100/100 mL.

Parameters	Discharge Limitations	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Turbidity, Daily Maximum (NTU) ⁽³⁾	3	Seven Days/Week	Continuous	Effluent
pH, Daily Minimum – Daily Maximum (Standard Units)	6.0 – 9.0	Seven Days/Week	Grab	Effluent

⁽³⁾ This is an instantaneous maximum limitation. Continuous turbidity monitoring prior to disinfection is required. Treated effluent exceeding 3 NTU shall be rejected.

C. MONITORING AND REPORTING

1. REPRESENTATIVE SAMPLING

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

2. SAMPLING PERIOD

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

3. MONITORING PROCEDURES

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

4. RECORDING OF RESULTS

For each required parameter analyzed, the permittee shall record:

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

5. ADDITIONAL MONITORING BY PERMITTEE

If the permittee monitors required parameters at the locations designated in I.B. more frequently than required, the permittee shall analyze all samples using approved analytical methods specified in I.C.3. The results of this additional monitoring shall be included in calculating and reporting the values on the Discharge Monitoring Report forms. The permittee shall indicate the

monitoring frequency on the report. The EPD may require in writing more frequent monitoring, or monitoring of other pollutants not specified in this permit.

6. RECORDS RETENTION

The permittee shall retain records of:

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

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

7. PENALTIES

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

8. WATERSHED PROTECTION PLAN

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

Each June 30th the permittee is to submit the following to EPD:

- a. An annual certification statement documenting that the plan is being implemented as approved. The certification statement shall read as follows: "I certify, under penalty of law, that the Watershed Protection Plan is being implemented. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- b. All watershed plan data collected during the previous year in an electronic format. This data shall be archived using a digital format such as a spreadsheet developed in coordination with EPD. All archived records, data, and information pertaining to the Watershed Protection Plan shall be maintained permanently.
- c. A progress report that provides a summary of the BMPs that have been implemented and documented water quality improvements. The progress report shall also include any necessary changes to the Watershed Protection Plan.

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

Environmental Protection Division
Watershed Planning and Monitoring Program
2 Martin Luther King Jr. Drive SE
Suite 1152 East
Atlanta, Georgia 30334

9. CHRONIC WHOLE EFFLUENT TOXICITY (WET)

The permittee must conduct annual chronic Whole Effluent Toxicity (WET) tests. The testing must include 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 a dilution equal to 22%.

EPD will evaluate the WET tests submitted to determine whether toxicity has been demonstrated. An effluent discharge will not be considered toxic if the No Observed Effect Concentration (NOEC) is greater than or equal to the Instream Wastewater Concentration (IWC) of 22%. If the test results indicate effluent toxicity, the permittee may be required to perform additional WET tests, and/or to submit a toxicity reduction evaluation upon notification by the EPD and/or the permit may be reopened to incorporate a 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, 2020**, 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

a. For reuse plants which do not have automatic diversion:

The operator in responsible charge (ORC) for the facility shall be a Class I Biological Wastewater Operator. On-site operation shall be 24 hours per day, 7 days per week by an on-site operator (OSO) who is certified Class II Biological Wastewater Operator or higher. All Operators (other than the ORC and OSO) shall have a minimum of a Class III Biological Wastewater Operator certification.

b. For reuse plants which have automatic diversion, but do not have an electronic monitoring and alarm system:

The operator in responsible charge (ORC) for the facility shall be a Class I Biological Wastewater Operator. On-site operation shall be by an on-site operator (OSO) who is certified Class II Biological Wastewater Operator or higher for a minimum of 8 hours per day, 7 days per week in conjunction with automatic diversion of reclaimed water that does not meet the turbidity criteria and with the automatic diversion of reclaimed water should any component of the disinfection system fail. All operators (other than the ORC and OSO) shall have a minimum of a Class III Biological Wastewater Operator certification.

c. For reuse plants that have automatic diversion and have an electronic monitoring and alarm system:

The operator in responsible charge (ORC) shall be a Class I Biological Wastewater Operator. On-site operation shall be by an on-site operator (OSO) who is certified Class II Biological Wastewater Operator or higher for a minimum of 4 hours per day, 7 days per week in conjunction with automatic diversion of reclaimed water that does not meet the turbidity criteria and with the automatic diversion of reclaimed water should any component of the disinfection system fail. An operator shall be on call during all periods the plant is unattended and must be able to respond to the plant site within one hour of an alarm. The electronic monitoring and alarm system must record the date and time of all alarms and the date and time of alarm override. All operators (other than the ORC and the OSO) shall have a minimum of a Class III Biological Wastewater Operator certification.

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 exceedance 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 without written authorization from the EPD. To receive this authorization, 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 by the issuance 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.



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:

Alyssa Thomson, Environmental Specialist
alyssa.thomson@dnr.ga.gov
 404-463-4946

Draft permit:

- First issuance
- Reissuance with no or minor modifications from previous permit
- Reissuance with substantial modifications from previous permit
- Modification of existing permit
- Requires EPA review

1. FACILITY INFORMATION

1.1 NPDES Permit No.: GA0039021

1.2 Name and Address of Owner/Applicant

Paulding County Water System
 240 Constitution Blvd
 Dallas, Georgia 30132

1.3 Name and Address of Facility

Pumpkinvine Creek WRF
 229 Graves Road Spur
 Acworth, GA 30101

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

Outfall #	Latitude (°)	Longitude (°)	Receiving Waterbody
001	34.069533	-84.770521	Pumpkinvine Creek

1.5 Permitted Design Capacity

Discharge to Pumpkinvine (Plant #2): 1.5 MGD

Discharge to reuse distribution system (Plant #1): 1.0 MGD

1.6 SIC Code & 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 first consists of screening and grit removal. Flow is then split between Plant #1 (anaerobic tanks, anoxic tanks, aerobic tanks, membrane bioreactors, UV disinfection) and Plant #2 (anaerobic tanks, anoxic tanks, aerobic tanks, membrane bioreactors, UV disinfection, post aeration). Effluent from Plant # 1 is discharged to the reuse distribution system. Effluent from Plant #2 is either discharged to Pumpkinvine Creek or distributed to reuse customers.

Solids processing:

Sludge from Plant # 1 and Plant # 2 is aerobically digested, dewatered and disposed of in a landfill.

1.8 Type of Wastewater Discharge

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

1.9 Characterization of Effluent Discharge (as reported by applicant)

Outfall No. 001:

Effluent Characteristics (as Reported by Applicant)	Maximum Daily Value	Average Daily Value
Flow (MGD)	1.143	0.604
Five-Day Biochemical Oxygen Demand (mg/L)	1.3	0.9
Total Suspended Solids (mg/L)	4.0	2.04
Fecal Coliform Bacteria (#/100mL)	3	1
Ammonia, as N (mg/L)	0.04	0.03
Total Phosphorus, as P (mg/L)	0.51	0.42

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	Municipal Effluent Discharge	40 CFR 122
		40 CFR 125
		40 CFR 133
	Non-Process Water Discharges	40 CFR 122
		40 CFR 125
		40 CFR 122
Municipal Sludge Use and Disposal	40 CFR 257	
	40 CFR 501 & 503	

3. WATER QUALITY STANDARDS & RECEIVING WATERBODY INFORMATION

3.1 Receiving Waterbody Classification and Information – Pumpkinvine 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

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in these surface waters since a number of factors which are beyond the control of any State regulatory agency contribute to elevated levels of bacteria.

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	7Q10 (cfs)	1Q10 (cfs)	30Q3 (cfs)	Annual Average Flow (cfs)	Hardness (mg CaCO ₃ /L)	Upstream Total Suspended Solids (mg/L)
001	8.4	7.0	31	141	15 ⁽¹⁾	10 ⁽²⁾

⁽¹⁾ A conservative value of 15 mg/L was used for the reasonable potential analysis calculations

⁽²⁾ A conservative value of 10 mg/L was used for the reasonable potential analysis calculations

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

Pumpkinvine Creek	Little Pumpkinvine Creek to Etowah River	Coosa	Supporting	15	1	TMDL completed FC 2004
GAHQ31501041101	Paulding, Bartow	Fishing	30	Miles		

Pumpkinvine Creek is listed on the 2016 305(b)/303(d) list as supporting its designated use (fishing).

3.4 Total Maximum Daily Loads (TMDLs)

In 2004, Georgia EPD developed a fecal coliform TMDL for fifty-eight stream segments in the Coosa River Basin, including the Chattooga River. The TMDL recommends that all municipal wastewater treatment facilities with the potential for the occurrence of fecal coliform in their discharge be given end-of-pipe limits equivalent to the water quality standard of 200 counts/100 mL, or less. Therefore, the fecal coliform effluent limitation in the draft permit for the Pumpkinvine WRF is 200 counts/100 mL, monthly average. This effluent limitation for fecal coliform is protective of Instream Water Quality Standards.

In 2008, the State of Alabama developed a nutrient impairment TMDL for Weiss Lake, which lies in the Coosa River Basin, west of the Georgia state line. The TMDL addresses water quality impairments due to an excess of nutrients, especially chlorophyll *a*, in Lake

Weiss and requires that Georgia reduce phosphorus loadings in the Coosa River Basin at the state line by 30%. Facilities that discharge over 1 million gallons per day into the Coosa River Basin are required to have a total phosphorus limit of 1.0 mg/L. Therefore a total phosphorus limit of 1.0 mg/L, monthly average, has been included in the draft permit.

3.5 Wasteload Allocation (WLA)

A WLA for reissuance was issued on April 17, 2018. Refer to *Appendix A* of the Fact Sheet for a copy of the WLA.

4. EFFLUENT LIMITS AND PERMIT CONDITIONS

4.1 Reasonable Potential Analysis (RP)

Title 40 of the Federal Code of Regulations, 40 CFR 122.44(d) requires delegated 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 criteria 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's Reasonable Potential Procedures are based on Georgia's Rules and Regulations for Water Quality Control (Rules), Chapter 391-3-6-.06(4)(d)5. The 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 Rules in the evaluation of a permit application and in the evaluation of the reasonable potential for an effluent to cause an exceedance in the numeric or narrative criteria.

Refer to Section 4.2 for reasonable potential analysis on effluent toxicity.

Refer to Section 4.6 for reasonable potential analysis on toxic and manmade pollutants.

4.2 Whole Effluent Toxicity (WET)

Chronic WET test measures the effect of wastewater on indicator organisms' growth, reproduction and survival. Effluent toxicity is predicted when the No Observable Effect Concentrations (NOEC) for a test organism is less than the facility's Instream Wastewater Concentration (IWC). WET testing also requires a measure of test sensitivity known as the Percent Minimum Significant Difference (PMSD). See Table below from Section 10.2.8.3 (page 52) of EPA 821-R-02-013 *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, 4th Edition, 2002 for PMSD variability criteria.

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TABLE 6. VARIABILITY CRITERIA (UPPER AND LOWER PMSD BOUNDS) FOR SUBLETHAL HYPOTHESIS TESTING ENDPOINTS SUBMITTED UNDER NPDES PERMITS.¹

Test Method	Endpoint	Lower PMSD Bound	Upper PMSD Bound
Method 1000.0, Fathead Minnow Larval Survival and Growth Test	growth	12	30
Method 1002.0, <i>Ceriodaphnia dubia</i> Survival and Reproduction Test	reproduction	13	47
Method 1003.0, <i>Selenastrum capricornutum</i> Growth Test	growth	9.1	29

¹ Lower and upper PMSD bounds were determined from the 10th and 90th percentile, respectively, of PMSD data from EPA's WET Interlaboratory Variability Study (USEPA, 2001a; USEPA, 2001b).

PMSD must be calculated for each species tested as follows:

$$PMSD = \frac{\text{Minimum Significant Data (MSD)}}{\text{Control Mean}} \times 100 \%$$

The effluent from the Pumpkinvine Creek WRF will not be considered toxic if the No Observed Effect Concentration (NOEC) is greater than or equal to the Instream Wastewater Concentration (IWC) of 22%. If results of the WET tests predict toxicity or are invalid, then the permittee may be required to perform additional WET tests or the permit may be modified to include chronic WET effluent limitations.

The permittee submitted the results of four WET tests with the application. For all tests, the NOEC for the *Ceriodaphnia dubia* survival and reproduction and the *Pimephales promelas* survival and growth were greater than or equal to the IWC of 22%; therefore, effluent is not considered toxic. Refer to WET Test results summary in the table below.

Test	Sample Date	No Observed Effect Concentration (NOEC)			
		<i>Ceriodaphnia dubia</i>		<i>Pimephales promelas</i>	
		Survival (%)	Reproduction (%)	Survival (%)	Growth (%)
1	2014	100	100	100	100
2	2015	100	100	100	100
3	2016	100	100	100	100
4	2017	100	100	100	100

PMSD values were calculated for each set of results and compared to EPA's Variability Criteria to ensure their validity. PMSD for *Ceriodaphnia dubia* reproduction and *Pimephales promelas* survival from the four WET tests were lower or within EPA's Variability Criteria; therefore, the tests are considered valid. Refer to *Appendix C* for PMSD values.

EPD is including annual WET monitoring for all facilities with a permitted discharge of 1.0 MGD or greater; therefore, annual WET testing has been included in the draft permit.

EPD will evaluate the WET tests submitted to determine whether toxicity has been demonstrated. If the test results indicate effluent toxicity, 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.

4.3 Applicable Water Quality Based Effluent Limitations (WQBELs)

When drafting a National Pollutant Discharge Elimination System (NPDES) permit, a permit writer must consider the impact of the proposed discharge on the quality of the receiving water. Water quality goals for a waterbody are defined by state water quality standards. By analyzing the effect of a 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. 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 that water quality standards are met in the receiving water and downstream uses are protected. On the basis of the requirements of Title 40 of the *Code of Federal Regulations* (CFR) 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.

The term *pollutant* is defined in CWA section 502(6) and § 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 § 401.16 (BOD₅, 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 chlorine, ammonia, nitrogen, phosphorus, chemical oxygen demand (COD), and whole effluent toxicity (WET).

4.4 Conventional Pollutants

Pollutants of Concern	Basis
pH	<p>The instream wastewater concentration (IWC) is 22%. When the IWC is less than 50%, there is no reasonable potential to cause or contribute to violation of the instream Georgia Water Quality Standard; therefore, pH limits of 6.0-8.5 SU (daily minimum-daily maximum) were included in the draft permit.</p>
Five-Day Biochemical Oxygen Demand (BOD ₅)	<p>According to the steady-state dissolved oxygen Georgia DOSAG model, a monthly average BOD₅ limit of 5 mg/L, when combined with the ammonia limit (refer to Section 4.6 below), is protective of the instream Water Quality Standard for dissolved oxygen described in Section 3.1. Refer to WLA in <i>Appendix A</i> for model inputs.</p> <p>The proposed monthly average BOD₅ limit is also in accordance with EPD stands for reuse water (technology-based limit).</p>
Total Suspend Solids (TSS)	<p>The proposed monthly average TSS limit is in accordance with EPD standards for reuse water (technology-based limit).</p>
Fecal Coliform Bacteria (FCB)	<p>The monthly average limit of 23 #/100mL is in accordance with EPD standards for reuse water (technology-based limit)</p>

4.5 Nonconventional Pollutants

Pollutants of Concern	Basis
Dissolved Oxygen (DO)	According to the steady-state dissolved oxygen Georgia DOSAG model, a minimum effluent DO of 6.0 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 TP limit of 1.0 mg/L has been included in the draft permit in accordance with the 2008 State of Alabama nutrient impairment TMDL for Weiss Lake.
Ortho-Phosphate, Total Nitrogen (TKN), Nitrogen, Nitrate-Nitrite Kjeldahl Organic	Ortho-phosphate, organic nitrogen, nitrate-nitrite, and TKN monitoring has been included in the draft permit. The data will be used to determine nutrient speciation and to quantify and manage nutrient loadings in the Coosa River Basin.
Ammonia (NH ₃)	According to the steady-state dissolved oxygen Georgia DOSAG model, a monthly average ammonia limit of 0.5 mg/L, when combined with the BOD ₅ limit (Refer to Section 4.5), is protective of the instream Water Quality Standard for dissolved oxygen described in Section 3.1 above. An ammonia limit of 0.5 mg/L also meets EPD's permitting strategy to address Ammonia toxicity in State waters under 30Q3 stream flow conditions.

4.6 Toxics & Manmade Organic Compounds

The permittee submitted the results of three Priority Pollutant Scans (PPS) with the permit application. All pollutants were “non-detect” except for the following:

Pollutants of Concern	Basis
Total Recoverable Mercury (Hg)	<p>This parameter was evaluated and its instream concentration was found to be less than 50% of the acute & chronic instream standard. Refer to <i>Appendix B</i> for reasonable potential evaluation.</p> <p>In accordance with EPD reasonable potential procedures, Mercury is not considered a pollutant of concern and additional monitoring is not required</p>
Total Recoverable Zinc (Zn)	<p>This parameter was evaluated and its instream concentration was found to be less than 50% of the acute & chronic instream standard. Refer to <i>Appendix B</i> for reasonable potential evaluation.</p> <p>In accordance with EPD reasonable potential procedures, Zinc is not considered a pollutant of concern and additional monitoring is not required</p>
Total Recoverable Copper (Cu)	<p>This parameter was evaluated and its instream concentration was found to be less than 50% of the acute & chronic instream standard. Refer to <i>Appendix B</i> for reasonable potential evaluation.</p> <p>In accordance with EPD reasonable potential procedures, Copper is not considered a pollutant of concern and additional monitoring is not required.</p>
Total Recoverable Nickel (Ni)	<p>This parameter was evaluated and its instream concentration was found to be less than 50% of the acute & chronic instream standard. Refer to <i>Appendix B</i> for reasonable potential evaluation.</p> <p>In accordance with EPD reasonable potential procedures, Nickel is not considered a pollutant of concern and additional monitoring is not required.</p>

4.7 Calculations for Water Quality Based Effluent Limits

4.7.1 Instream Waste Concentration (IWC):

$$\begin{aligned} \text{IWC} &= \frac{Q_{\text{Effluent}} (\text{ft}^3/\text{sec})}{Q_{\text{Effluent}} (\text{ft}^3/\text{sec}) + 7Q_{10} (\text{ft}^3/\text{sec})} \% \\ &= \frac{2.31}{2.31+8.4} \% \\ &= 22\% \end{aligned}$$

4.7.2 Five-Day Biochemical Oxygen Demand:

- *Weekly Average Flow:*

$$\begin{aligned} Q_{\text{Weekly}} &= Q_{\text{Monthly}} (\text{MGD}) \times 1.25 \\ &= 1.5 \times 1.25 \\ &= 1.875 \text{ MGD} \end{aligned}$$

Q = Flow
C = Concentration
M = Mass

- *Weekly Average Concentration:*

$$\begin{aligned} [C]_{\text{Weekly}} &= [C]_{\text{Monthly}} (\text{mg/L}) \times 1.5 \\ &= 5.0 \times 1.5 \\ &= 7.5 \text{ mg/L} \end{aligned}$$

- *Monthly Average Mass Loading:*

$$\begin{aligned} M_{\text{Monthly}} &= \frac{Q_{\text{Monthly}} (\text{MGD}) \times [C]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})}{2.2 (\text{lbs/Kg})} \\ &= \frac{1.5 \times 5.0 \times 8.34}{2.2} \text{ kg/day} \\ &= 28.4 \text{ kg/day} \end{aligned}$$

- *Weekly Average Mass Loading:*

$$\begin{aligned} M_{\text{Weekly}} &= \frac{Q_{\text{Weekly}} (\text{MGD}) \times [C]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})}{2.2 (\text{lbs/Kg})} \\ &= \frac{1.875 \times 5.0 \times 8.34}{2.2} \text{ kg/day} = 35.5 \text{ kg/day} \end{aligned}$$

4.7.3 Total Residual Chlorine (TRC):

The facility is equipped with a UV system for disinfection. A TRC limit has not been included in the draft permit.

4.7.4 Total Suspended Solids:

- *Weekly Average Concentration:*

$$\begin{aligned} [C]_{\text{Weekly}} &= [C]_{\text{Monthly}} (\text{mg/L}) \times 1.5 \\ &= 2.04 \times 1.5 \\ &= 3.1 \text{ mg/L} \end{aligned}$$

- *Monthly Average Mass Loading:*

$$\begin{aligned} M_{\text{Monthly}} &= \frac{Q_{\text{Monthly}} (\text{MGD}) \times [C]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})}{2.2 (\text{lbs/Kg})} \\ &= \frac{1.5 \times 2.04 \times 8.34}{2.2} \\ &= 11.6 \text{ kg/day} \end{aligned}$$

- *Weekly average mass loading:*

$$\begin{aligned} M_{\text{Weekly}} &= \frac{Q_{\text{Weekly}} (\text{MGD}) \times [C]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})}{2.2 (\text{lbs/Kg})} \\ &= \frac{1.875 \times 2.04 \times 8.34}{2.2} \\ &= 14.5 \text{ kg/day} \end{aligned}$$

4.7.5 Total Phosphorus, as P

- *Daily Maximum Concentration*

$$\begin{aligned} [C]_{\text{Max}} &= [C]_{\text{Monthly}} (\text{mg/L}) \times 1.5 \\ [C]_{\text{Max}} &= 1.0 (\text{mg/L}) \times 1.5 \\ [C]_{\text{Max}} &= 1.5 \text{ mg/L} \end{aligned}$$

- *Monthly Average Mass Loading*

$$\begin{aligned}
 M_{\text{Monthly}} &= \frac{Q_{\text{Monthly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{1.5 \times 1.0 \times 8.34}{2.2} \\
 &= 5.7 \text{ kg/day}
 \end{aligned}$$

- *Daily Maximum Mass Loading*

$$\begin{aligned}
 M_{\text{Max}} &= \frac{Q_{\text{Weekly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{1.875 \times 1.0 \times 8.34}{2.2} \\
 &= 7.1 \text{ kg/day}
 \end{aligned}$$

4.7.6 Ammonia Toxicity Analysis:

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

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

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

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

$$\begin{aligned}
 &\bullet \quad [\text{NH}_3]_{\text{Effluent}} = \\
 &\quad \frac{(Q_{\text{Effluent}} \text{ (ft}^3\text{/sec)} + 30Q3 \text{ (ft}^3\text{/sec)}) \times \text{CCC} \text{ (mg/L)} - 30Q3 \text{ (ft}^3\text{/sec)} \times [\text{NH}_3]_{\text{StreamBackground}} \text{ (mg/L)}}{Q_{\text{Effluent}} \text{ (ft}^3\text{/sec)}}
 \end{aligned}$$

Refer to *Appendix D* for detailed calculations

- *Weekly Average Concentration:*

$$\begin{aligned}
 [C]_{\text{Weekly}} &= [C]_{\text{Monthly}} \text{ (mg/L)} \times 1.5 \\
 &= 0.5 \times 1.5 \\
 &= 0.8 \text{ mg/L}
 \end{aligned}$$

- *Monthly Average Mass Loading:*

$$\begin{aligned}
 M_{\text{Monthly}} &= \frac{Q_{\text{Monthly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L or ppm)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{1.5 \times 0.5 \times 8.34}{2.2} \\
 &= 2.8 \text{ kg/day}
 \end{aligned}$$

- *Weekly average mass loading:*

$$\begin{aligned}
 M_{\text{Weekly}} &= \frac{Q_{\text{Weekly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L or ppm)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{1.875 \times 0.8 \times 8.34}{2.2} \\
 &= 5.7 \text{ kg/day}
 \end{aligned}$$

4.7.7 *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 (BOD₅), total suspended solids (TSS), and pH.

The table below shows the secondary treatment standards:

Parameter	Secondary treatment standards	
	<i>30-day average</i>	<i>7-day average</i>
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.	

EPD has also established standards for water reclamation and urban water reuse as shown below:

Parameter	Reuse standards
	<i>30-day average</i>
BOD ₅	5.0 mg/L
TSS	5 mg/L
Fecal Coliform Bacteria	23 #/100mL
Turbidity (Daily Maximum)	3 NTU
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⁾
	<i>Monthly Average</i>	<i>Monthly Average</i>
Five-Day Biochemical Oxygen Demand (mg/L)	5.0	5.0
Total Suspended Solids (mg/L)	None	5
Total Phosphorus (mg/L)	1.0	None
Ammonia (mg/L)	0.5	None
Fecal Coliform Bacteria (#/100 mL)	200	23

⁽¹⁾ Effluent limits in bold were included in the permit. Refer to Sections 4.5 and 4.6 above for more information.

5. OTHER PERMIT REQUIREMENTS AND CONSIDERATIONS

5.1 LAS Permit GAJ020296

The discharge from Plant #1 to the reuse customers is currently covered under LAS Permit GAJ020296. Since language to allow distribution of reuse water from Plant #1 has been included in the draft NPDES permit (Part I.B.3), LAS Permit No. GAJ020296 will be terminated by EPD once NPDES Permit GA0039021 is effective. A public comment period for this action was included in the notice for the proposed permit.

5.2 Urban Reuse

The proposed limits are in accordance with EPD standards for reuse water.

5.3 Industrial Pre-treatment Program (IPP)

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

5.4 Sludge Management Plan (SMP)

Sludge is disposed of in a landfill; therefore, a SMP is not required.

5.5 Watershed Protection Plan (WPP)

Paulding County has an approved WPP; therefore language has been included in the draft permit to reflect the approved plan.

5.6 Service Delivery Strategy

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

5.7 Compliance Schedules

Effluent limitations are applicable immediately upon the effective date of the permit.

5.8 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
Mountain District – Cartersville Office
P.O. Box 3250
Cartersville, Georgia 30120-3250

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. 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

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3. by the issuance or denial of a permit;
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.

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Appendix A

**Paulding County – Pumpkinvine Creek WRF
NPDES Permit No. GA0039021**

Waste Load Allocation (WLA)

National Pollutant Discharge Elimination System Waste Load Allocation Form

Part I: Background Information

WLA Request Type: Reissuance Modification Relocation Expansion New Discharge
 Facility Name: Paulding County - Pumpkinvine Creek WPCP County: Paulding WQMU: 1422
 NPDES Permit No.: GA0039021 Expiration Date: 08/14/2018 Outfall Number: 001
 Receiving Water: Pumpkinvine Creek River Basin: Coosa 10-Digit HUC: 0315010411
 Discharge Type: Domestic Industrial Both Proportion (D:I): Flow(s) Requested (MGD): 1.5
 Industrial Contributions Type(s):
 Treatment Process Description: Grit removal, membrane bioreactor, anoxic/anaerobic basins, pre-aeration, UV disinfection.
 Additional Information: (history, special conditions, other facilities):
 Requested by: Emily Wingo Title: Environmental Specialist Program: Wastewater Regulatory Program
 Telephone: Date: 02/13/2018

Part II: Receiving Water Information

Receiving Water: Pumpkinvine Creek Designated Use Classification: Fishing
 Integrated 305(b)/303(d) List: Yes No Support: Not Support: Criteria:
 Total Maximum Daily Load: Yes No Parameter(s) Fecal WLA Complies with TMDL Yes No
 The Fecal Coliform TMDL was completed in 2004. The U.S. Environmental Protection Division finalized the TMDL for nutrient impairment in Lake Wales in Alabama in 2008. The TMDL recommends a 30% reduction at the state line of the total phosphorus loads originating from the Coosa River. A dissolved oxygen TMDL for the Coosa River was finalized in 2004 by the Georgia Environmental Protection Division.

Part III: Water Quality Model Review Information

Model Type: Uncalibrated Calibrated Verified Cannot be Modeled Model Length (mi): 13.3
 Field Data: None Fair Good Excellent
 Model and Field Data Description: Steady-state dissolved oxygen Georgia DOSAG model.
 Critical Water Temperature (°C): 28 Drainage Area (mi²): 117.6 Mean annual streamflow at discharge (cfs): 141
 7Q10 Yield (cfs/mi²): 0.071 Velocity (range fps): 0.18 - 0.38 30Q3 streamflow at discharge (cfs): 31
 Effluent Flow Rate (cfs): 2.31 IWC (%): 22 7Q10 streamflow at discharge (cfs): 8.4
 Slope (range - fpm): 2.2 - 30 K1: 0.3 K3: 0.3 K2: 1.1 - 4.7 1Q10 streamflow at discharge (cfs): 7.0
 SOD: Not Modeled Escape Coef. (ft⁻¹): 0.054-0.11 f-Ratio BOD₅/BOD_s: 4 Background Hardness (as CaCO₃)(mg/L):
 The predicted minimum dissolved oxygen concentration is 5.3 mg/L, occurring 10.4 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: Pumpkinvine Creek (existing)

Effluent Flow Rate (MGD)	BOD ₅	NH ₃ -N	DO (min)	Fecal Coliform (No./100ml)	pH (std. units)	Total-P	Ortho-P	TKN	NO _x	Org-N
1.5	5.0	0.5	6.0	23	6.0 - 8.5	1.0	Mon	Mon	Mon	Mon

Additional Comments:

Priority pollutant permit limits, aquatic toxicity testing requirements, and other parameters required by categorical effluent guidelines are to be determined by the Wastewater Regulatory Program.

The current ammonia permit limit meets the U.S. Environmental Protection Agency's 2013 ammonia toxicity criteria using the 30Q3 streamflow rate.

Effluent nutrient monitoring is recommended in accordance with the State of Georgia's nutrient management strategy to identify and quantify nutrient loadings to the Coosa River Basin and Lake Wales. Phosphorus and nitrogen constituents should be analyzed from the same sample for the respective nutrient group.

Prepared by: Paul Lamarre  Date: 03/09/2018 Reviewed by: Josh Welte  Date: 6 APR 18

Part V: Program Manager Comments



Elizabeth Booth

Date: 4/17/18

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Appendix B

**Paulding County – Pumpkinvine Creek WRF
NPDES Permit No. GA0039021**

Reasonable Potential Analysis

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Paulding County - Pumpkinvine Creek WRF NPDES Permit No. GA0039021

Stream Data (upstream of the discharge):

TSS:	10	mg/L
7Q10:	8.40	ft ³ /s
1Q10:	7.00	ft ³ /s
Mean flow:	141.0	ft ³ /s

Effluent Data:

TSS:	2.0	mg/L
Flow:	1,500,000	gal/day
Flow:	2.32	ft ³ /s

Stream data (downstream of the discharge):

Hardness (at 7Q10):	15.0	mg/L	
TSS (at 7Q10):	8.28	mg/L	
Dilution factor (at average flow):	61.7		1.6
Dilution factor (at 7Q10):	4.62		21.6
Dilution factor (at 1Q10):	4.02		24.9

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	0.0	340.00	no
Cadmium	4.00.E+06	-1.131	0.000	0.0	0.0	0.32	no
Chromium III	3.36.E+06	-0.930	0.00	0.0	0.0	120.48	no
Chromium VI	3.36.E+06	-0.930	0.00	0.0	0.0	16.00	no
Copper	1.04.E+06	-0.744	0.36	6.1	0.54	2.25	no
Lead	2.80.E+06	-0.800	0.00	0.0	0.0	7.79	no
Mercury	2.91.E+06	-1.136	0.31	0.0	0.0	1.40	no
Nickel	4.90.E+05	-0.572	0.45	2.1	0.2	94.07	no
Zinc	1.25.E+06	-0.704	0.30	32.9	2.45	23.48	no

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

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

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Paulding County - Pumpkinvine Creek WRF NPDES Permit No. GA0039021

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	0.0	150.00	no
Cadmium	4.00.E+06	-1.131	0.000	0.0	0.0	0.07	no
Chromium III	3.36.E+06	-0.930	0.00	0.0	0.0	15.67	no
Chromium VI	3.36.E+06	-0.930	0.00	0.0	0.0	11.00	no
Copper	1.04.E+06	-0.744	0.36	2.03	0.16	1.77	no
Lead	2.80.E+06	-0.800	0.00	0.0	0.0	0.30	no
Mercury	2.91.E+06	-1.136	0.31	0.0	0.0	0.012	no
Nickel	4.90.E+05	-0.572	0.45	6.3	0.6	10.45	no
Zinc	1.25.E+06	-0.704	0.30	31.0	2.01	23.68	no

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

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

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?
NA	0.0	0.00	0	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 constituent 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 constituent may be included in the permit.

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Paulding County - Pumpkinvine Creek WRF NPDES Permit No. GA0039021

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)	(1)
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	N/A	N/A	N/A	N/A	(2)
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:

$$\text{Chronic } C_T = \frac{\frac{WQC_{\text{Chronic}}}{f_D} \times (Q_E + 7Q_{10}) - (7Q_{10} \times C_s)}{Q_E} \qquad \text{Acute } C_T = \frac{\frac{WQC_{\text{Acute}}}{f_D} \times (Q_E + 1Q_{10}) - (1Q_{10} \times C_s)}{Q_E}$$

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

$$\text{Chronic } C_T = \frac{\frac{WQC_{\text{Chronic}}}{f_D} \times (Q_E + 7Q_{10})}{Q_E} \qquad \text{Acute } C_T = \frac{\frac{WQC_{\text{Acute}}}{f_D} \times (Q_E + 1Q_{10})}{Q_E}$$

FACT SHEET

Appendix C

**Paulding County – Pumpkinvine Creek WRF
NPDES Permit No. GA0039021**

Whole Effluent Toxicity Results

FACT SHEET

Appendix C

Paulding County - Pumpkinvine Creek WRF NPDES Permit No. GA0039021

WET Test PMSD Values:

PMSD = Minimum Significant Data (MSD) / Control Mean x 100 %

WET Test #1 2014

Species	PMSD Bounds	MSD	Control Mean	PMSD	
Water Flea (<i>C. dubia</i>)	13-47	--	--	10.80	Lower
Fathead Minnow (<i>P. promelas</i>)	12-30	--	--	10.60	Lower

WET Test #2 2015

Species	PMSD Bounds	MSD	Control Mean	PMSD	
Water Flea (<i>C. dubia</i>)	13-47	--	--	17.5	Within
Fathead Minnow (<i>P. promelas</i>)	12-30	--	--	10.2	Lower

WET Test #3 2016

Species	PMSD Bounds	MSD	Control Mean	PMSD	
Water Flea (<i>C. dubia</i>)	13-47	--	--	12.0	Lower
Fathead Minnow (<i>P. promelas</i>)	12-30	--	--	18.5	Within

WET Test #4 2017

Species	PMSD Bounds	MSD	Control Mean	PMSD	
Water Flea (<i>C. dubia</i>)	13-47	--	--	14.2	Within
Fathead Minnow (<i>P. promelas</i>)	12-30	--	--	16.2	Within

FACT SHEET

Appendix D

**Paulding County – Pumpkinvine Creek WRF
NPDES Permit No. GA0039021**

Ammonia Toxicity Analysis

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

Date: 9.Mar.18

Facility: Paulding County - Pumpkinvine Creek WPCP

NPDES Permit Number: GA0039021

Receiving Stream: Pumpkinvine Creek

Engineer: Paul Lamarre

Comments:

Stream and Facility Data:

Background Stream pH (standard units): 7.0

Effluent pH (standard units): 8.5

Final Stream pH (standard units): 7.03

Stream Temperature (Celsius): 28.0

30Q3 Streamflow (cfs): 31.00

Stream background concentration (Total NH3-N, mg/L): 0.13

Avg Facility Discharge (MGD/cfs): 1.5 2.32

Total Combined Flow (cfs): 33.32

Effluent concentration (Total NH3-N, mg/L) = 16.44 **Monthly Average**

If 16.44 is greater than 17.4 mg/L, use 17.4 mg/L in WLA modeling.

Chronic Criterion based on Villosa Iris (Rainbow mussel):

Instream CCC = criterion continuous concentration (chronic criterion):

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

Allowable instream concentration CCC (Total NH3-N, mg/l) = 1.27

Acute Criterion when Oncorhynchus salmonid species are present:

Instream Criterion Maximum Concentration (CMC) = same as acute criterion:

$$\text{Instream CMC} = \text{Min}((0.275 / (1 + 10^{(7.204 - pH)})) + (39.0 / (1 + 10^{(pH - 7.204)})), 0.7249 \times (0.0114 / (1 + 10^{(7.204 - pH)})) + 1.6181 / (1 + 10^{(pH - 7.204)})) \times$$

Allowable instream concentration CMC, (Total NH3-N mg/l) = 9.92

Acute Criterion when Oncorhynchus salmonid species are absent:

$$\text{Instream CMC} = 0.7249 \times (0.0114 / (1 + 10^{(7.204 - pH)})) + 1.6181 / (1 + 10^{(pH - 7.204)}) \times \text{MIN}(51.93, 23.12 \times 10^{(0.038 \times (20 - T))})$$

Allowable instream concentration CMC, (Total NH3-N mg/l) = 9.92

Based on National Criterion For Ammonia In Fresh Water As Revised In Year 2013
Office of Science and Technology, EPA-822-R-13-001. April 2013. Washington, D.C.