GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

SUMMARY PAGE

Name of Facility: City of Ray City – Ray City WPCP

NPDES Permit No.: GA0033553

This is a reissuance of the NPDES permit for the Ray City WPCP. Up to 0.1 MGD (monthly average) of treated domestic wastewater is discharged to Cat Creek in the Suwannee River Basin. The permit expires on June 30, 2022 and became administratively extended. The permit was placed on public notice from XXXX to XXXXX.

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

Part I.B – Effluent Limitations and Monitoring Requirements:

- Revised outfall coordinates to correct a topographic error.
- Converted mass loading limits from kg/day to lbs/day to be consistent with other NPDES permits in Georgia.
- Reduced monthly average five-day biochemical oxygen demand from 30 mg/L to 15 mg/L to meet Water Quality Standards for Dissolved Oxygen in the receiving stream along with a 36-month compliance schedule.
- Reduced monthly average TSS limit from 90 to30 mg/L in accordance with EPD's *Guidelines for Establishing Technology-Based Total Suspended Solids (TSS) Limits in Domestic Wastewater NPDES Permits,* 2020 along with a 36-month compliance schedule
- Increased orthophosphate, organic nitrogen, nitrate-nitrite and total Kjeldahl nitrogen monitoring from quarterly to monthly in accordance with EPD monitoring requirements guidelines.
- Added a monthly average ammonia limit of 5.2 mg/L to meet instream water quality standards for dissolved oxygen in the receiving stream, along with a 36-month compliance schedule. The proposed limit is also in accordance with EPD's *NPDES Permitting Strategy for Addressing Ammonia Toxicity*.
- Added annual average and monthly average total nitrogen limits of 20 mg/L and 25 mg/L, respectively, to meet Florida's instream TN criteria at the Florida-Georgia state-line. A 36-month compliance schedule to meet the new limit has been included in the draft permit.
- Added a monthly average total phosphorus limit of 5.0 mg/L to meet Florida's instream TP criteria at the Florida-Georgia state-line. A 36-month compliance schedule to meet the new limit has been included in the draft permit.
- Added a daily minimum dissolved oxygen limit of 6.0 mg/L to be protective of instream water quality standards for dissolved oxygen. A 36-month compliance schedule to meet the new limit has been included in the draft permit.
- Revised the total residual chlorine limit from 0.011 mg/L to 0.02 mg/L based on updated stream flow information.
- Removed the completed pH Compliance Schedule.

Standard Conditions and Boilerplate Modifications:

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

Final Permit Determinations and Public Comments:

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

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Watershed Protection Branch
2 Martin Luther King, Jr. Drive
Suite 1152, East Tower
Atlanta, Georgia 30334
404-463-1511

Honorable Brenda Exum, Mayor
City of Ray City
P.O. Box 128
Ray City, Georgia 31645

August 25, 2022

RE: Draft Permit
Ray City Water Pollution Control Plant (WPCP)
NPDES Permit No. GA0033553
Berrien County, Suwannee River Basin

Dear Mayor Exum:

The Environmental Protection Division (EPD) has received your application for renewal of the above-referenced permit. We are processing your application and are considering the issuance of a National Pollutant Discharge Elimination System (NPDES) permit in accordance with the Georgia Water Quality Control Act and the Federal Clean Water Act.

Before the permit can be reissued, EPD must complete the public notice requirements. The draft permit will be placed on the upcoming EPD public notice. Once posted, the public notice may be viewed on EPD's website at: https://epd.georgia.gov/watershed-protection-branch-public-announcements. At the end of the 30-day public comment period, EPD will make a determination on the reissuance of the permit.

Enclosed are the draft permit and additional documents. We request that all the documents be reviewed carefully by appropriate personnel. If you have comments or questions, please contact Dominique Hawkins of my staff at 470.524.1658 or *dominique.hawkins@dnr.ga.gov*.

Sincerely,

Benoit Causse, Manager
Municipal Permitting Unit
Wastewater Regulatory Program

BSC\drh
Attachments: Public Notice, Fact Sheet, Draft Permit
cc: John Reynolds, City of Ray City (*dray@raycityga.gov*)
Brandon Rice, City of Ray City (*rice.brandon79@yahoo.com*)
Lisa Myler, EPD Southwest District (*Lisa.Myler@dnr.ga.gov*)

GEORGIA
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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:

Dominique Hawkins, Environmental Specialist
dominique.hawkins@dnr.*ga.gov*
470-524-1658

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
- ☐ Designated as a major (≥1MGD or approved industrial pre-treatment program)

1. FACILITY INFORMATION

1.1 NPDES Permit No.: GA0033553

1.2 Name and Address of Owner/Applicant

City of Ray City
P.O. Box 128
Ray City, Georgia 31645

1.3 Name and Address of Facility

Ray City Water Pollution Control Plant (WPCP)
Park Street Extension
Ray City, Georgia 31645
(Berrien County)

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

Outfall #	Latitude (º)	Longitude (º)	Receiving Waterbody
001	31.068727	-83.207118	Cat Creek

1.5 Permitted Design Capacity

0.1 MGD

1.6 SIC Code and Description

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

1.7 Description of the Water Pollution Control Plant

Wastewater treatment:

The treatment process consists of an aerated pond, chlorination, and dechlorination. Treated effluent is then discharged to Cat Creek.

Solids processing:

Solids settle and stabilize at the bottom of the waste stabilization pond. The pond will be dredged and dewatered sludge sent to a permitted landfill when needed.

1.8 Type of Wastewater Discharge

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

1.9 Characterization of Effluent Discharge (as reported by applicant)

Outfall No. 001:

Effluent Characteristics (as Reported by Applicant)	Maximum Daily Value	Average Daily Value
Flow (MGD)	0.126	0.093
Five-Day Biochemical Oxygen Demand (mg/L)	21.0	15.39
Total Suspended Solids (mg/L)	22.4	19.275
Fecal Coliform Bacteria (#/100mL)	119	50.35
Ammonia, as N (mg/L)	3.1	2.26
Total Phosphorus, as P (mg/L)	2.7	1.6

2. APPLICABLE REGULATIONS

2.1 State Regulations

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

2.2 Federal Regulations

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

3. WATER QUALITY STANDARDS & RECEIVING WATERBODY INFORMATION

Section 301(b)(1)(C) of the Clean Water Act (CWA) requires the development of limitations in permits necessary to meet water quality standards. Federal Regulations 40 CFR 122.4(d) require that conditions in NPDES permits ensure compliance with the water quality standards which are composed of use classifications, numeric and or narrative water quality criteria and an anti-degradation policy. The use classification system designates the beneficial uses that each waterbody is expected to achieve, such as drinking water, fishing, or recreation. The numeric and narrative water quality criteria are deemed necessary to support the beneficial use classification for each water body. The antidegradation policy represents an approach to maintain and to protect various levels of water quality and uses.

3.1 Receiving Waterbody Classification and Information – Cat Creek:

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

Fishing: Propagation of Fish, Shellfish, Game and Other Aquatic Life; secondary contact recreation in and on the water; or for any other use requiring water of a lower quality.

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

(ii) pH: Within the range of 6.0 – 8.5.

(iii) Bacteria:

1. For the months of May through October, when water contact recreation activities are expected to occur, fecal coliform not to exceed a geometric mean of 200 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours. Should water quality and sanitary studies show fecal coliform levels from non-human sources exceed 200/100 mL (geometric mean) occasionally, then the allowable geometric mean fecal coliform shall not exceed 300 per 100 mL in lakes and reservoirs and 500 per 100 mL in free-flowing freshwater streams. For the months of November through April, fecal coliform not to exceed a geometric mean of 1,000 per 100 mL based on at least four samples collected from a given sampling site over a 30-day period at intervals not less than 24 hours and not to exceed a maximum of 4,000 per 100 mL for any sample. The State does not encourage swimming in these surface waters since 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	30Q3 (cfs)	7Q10 (cfs)	1Q10 (cfs)	Annual Average Flow (cfs)	Hardness (mg $CaCO_3$/L)	Upstream Total Suspended Solids (mg/L)
001	0.43	0.09	0.05	38	17 [(1)]	10 [(2)]

[(1)] Hardness value based on EPD's *Hardness in Georgia Waterbodies*, 2021, for Ecoregion 65h (10^{th} percentile).

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

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

Cat Creek	Beatty Mill Creek to Withlacoochee River near Ray City	Suwannee	Not Supporting	DO	4	4a	TMDL completed DO 2001.
GAR031102030304	Lowndes	Fishing	10,62	NP	Miles		

Cat Creek is listed on the 2022 305(b)/303(d) list as not supporting its designated use (fishing) but TMDLs have been completed for the impacted parameters (dissolved oxygen).

3.4 Total Maximum Daily Loads (TMDLs)

Dissolved Oxygen:

The Georgia Environmental Protection Division (EPD) completed a Total Maximum Daily Load (TMDL) for Dissolved oxygen (DO) for Cat Creek in the Suwannee River Basin in 2001. The TMDL includes wasteload allocations for total organic carbon (TOC), total nitrogen (TN), and total phosphorus (TP); however, the TMDL did not include any wasteload allocations for Ray City WPCP. A revised DO TMDL is being developed by EPD and will supersede the 2001 TMDL. Ray City WPCP will be included into the TMDL and given wasteload allocations for five-day biochemical oxygen demand, ammonia, and dissolved oxygen of 15.0, 5.2, and 6.0 mg/L, respectively.

3.5 Wasteload Allocation (WLA)

WLAs for reissuance was issued on March 17, 2022. Refer to *Appendix A* of the Fact Sheet for a copy of the WLAs.

4. PERMIT CONDITIONS AND EFFLUENT LIMITATIONS

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

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

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

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

40 CFR Part §122.44(a)(1) requires that NPDES permits include applicable technology-based limitations and standards, while regulations at § 125.3(a)(1) state that TBELs for publicly owned treatment works must be based on secondary treatment standards and the "equivalent to secondary treatment standards" (40 CFR Part 133). The regulation applies to all POTWs and identifies the technology-based performance standards achievable based on secondary treatment for five-day biochemical oxygen demand (BOD_5), total suspended solids (TSS), and pH.

The table below shows the secondary treatment standards:

Parameter	**Secondary Treatment Standards**	
	30-day Average	*7-day Average*
BOD_5	30 mg/L	45 mg/L
TSS	30 mg/L	45 mg/L
TSS & BOD_5 removal (concentration)	≥ 85%	--
pH (Daily Minimum – Daily Maximum)	6.0-9.0 S.U.	

4.2 Reasonable Potential Analysis (RPA)

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

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

The term "pollutant" is defined in CWA section 502(6) and 40 C.F.R. §122.2. Pollutants are grouped into three categories under the NPDES program: conventional, toxic, and

nonconventional. Conventional pollutants are those defined in CWA section 304(a)(4) and 40 C.F.R.§401.16 (five day-biochemical oxygen demand (BOD_5), total suspended solids (TSS), fecal coliform, pH, and oil and grease). Toxic (priority) pollutants are those defined in CWA section 307(a)(1) and include 126 metals and manmade organic compounds. Nonconventional pollutants are those that do not fall under either of the above categories (conventional or toxic pollutants) and include parameters such as, but not limited to, chlorine, ammonia, nitrogen, phosphorus, chemical oxygen demand (COD), and whole effluent toxicity (WET).

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

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

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

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

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

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

4.3 Whole Effluent Toxicity (WET)

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

4.4 Conventional Pollutants

Pollutants of Concern	Basis
pH	The instream wastewater concentration (IWC) is 63%. When the IWC is greater than 50%, there is reasonable potential for pH to cause or contribute to violations of the instream Georgia Water Quality Standard; therefore, pH limits of 6.0-8.5 SU (daily minimum-daily maximum) were included in the draft permit.
Five-Day Biochemical Oxygen Demand (BOD_5)	The monthly average BOD_5 limit was decreased from 30 mg/L to 15 mg/L. A compliance schedule to meet the new limit has been included in the draft permit. According to the steady-state dissolved oxygen Georgia DOSAG model, the proposed monthly average BOD_5 limit of 15 mg/L, when combined with the ammonia and dissolved oxygen limits (Refer to Section 4.5 below), is protective of the instream Water Quality Standard for dissolved oxygen described in Section 3.1 above.
Total Suspended Solids (TSS)	The monthly average TSS limit has been reduced from 90 mg/L to 30 mg/L. The proposed limit is in accordance with EPD's *Guidelines for Establishing Technology-Based Total Suspended Solids (TSS) Limits in Domestic Wastewater NPDES Permits*, 2020 for wastewater stabilization ponds. A compliance schedule to meet the new limit has been included in the draft permit.

Pollutants of Concern	Basis
Fecal Coliform Bacteria (FCB)	In accordance with 40 C.F.R. §122.44(d)(1)(ii) of the federal regulations, EPD considers all POTWs, Private and Institutional Developments, and CSO Control Facilities, discharging all or a portion of domestic sanitary wastewater, to have the reasonable potential to cause or contribute to instream water quality standard violations for bacteria, including fecal coliform and *Escherichia coli*. EPD has determined these facilities discharge the conventional pollutant fecal coliform bacteria, wastewater treatment systems are consistently designed to treat fecal coliform bacteria, and fecal coliform bacterium are highly variable in the receiving stream after treatment. EPD does not consider dilution in our analysis as we don't believe it's appropriate for bacteria due to its inherent ability to reproduce in the receiving stream. The monthly average FCB limit of 200 #/100mL is in accordance with the instream Water Quality Standards in Section 3.1 above.

4.5 Nonconventional Pollutants

Pollutants of Concern	Basis
Total Residual Chlorine (TRC)	The daily maximum TRC limit was revised from 0.011 mg/L to 0.02 mg/L in the draft permit. The proposed limit has been determined using the US EPA's chronic TRC criterion of 11 µg/L in the receiving stream after dilution. Refer to Section 4.7.3 below for calculations.
Dissolved Oxygen (DO)	A daily minimum DO limit of 6.0 mg/L has been included in the draft permit, along with a compliance schedule to meet the new limit. 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.

Pollutants of Concern	Basis
Orthophosphate, Total Phosphorus (TP)	Total phosphorus measures all forms of phosphorus in a sample (orthophosphate, condensed phosphate, and organic phosphate). Orthophosphate, or reactive phosphorus is the amount of phosphorus available to chemically or biologically react in the environment. Discharges of total phosphorus directly to or within the watershed upstream from waterbodies with total phosphorus water quality standards must undergo an analysis to determine if the discharge of the pollutants has the reasonable potential to cause or contribute to instream water quality standard violations. Based on the pollutant being present in the wastestream, EPD has identified total phosphorus as a pollutant of concern for the following: POTWs, Private and Institutional Developments, CSO Control Facilities, and applicable Non POTWs. An effluent limit for total phosphorus and monitoring for orthophosphate has been included in the permit to provide information for further analyses and development of appropriate numeric or narrative effluent limits. Additionally, the permittee will be required to develop and maintain a Comprehensive Nutrient Optimization Plan. A monthly average TP limit of 5.0 mg/L has been included in the draft permit. The proposed limit was developed to meet the nutrient threshold criteria in in Florida Regulations, Chapter 62:302.531: Numeric Interpretations of Narrative Nutrient Criteria and to protect downstream uses. A compliance schedule to meet the new limit has been included in the draft permit.
Total Nitrogen (TN), Total Kjeldahl Nitrogen (TKN), Organic Nitrogen, Nitrate-Nitrite	Based on the pollutant being present in the wastestream, EPD has identified total nitrogen as a pollutant of concern for the following: POTWs, Private and Institutional Developments, CSO Control Facilities, and applicable Non POTWs. Monitoring for TKN, organic nitrogen, and nitrate-nitrite has been included in the permit to calculate total nitrogen, quantify nutrient loadings in the Suwannee River Basin, and provide information for further analyze and develop appropriate numeric or narrative effluent limits. Additionally, the permittee will be required to develop and maintain a Comprehensive Nutrient Optimization Plan. Total nitrogen is the sum of all nitrogen forms or TN = TKN + nitrite + nitrate. Organic nitrogen, as N = TKN – ammonia, as N. Total nitrogen, organic nitrogen, nitrate-nitrite, and TKN must be analyzed or calculated from the same sample to correctly calculate

	total nitrogen. See Section 5.7 and 5.8 of this Fact Sheet for additional information A monthly average and annual average (12-month rolling average) TN limits of 25 mg/L and 20 mg/L, respectively, have been established using a have been established using a watershed modeling system (LSPC++). The proposed limits were developed to meet the nutrient threshold criteria in Florida Regulations, Chapter 62:302.531: Numeric Interpretations of Narrative Nutrient Criteria and to protect downstream uses. In order to demonstrate compliance with the annual average limit on a monthly basis rather than once at the end of a 12-month period, the permittee will calculate and report the 12-month rolling average on each Discharge Monitoring Report. A 36-month compliance schedule to meet the new limit has been included in the draft permit. The monthly average TN limitation of 25 mg/L will become effective after the completion of the compliance schedule. Twelve months of data is needed to calculate an annual average; therefore, the annual average TN limit of 20 mg/L will be applicable only 12 months after the completion of the compliance schedule.
Ammonia (NH_3)	A monthly average NH3 limit of 5.2 mg/L has been included in the draft permit. According to the steady-state dissolved oxygen Georgia DOSAG model, the proposed limit, when combined with the monthly average BOD_5 limit (Refer to Section 4.4 above), is protective of the instream Water Quality Standard for dissolved oxygen described in Section 3.1 above. A compliance schedule to meet the new limit or has been included in the draft permit. A monthly average ammonia limit of 5.2 mg/L is also in accordance with EPD's *NPDES Permitting Strategy for Addressing Ammonia Toxicity*, 2017.

4.6 Toxics & Manmade Organic Compounds

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

4.7 Calculations for Effluent Limits

4.7.1 Instream Waste Concentration (IWC):

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

$$= \frac{0.155}{0.155 + 0.09}$$

$$= 63\ \%$$

4.7.2 Flow:

Weekly Average Flow:

Q = Flow
C = Concentration
M = Mass

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

$$= 0.1 \times 1.25$$

$$= 0.125\ MGD$$

4.7.3 Five-Day Biochemical Oxygen Demand:

Weekly Average/ Concentration:

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

$$= 15.0 \times 1.5$$

$$= 22.5\ mg/L$$

Monthly Average Mass Loading:

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

$$= 0.1 \times 15.0 \times 8.34$$

$$= 12.5\ lbs/day$$

Weekly Average Mass Loading:

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

= 0.125 x 15.0 x 8.34

= 16.0 lbs/day

4.7.4 Total Suspended Solids:

Weekly Average/ Concentration:

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

= 30 x 1.5

= 45 mg/L

Monthly Average Mass Loading:

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

= 0.1 x 30 x 8.34

= 25 lbs/day

Weekly Average Mass Loading:

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

= 0.125 x 30 x 8.34

= 31.3 lbs/day

4.7.5 Fecal Coliform Bacteria:

Weekly Average/ Concentration:

$C_{Weekly/Max}$ = $C_{Monthly}$ (#/100 mL) x 2

= 200 x 2

= 400 #/100 mL

4.7.6. Total Residual Chlorine (TRC):

Daily Maximum Concentration:

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

$$= \frac{(0.155 + 0.09) \times 0.02}{0.154}$$

$$= 0.02 \text{ mg/L}$$

4.7.7 Ammonia:

Toxicity Analysis:

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

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

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:

$$[NH_3]_{Effluent} =$$

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

Refer to *Appendix C* for detailed calculations.

Weekly Average Concentration:

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

$$= 5.2 \times 1.5$$

$$= 7.8 \text{ mg/L}$$

Monthly Average Mass Loading:

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

$$= 0.1 \times 5.2 \times 8.34$$

$$= 4.3 \text{ lbs/day}$$

Weekly Average Mass Loading:

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

= 0.125 x 5.2 x 8.34

= 5.4 lbs/day

4.7.8 Total Phosphorus

Weekly Average Concentration:

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

= 5.0 x 1.5

= 7.5 mg/L

Monthly Average Mass Loading:

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

= 0.1 x 5.0 x 8.34

= 4.2 lbs/day

Weekly Average Mass Loading:

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

= 0.125 x 5.0 x 8.34

= 5.2 lbs/day

4.7.9 Total Nitrogen

Monthly average concentration:

$[C]_{Monthly}$ = [C] Annual (mg/L) x 1.25

= 20 x 1.25

= 25 mg/L

Weekly Average Concentration:

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

= 25 x 1.5

= 37.5 mg/L

Monthly Average Mass Loading:

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

= 0.1 x 25 x 8.34

= 20.9 lbs/day

Weekly Average Mass Loading:

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

= 0.125 x 25 x 8.34

= 26.1 lbs/day

4.7.10 Metals

Not applicable

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

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

Parameter	WQBELS [(1)]	TBELS [(1)]
	Monthly Average	*Monthly Average*
Five-Day Biochemical Oxygen Demand (mg/L)	**15**	30.0
Total Suspended Solids (mg/L)	None	**30**
Total Phosphorus (mg/L)	**5.0**	None
Total Nitrogen (mg/L) – Annual Average – Monthly Average	 **20** **25**	 None
pH (S.U.), Daily Minimum – Daily Maximum	**6.0 - 8.5**	6.0 – 9.0
Ammonia (mg/L)	**5.2**	None
Fecal Coliform Bacteria (#/100 mL)	**200**	None
Dissolved Oxygen (mg/L), Daily Minimum	**6.0**	None
Total Residual Chlorine (mg/L), Daily Maximum	**0.02**	0.5

(1) Effluent limits in bold were included in the permit. Refer to Sections 4.5, 4.6, and 4.7, and above for more information.

5. OTHER PERMIT REQUIREMENTS AND CONSIDERATIONS

5.1 Industrial Pretreatment Program (IPP)

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

5.2 Sludge Management Plan (SMP)

The facility has not been required to dispose of sludge in the last five years. When necessary to dredge the pond, the City will choose a suitable landfill for disposal; therefore, a SMP is not required at this time.

5.3 Watershed Protection Plan (WPP)

The City does not have an approved WPP. A WPP is only required for new or expanding facilities, as well as for facilities with design permitted flow greater or equal to 1.0 MGD.

5.4 Service Delivery Strategy

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

5.5 Compliance Schedules

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

5.6 Anti-Backsliding

In accordance with Section 404(o) of the Clean Water Act and 40 C.F.R. 122.44(l)(2)(i)(B)(1), a permit may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant if information is available which was not available at the time of permit issuance and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.

The TRC limit has been increased due to updated receiving stream information. Therefore, the permit complies with the anti-backsliding requirements of the Clean Water Act.

5.7 Development of a Comprehensive Permitting Strategy for Nutrients

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

EPD is developing a comprehensive Permitting Strategy for Nutrients (Nutrient Permitting Strategy). The development of the Nutrient Permitting Strategy will allow EPD to update the 2011 Phosphorus Strategy; develop a comprehensive nutrient reduction approach to tackle phosphorus, nitrogen, and their effect on chlorophyll a; and solicit stakeholder and permittee feedback on key strategy elements. EPD anticipates the Nutrient Permitting Strategy will provide some degree of regulatory certainty for point source dischargers and minimize the regulatory burden whereby EPD will be evaluating and establishing WLAs for nitrogen and phosphorus.

The Nutrient Permitting Strategy will complement the work completed over the last several decades and build upon the Nutrient WQS Plan, analyze available ambient and permitted discharge data, determine limiting factors, develop a reasonable potential analysis for total

nitrogen and total phosphorus, develop TBELs, and provide a NPDES permit implementation schedule.

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

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

5.8 Comprehensive Nutrient Optimization Plan

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

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

6. REPORTING

6.1 Compliance office

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

Georgia Environmental Protection Division
Southwest District – Albany Office
2024 Newton Road
Albany, Georgia 31701

6.2 E-Reporting

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

7. REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

Not applicable

8. PERMIT EXPIRATION

The permit will expire five years from the effective date.

9. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS

9.1 Comment Period

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

The permit application, draft permit, and other information are available for review at 2 Martin Luther King Jr. Drive, Suite 1152 East, Atlanta, Georgia 30334, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday and on EPD's website accessible through the publicly available Georgia EPD Online System (GEOS) at: https://geos.epd.georgia.gov/GA/GEOS/Public/GovEnt/Shared/Pages/Main/Login.aspx
For additional information, you can contact 404-463-1511.

9.2 Public Comments

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

9.3 Public Hearing

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

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

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

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

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

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

9.4 Final Determination

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

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

9.5 Contested Hearings

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

Petitions for a contested hearing must include the following:

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

National Pollutant Discharge Elimination System
Wasteload Allocation Form

Part I: Background Information

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

Facility Name: **Ray City WPCP** County: **Berrien** WQMU: **0904**

NPDES Permit No.: **GA0033553** Expiration Date: **6/30/2022** Outfall Number: **001**

Receiving Water: **Cat Creek** River Basin: **Suwannee** 10-Digit HUC: **0311020303**

Discharge Type: Domestic ☒ Industrial ☐ Both ☐ Proportion (D:I): Flow(s) Requested (MGD): **0.1**

Ecoregion: **L4 – 65h, Tifton Upland**

Industrial Contributions Type(s):

Treatment Process Description: **Influent bar screen, a three-celled aerated waste stabilization pond, chlorination and de-chlorination**

Additional Information: (history, special conditions, other facilities): **The City proposes to expand current capacity to 0.2 MGD.**

Requested by: **Benoit Causse** Program: **WRP** Date: **1/13/2022**

Part II: Receiving Water Information

Receiving Water: **Cat Creek to the Withlacoochee River** Designated Use Classification: **Fishing**

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

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

Georgia EPD developed a DO TMDL in the Suwannee River Basin in 2001, which recommended 38% load reduction from nonpoint sources to meet natural water quality standard for Cat Creek. The TMDL only included point sources with permitted flows greater than 0.1 MGD; therefore, the Ray City WPCP was not identified as a point source contributing to impaired waterbodies in the basin.

Part III: Water Quality Model Review Information

Model Type: Uncalibrated ☐ Calibrated ☒ Verified ☐ Cannot be Modeled ☐ Model Length (mi): **8.3**

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 (mi^2):	**42.8**			Mean annual streamflow at discharge (cfs):	**38**
7Q10 Yield (cfs/mi^2):	**0.002**	Velocity (range fps):	**0.33**			30Q3 streamflow at discharge (cfs):	**0.43**
Effluent Flow Rate (cfs):	**0.15**	IWC (%):	**64**			7Q10 streamflow at discharge (cfs):	**0.09**
Slope (range - fpm):	**4.7 - 6.0**	K1:	**0.15 / 0.02**	K3:	**0.4**	K2 : **3 – 4**	1Q10 streamflow at discharge (cfs):	**0.05**
SOD: **1.0**	Escape Coef. (ft^{-1}):	**0.11**	f-Ratio BOD_u/BOD_5):	**3**		*Background Hardness (as $CaCO_3$):	**See L4-65h**	

The receiving stream has naturally low DO of ~4.4 mg/L under critical conditions. The DOSAG model predicted an estimated minimum DO of 4 mg/L, approximately 7.2 miles downstream from the discharge. This DO is within the range of 90% of the natural DO applying the EPA alternative DO criteria for naturally low DO waters.

***Average hardness value is 18 mg/L at WQ station RV_09_16757, ~3.4 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: **Cat Creek**

Effluent Flow Rate (MGD)	BOD_5	NH_3-N	DO (minimum)	TRC (daily max.)	Fecal Coliform (No./100ml)	pH (std. units)	Total Nitrogen	Total Phosphorus	Ortho-P, TKN Nitrite - Nitrate Organic Nitrogen
0.1	**15**	**5.2**	**6.0**	**0.02**	**200**	**6.0 – 8.5**	**25 (20)**	5.0	**Monitor**

Additional Comments:

- **Priority pollutants permit limits, aquatic toxicity testing requirements, and other parameters required by categorical effluent guidelines or identified during review of permit application are to be determined by WRP.**
- **Revised BOD_5 and NH3 limits, and a new DO limit are recommended to protect the instream DO criteria.**
- **The revised ammonia limit meets EPA's Aquatic Life Ambient Water Quality Criteria for Ammonia-Freshwater 2013 under 30Q3 streamflow and meets TN limits.**
- **When the instream wastewater concentration (IWC) is 50% or greater, the effluent pH permit limit range of 6.0 to 8.5 standard units is recommended in accordance with GA EPD's permitting guideline for effluent pH.**
- **Total nitrogen limit is necessary to meet Florida's TN instream criteria. The value in parentheses is an annual average limit.**
- **Total phosphorus limit meets Florida's TP instream criteria.**
- **Effluent monitoring for total phosphorus, Ortho P, TKN, nitrate-nitrite, and organic nitrogen is recommended. Nitrogen and phosphorus constituents should be analyzed from the same sample. Organic nitrogen should be calculated as TKN minus NH_3.**

Prepared by: **Lucy Sun** LS Date: **3/14/2022** | Reviewed by: **Josh Welte** JW Date: **15.Mar.22**

Part V: Program Manager Comment

Elizabeth C Booth

Elizabeth Booth Date: **03/17/2022**

FACT SHEET

Appendix B

Ray City Water Pollution Control Plant
NPDES Permit No. GA0033553

Ammonia Toxicity

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

Date: 4/10/2017
Facility: Ray City WPCP
NPDES Permit Number: GA0033553
Receiving Stream: Cat Creek to the Withlacoochee River
Engineer: Lucy Sun
Comments: Reissuance

Reissuance

Stream and Facility Data:

Background Stream pH (standard units):	6.0		RV_09_1657, 58, 59
Effluent pH (standard units):	8.5		
Final Stream pH (standard units):	6.13		
Stream Temperature (Celsius):	27.0		USGS 02318700
30Q3 Streamflow (cfs):	0.43		30Q3
Stream background concentration (Total NH3-N, mg/L):	0.04		
Facility Discharge (MGD/cfs):	0.1	0.15	
Total Combined Flow (cfs):	0.58		

Effluent concentration (Total NH3-N, mg/L) = 5.2 No limit. Recommend limit 5.2 mg/L

If 5.19 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):

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

Allowable instream concentration CCC (Total NH3-N, mg/l) = 1.40

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

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

Permit No. GA0033553
Issuance Date:

GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

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

City of Ray City
P.O. Box 128
Ray City, Georgia, 31645

is authorized to discharge from a facility located at

City of Ray City
Water Pollution Control Plant (WPCP)
Park Street Extension
Ray City, Georgia 31645
(Berrien County)

to receiving waters

Cat Creek
(Suwannee River Basin)

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

This permit is issued in reliance upon the permit application signed on December 23, 2021, 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 XXXXXXX XX, 20XX.

This permit and the authorization to discharge shall expire at midnight, XXXXX XX, 20XX.

STATE OF GEORGIA
CONSTITUTION
WISDOM JUSTICE MODERATION
1776

DRAFT

Director,
Environmental Protection Division

PART I

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

The Federal Act referred to is The Clean Water Act.

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

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

A. SPECIAL CONDITIONS

1. SLUDGE DISPOSAL REQUIREMENTS

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

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

2. SLUDGE MONITORING REQUIREMENTS

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

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

The permittee must notify EPD of:

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

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

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

4. EFFLUENT TOXICITY AND BIOMONITORING REQUIREMENTS

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

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

a. Acute biomonitoring tests;

b. Chronic biomonitoring tests;

c. Stream studies;

d. Priority pollutant analyses;

e. Toxicity reduction evaluations (TRE); or

f. Any other appropriate study.

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

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

B.1. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Discharge to Cat Creek - Outfall #001 (31.068727°, -83.207118°):

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

Parameters	Discharge limitations in mg/L (lbs/day) unless otherwise specified		Monitoring Requirements		
	Monthly Average	Weekly Average	Measurement Frequency	Sample Type	Sample Location
Flow (MGD)	0.1	0.125	One Days/Week	Instantaneous	Effluent
Five-Day Biochemical Oxygen Demand [(1)(2)]	30 (25.0)	45 (31.3)	One Day/Week	Grab	Influent & Effluent
Total Suspended Solids [(1) (2)]	90.0 (75.1)	120.0 (93.8)	One Day/Week	Grab	Influent & Effluent
Fecal Coliform Bacteria (#/100 mL)	200	400	Two Days/Month	Grab	Effluent

[(1)] Numeric limits only apply to the effluent.

(2) Refer to Part I.C.8. TOTAL SUSPENDED SOLIDS, FIVE-DAY BIOCHEMICAL OXYGEN DEMAND, AMMONIA, DISSOLVED OXYGEN, TOTAL NITROGEN, AND TOTAL PHOSPHORUS COMPLIANCE SCHEDULE

(Effluent limitations continued on the next page)

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

Discharge to Cat Creek - Outfall #001 (31.068727°, -83.207118°):

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
pH, Daily Minimum – Daily Maximum (Standard Unit)	6.0 – 8.5	One Day/Week	Grab	Effluent
Total Residual Chlorine, Daily Maximum	0.02	One Day/Week	Grab	Effluent
Dissolved Oxygen, Daily Minimum (2)	Report	One Day/Week	Grab	Effluent
Total Phosphorus, as P (2)(3)(6)	Report	One Day/Month	Grab	Effluent
Orthophosphate, as P (3)	Report	One Day/Month	Grab	Effluent
Ammonia, as N (2)(4)(6)	Report	One Day/Month	Grab	Effluent
Organic Nitrogen, as N (4)	Report	One Day/Month	Grab	Effluent
Nitrate-Nitrite, as N (4)	Report	One Day/Month	Grab	Effluent
Total Kjeldahl Nitrogen, as N (4)	Report	One Day/Month	Grab	Effluent
Total Nitrogen, as N (2)(4)(5)(6)	Report	One Day/Month	Grab	Effluent

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

(2) Refer to Part I.C.8. FIVE-DAY BIOCHEMICAL OXYGEN DEMAND, AMMONIA, DISSOLVED OXYGEN, TOTAL NITROGEN, AND TOTAL PHOSPHORUS COMPLIANCE SCHEDULE

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

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

(5) The permittee must report the monthly average total nitrogen concentration (mg/L). The 12-month rolling average must also be reported on the discharge monitoring reports once 12-months of monitoring data is available.

(6) Refer to Part I.C.9 COMPREHENSIVE NUTRIENT OPTIMIZATION PLAN.

(Monitoring requirements continued on the next page)

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

c. The weekly average, other than for fecal coliform bacteria, is the arithmetic mean of values obtained for samples collected during a 7-day period. The week begins 12:00 midnight Saturday and ends at 12:00 midnight the following Saturday. To define a different starting time for the sampling period, the permittee must notify the EPD in writing. For reporting required by Part I.D.1. of this permit, a week that starts in one month and ends in another month shall be considered part of the second month. The permittee may calculate and report the weekly average as a 7-day moving average.

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

e. Influent monitoring: Unless otherwise specified, influent samples shall be collected before any return or recycle flows. These flows include returned activated sludge, supernatants, centrates, filtrates, and backwash.

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

g. A composite sample shall consist of a minimum of 5 subsamples collected at least once every 2 hours for at least 8 hours and shall be composited proportionately to flow.

h. Flow measurements shall be conducted using the flow measuring device(s) in accordance with the approved design of the facility. If instantaneous measurements are required, then the permittee shall have a primary flow measuring device that is correctly installed and maintained. If continuous recording measurements are required, then flow measurements must be made using continuous recording equipment. Calibration shall be maintained of the continuous recording instrumentation to ± 10% of the actual flow.

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

   Records of the calibration checks shall be maintained.

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

j. Some parameters will be reported as "not detected" when they are below the detection limit and will then be considered in compliance with the effluent limit. The detection limit will also be reported.

B.2. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Discharge to Cat Creek - Outfall #001 (31.068727°, -83.207118°):

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

Parameters	Discharge limitations in mg/L (lbs/day) unless otherwise specified		Monitoring Requirements		
	Monthly Average	Weekly Average	Measurement Frequency	Sample Type	Sample Location
Flow (MGD)	0.1	0.125	One Days/Week	Instantaneous	Effluent
Five-Day Biochemical Oxygen Demand [(1)(2)]	15.0 (12.5)	22.5 (15.6)	One Day/Week	Grab	Influent & Effluent
Total Suspended Solids [(2)]	30 (25)	40 (31.3)	One Day/Week	Grab	Influent & Effluent
Ammonia, as N [(1)(3)(6)]	5.2 (4.3)	7.8 (5.4)	One Day/Week	Grab	Effluent
Total Nitrogen, as N [(1)(3)(4)(6)]	25.0 (20.9)	37.5 (26.1)	One Day/Week	Grab	Effluent
Total Phosphorus, as P [(1)(5)(6)]	5.0 (4.2)	7.5 (5.2)	One Day/Week	Grab	Effluent
Fecal Coliform Bacteria (#/100 mL)	200	400	Two Days/Month	Grab	Effluent

(1) Refer to Part I.C.8. TOTAL SUSPENDED SOLIDS FIVE-DAY BIOCHEMICAL OXYGEN DEMAND, AMMONIA, DISSOLVED OXYGEN, TOTAL NITROGEN, AND TOTAL PHOSPHORUS COMPLIANCE SCHEDULE

(2) Numeric limits only apply to the effluent.

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

(4) The 12-month rolling average shall not exceed 20 mg/L. This limit is applicable 48 months after the effective date of the permit.

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

(6) Refer to Part I.C.9 COMPREHENSIVE NUTRIENT OPTIMIZATION PLAN.

(Effluent limitations continued on the next page)

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

Discharge to Cat Creek - Outfall #001 (31.068727°, -83.207118°):

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 (%)	85	See Below	See Below	See Below
pH, Daily Minimum – Daily Maximum (Standard Unit)	6.0 – 8.5	One Day/Week	Grab	Effluent
Total Residual Chlorine, Daily Maximum	0.02	One Day/Week	Grab	Effluent
Dissolved Oxygen, Daily Minimum (2)	6.0	One Day/Week	Grab	Effluent
Orthophosphate, as P (3)(5)	Report	One Day/Month	Grab	Effluent
Organic Nitrogen, as N (4)(5)	Report	One Day/Month	Grab	Effluent
Nitrate-Nitrite, as N (4)(5)	Report	One Day/Month	Grab	Effluent
Total Kjeldahl Nitrogen, as N (4)(5)	Report	One Day/Month	Grab	Effluent

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

(2) Refer to Part I.C.8. TOTAL SUSPENDED SOLIDS, FIVE-DAY BIOCHEMICAL OXYGEN, DEMAND, AMMONIA, DISSOLVED OXYGEN, TOTAL NITROGEN, AND TOTAL PHOSPHORUS COMPLIANCE SCHEDULE

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

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

(5) Refer to Part I.C.9 COMPREHENSIVE NUTRIENT OPTIMIZATION PLAN.

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

c. The weekly average, other than for fecal coliform bacteria, is the arithmetic mean of values obtained for samples collected during a 7-day period. The week begins 12:00 midnight Saturday and ends at 12:00 midnight the following Saturday. To define a different starting time for the sampling period, the permittee must notify the EPD in writing. For reporting required by Part I.D.1. of this permit, a week that starts in one month and ends in another month shall be considered part of the second month. The permittee may calculate and report the weekly average as a 7-day moving average.

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

e. Influent monitoring: Unless otherwise specified, influent samples shall be collected before any return or recycle flows. These flows include returned activated sludge, supernatants, centrates, filtrates, and backwash.

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

g. A composite sample shall consist of a minimum of 5 subsamples collected at least once every 2 hours for at least 8 hours and shall be composited proportionately to flow.

h. Flow measurements shall be conducted using the flow measuring device(s) in accordance with the approved design of the facility. If instantaneous measurements are required, then the permittee shall have a primary flow measuring device that is correctly installed and maintained. If continuous recording measurements are required, then flow measurements must be made using continuous recording equipment. Calibration shall be maintained of the continuous recording instrumentation to ± 10% of the actual flow.

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

Records of the calibration checks shall be maintained.

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

j. Some parameters will be reported as "not detected" when they are below the detection limit and will then be considered in compliance with the effluent limit. The detection limit will also be reported.

C. MONITORING AND REPORTING

1. REPRESENTATIVE SAMPLING

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

2. SAMPLING PERIOD

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

b. Unless otherwise specified in this permit, semiannual samples shall be taken during the periods January-June and July-December.

c. Unless otherwise specified in this permit, annual samples shall be taken during the period of January-December.

3. MONITORING PROCEDURES

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

4. RECORDING OF RESULTS

For each required parameter analyzed, the permittee shall record:

a. The exact place, date, and time of sampling, and the person(s) collecting the sample. For flow proportioned composite samples, this shall include the instantaneous flow and the corresponding volume of each sample aliquot, and other information relevant to document flow proportioning of composite samples;

b. The dates and times the analyses were performed;

c. The person(s) who performed the analyses;

d. The analytical procedures or methods used; and

e. The results of all required analyses.

5. ADDITIONAL MONITORING BY PERMITTEE

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

6. RECORDS RETENTION

The permittee shall retain records of:

a. All laboratory analyses performed including sample data, quality control data, and standard curves;

b. Calibration and maintenance records of laboratory instruments;

c. Calibration and maintenance records and recordings from continuous recording instruments;

d. Process control monitoring records;

e. Facility operation and maintenance records;

f. Copies of all reports required by this permit;

g. All data and information used to complete the permit application; and

h. All monitoring data related to sludge use and disposal.

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

7. PENALTIES

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

8. TOTAL SUSPENDED SOLIDS, FIVE-DAY BIOCHEMICAL OXYGEN DEMAND, AMMONIA, DISSOLVED OXYGEN, TOTAL NITROGEN, AND TOTAL PHOSPHORUS COMPLIANCE SCHEDULE

The permittee shall comply with the five-day biochemical oxygen demand, ammonia, dissolved oxygen, total nitrogen, and total phosphorus effluent limitations in Part I.B.2. of this permit in accordance with the following schedule:

a. Within 9 months of the effective date of the permit, the permittee shall submit an Environmental Information Document (EID) and a design development report (DDR) to EPD for any modifications needed at the facility that will allow the facility to meet the five-day biochemical oxygen demand, ammonia, dissolved oxygen, total nitrogen, and total phosphorus effluent limitations in Part I.B.2. of this permit.

b. Within 15 months of the effective date of the permit, the permittee shall submit plans and specifications for any modifications needed at the facility that will allow it to meet the five-day biochemical oxygen demand, ammonia, dissolved oxygen, total nitrogen, and total phosphorus effluent limitations in Part I.B.2. of this permit.

c. Within 24 months of the effective date of the permit, the permittee shall submit a report to EPD that outlines the progress towards completing construction of the treatment process modifications. The report shall include an estimate of what percentage of the construction is complete and is to describe what work remains to be completed in order to meet the ammonia effluent limitations in Part I.B.2. of this permit.

d. Within 36 months of the effective date of the permit, the permittee shall comply with the five-day biochemical oxygen demand, ammonia, dissolved oxygen, total nitrogen, and total phosphorus effluent limitations in Part I.B.2. of this permit.

If at any time during the compliance schedule the permittee believes that the facility will be able to consistently meet the total suspended solids, five-day biochemical oxygen demand, ammonia, dissolved oxygen, total nitrogen, and total phosphorus effluent limitations without having to make any plant modifications, then the permittee may choose to write a letter to EPD stating this. The letter needs to include data supporting the permittee's position. Upon written notification by EPD, the permittee may be excused from completing any remaining items in the above compliance schedule. However, the permittee will also be subject to the five-day biochemical oxygen demand, ammonia, dissolved oxygen, total nitrogen, and total phosphorus effluent limitations from the date of EPD's letter and any future exceedance of those effluent limitations in Part I.B.2. will be considered to be a permit violation. If the permittee does not receive written notification from EPD releasing it from the compliance schedule, then the permittee is required to complete all items in the schedule by the dates indicated and will be required to attain compliance with the total suspended solids, five-day biochemical oxygen demand, ammonia, dissolved oxygen, total nitrogen, and total phosphorus effluent limitations in Part I.B.2. within 36 months of the effective date of the permit.

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

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

9. COMPREHENSIVE NUTRIENT OPTIMIZATION PLAN

a. Within 24 months of the effective date of this permit, the Permittee shall develop and submit to EPD a Comprehensive Nutrient Optimization Plan (CNOP).Wastewater treatment efficiency optimization is an adaptive management strategy the Permittee shall use to limit the discharge of total phosphorus and total nitrogen. The CNOP will include a suite of site specific best management practices. The CNOP shall, at a minimum, identify and quantify sources of nutrients entering the wastewater treatment plant, evaluate potential source reductions, idenitfy and implement operational adjustments aimed to reduce nutrients, and establish annual nutrient reduction goals.The CNOP shall be updated annually and retained on site. Prior to the submittal of the CNOP, the permittee will submit semi-annual progress reports detailing the status of the developpment and implementation of the CNOP to the assigned EPD Compliance Office.

b. Annual Report: Each June 30th the permittee is to submit the following to EPD:

i. An annual certification statement documenting that the CNOP is being implemented. The certification statement and signatory requirements shall comply with Part I.D.5 in this permit.

ii. A detailed progress report that provides a summary of the reduction goals and numeric targets developed for the previous year and discussion of how the goals and targets were acheived, BMPs that have been implemented, new reduction goals and targets for the following year. The progress report shall also include any necessary changes made to CNOP.

c. Once EPD has completed the statewide Nutrient Permitting Strategy, EPD may reopen this permit to include numeric or narrative effluent limits for nutrients.

D. REPORTING REQUIREMENTS

1. The permittee must electronically report the DMR, OMR and additional monitoring data using the web based electronic NetDMR reporting system, unless a waiver is granted by EPD.

a. The permittee must comply with the Federal National Pollutant Discharge Elimination System Electronic Reporting regulations in 40 CFR §127. The permittee must electronically report the DMR, OMR, and additional monitoring data using the web

based electronic NetDMR reporting system online at: https://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

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

7. LABORATORY ANALYST CERTIFICATION REQUIREMENTS

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

8. BYPASSING

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

a. Bypassing is unavoidable to prevent loss of life, personal injury, or severe property damage;

b. There are no feasible alternatives to bypassing; and

c. The permittee notifies the EPD at least 10 days before the date of the bypass.

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

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

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

9. POWER FAILURES

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

10. DUTY TO MITIGATE

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

11. NOTICE CONCERNING ENDANGERING WATERS OF THE STATE

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

Spills and Major Spills:

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

A "major spill" means:

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

2. Any discharge of raw sewage that 1) exceeds 10,000 gallons or 2) results in water quality violations in the waters of the State.

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

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

a. Notify EPD, in person or by telephone, when a spill or major spill occurs in the system.

b. Report the incident to the local health department(s) for the area affected by the incident.

The report at a minimum shall include the following:

1. Date of the spill or major spill;
2. Location and cause of the spill or major spill;
3. Estimated volume discharged and name of receiving waters; and
4. Corrective action taken to mitigate or reduce the adverse effects of the spill or major spill.

c. Post a notice as close as possible to where the spill or major spill occurred and where the spill entered State waters and also post additional notices along portions of the waterway affected by the incident (i.e. bridge crossings, boat ramps, recreational areas, and other points of public access to the affected waterway). The notice at a minimum shall include the same information required in 11(b)(1-4) above. These notices shall remain in place for a minimum of seven days after the spill or major spill has ceased.

d. Within 24 hours of becoming aware of a spill or major spill, the owner of a POTW shall report the incident to the local media (television, radio, and print media). The report shall include the same information required in 11(b)(1-4) above.

e. Within 5 days (of the date of the spill or major spill), the owner of a POTW shall submit to EPD a written report which includes the same information required in 11(b)(1-4) above.

f. Within 7 days (after the date of a major spill), the owner of a POTW responsible for the major spill, shall publish a notice in the largest legal organ of the County where the incident occurred. The notice shall include the same information required in 11(b)(1-4) above.

g. The owner of a POTW shall immediately establish a monitoring program of the receiving waters affected by a major spill or by consistently exceeding an effluent limit, with such monitoring being at the expense of the POTW for at least one year. The monitoring program shall include an upstream sampling point as well as sufficient downstream locations to accurately characterize the impact of the major spill or the consistent exceedence of effluent limitations described in the definition of *"* Consistently exceeding effluent limitation" above. As a minimum, the following parameters shall be monitored in the receiving stream:

1. Dissolved Oxygen;
2. Fecal Coliform Bacteria;
3. pH;
4. Temperature; and
5. Other parameters required by the EPD.

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

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

12. UPSET PROVISION

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

B. RESPONSIBILITIES

1. DUTY TO COMPLY

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

a. Enforcement action;

b. Permit termination, revocation and reissuance, or modification; or

c. Denial of a permit renewal application.

2. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

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

3. INSPECTION AND ENTRY

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

a. Enter the permittee's premises where a regulated activity or facility is located, or where any records required by this permit are kept;

b. Review and copy any records required by this permit;

c. Inspect any facilities, equipment, practices, or operations regulated or required by this permit; and

d. Sample any substance or parameter at any location.

4. DUTY TO PROVIDE INFORMATION

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

5. TRANSFER OF OWNERSHIP

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

a. The permittee notifies the Director in writing at least 30 days in advance of the proposed transfer;

b. An agreement is written containing a specific date for transfer of permit responsibility including acknowledgment that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on. This agreement must be submitted to the Director at least 30 days in advance of the proposed transfer; and

c. The Director does not notify the current permittee and the new permittee within 30 days of EPD intent to modify, revoke and reissue, or terminate the permit. The Director may require that a new application be filed instead of agreeing to the transfer of the permit.

6. AVAILABILITY OF REPORTS

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

7. PERMIT ACTIONS

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

a. Permit violations;

b. Obtaining this permit by misrepresentation or by failure to disclose all relevant facts;

c. Changing any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge;

d. Changes in effluent characteristics; and

e. Violations of water quality standards.

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

8. CIVIL AND CRIMINAL LIABILITY

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

9. PROPERTY RIGHTS

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

10. DUTY TO REAPPLY

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

11. CONTESTED HEARINGS

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

12. SEVERABILITY

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

13. OTHER INFORMATION

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

14. PREVIOUS PERMITS

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

PART III

INDUSTRIAL PRETREATMENT PROGRAM FOR PUBLICLY OWNED TREATMENT WORKS (POTW)

1. The permittee may establish and operate an approved industrial pretreatment program.

2. If the EPD determines that the permittee is required to develop a local industrial pretreatment program, the permittee will be notified in writing. The permittee shall immediately begin development of an industrial pretreatment program and shall submit it to the EPD for approval no later than one year after the notification.

3. During the interim period between determination that a program is needed and approval of the program, all industrial pretreatment permits shall be issued by the EPD.

4. The permittee shall notify the EPD of all industrial users connected to the system or proposing to connect to the system from the date of issuance of this permit.

5. Implementation of the Pretreatment Program developed by the State can be delegated to the permittee following the fulfillment of requirements detailed in 391-3-6-.09 of the Rules and Regulations for Water Quality Control.