

**Richard E. Dunn, Director**

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

Mr. Darryl Muse, Director of Utilities  
City of Valdosta  
Post Office Box 1125  
Valdosta, Georgia 31603

**FEB 13 2020**

RE: Draft Permit  
Mud Creek Water Pollution Control Plant  
NPDES Permit No. GA0020222  
Lowndes County, Suwannee River Basin

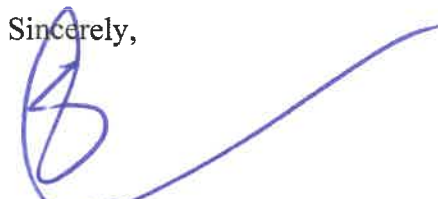
Dear Mr. Muse:

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 reissuing the permit, we require that you post a public notice for 30 days in a conspicuous location at City Hall and publish this notice for one day in one or more newspapers of general circulation in Lowndes County. When deciding whether to publish in one or more newspapers, please ensure that the notice will be published in all affected jurisdictions. The cost of publishing the public notice is the responsibility of the City. Within ten days of receiving this draft permit, please send a letter to our office stating where and what date the notice was posted and published. The letter should be signed by an authorized representative of the City. At the end of the 30-day public comment period, EPD will make a determination on the reissuance of the NPDES 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 Alyssa Thomson of my staff at 404.463.4946 or [alyssa.thomson@dnr.ga.gov](mailto:alyssa.thomson@dnr.ga.gov).

Sincerely,



Benoit Causse, Manager  
Municipal Permitting Unit  
Wastewater Regulatory Program

BSC\ah

Attachments: Public Notice, Fact Sheet, Draft Permit

cc: Marzieh Shahbazaz, EPD Watershed Compliance Program ([marzieh.shahbazaz@dnr.ga.gov](mailto:marzieh.shahbazaz@dnr.ga.gov))  
Alys Hannum, EPD Watershed Compliance Program ([alys.hannum@dnr.ga.gov](mailto:alys.hannum@dnr.ga.gov))  
Kenneth Lowe, City of Valdosta ([klowe@valdostacity.com](mailto:klowe@valdostacity.com))  
David Frost, City of Valdosta ([dfrost@valdostacity.com](mailto:dfrost@valdostacity.com))  
Keith Stanley, City of Valdosta ([kstanley@valdostacity.com](mailto:kstanley@valdostacity.com))

## SUMMARY PAGE

**Name of Facility:** City of Valdosta – Mud Creek Water Pollution Control Plant

**NPDES Permit No.:** GA0020222

This is a reissuance of the NPDES permit for the Mud Creek WPCP. Up to 3.22 MGD (monthly average) of treated domestic wastewater is discharged to Mud Creek in the Suwannee River Basin. The permit also includes effluent limitations and monitoring requirement for the expanded flow of 5.7 MGD.

The permit expired on October 16, 2019 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:**

- Decreased total suspended solids limitation from 30 mg/L to 10 mg/L based on facility design.
- Added bis(2-ethylhexyl)phthalate monitoring as this is a pollutant of concern while discharging under B.1 limitations at 3.22 MGD.
- Added total nitrogen monthly average limit of 13.75 mg/L while discharging at 3.22 MGD and a monthly average limit of 12.5 mg/L while discharging at 5.7 MGD which is in accordance with Florida's instream criteria for total nitrogen; a compliance schedule has been included to meet the new limit(s).
- Added total nitrogen annual average limit of 11.0 mg/L while discharging at 3.22 MGD and an annual average limit of 10.0 mg/L while discharging at 5.7 MGD which is in accordance with Florida's instream criteria for total nitrogen; a compliance schedule has been included to meet the new limit(s).
- Reduced total phosphorus monitoring frequency from three days/week to one day/month in accordance with EPD monitoring guidelines.
- Removed hardness downstream monitoring as enough data has been collected.

**Part IV – Approved Sludge Management Plan**

- Language for an approved sludge management plan to land apply sludge has been removed as the City does not intend to land apply sludge.

**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.



## PUBLIC NOTICE

### **Notice of Application for National Pollutant Discharge Elimination System Permit to Discharge Treated Wastewater Into Waters of the State of Georgia.**

The Georgia Environmental Protection Division has received a new NPDES permit application for the reissuance of an existing NPDES permit. Having reviewed such application, the Environmental Protection Division proposes to issue for a maximum term of five years the following permit subject to specific pollutant limitations and special conditions:

**City of Valdosta, Post Office Box 1125, Valdosta, Georgia, 31603, NPDES Permit No. GA0020222, for the Mud Creek Water Pollution Control Plant located at 1638 New Stantenville Road, Valdosta, Georgia, 31603. Up to 3.22 MGD of treated wastewater is being discharged to Mud Creek in the Suwannee River Basin. The draft permit also includes effluent limitations and monitoring requirements for the expanded flow of 5.7 MGD.**

Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the EPD address below, or via e-mail at [EPDcomments@dnr.ga.gov](mailto:EPDcomments@dnr.ga.gov), no later than thirty (30) days after this notification. If you choose to e-mail your comments, please be sure to include the words "NPDES permit reissuance – Mud Creek Water Pollution Control Plant – GA0020222 (Lowndes County)" in the subject line to ensure that your comments will be forwarded to the correct staff. All comments received prior to or on that date will be considered in the formulation of final determinations regarding the application. A public hearing may be held where the EPD Director finds a significant degree of public interest in a proposed permit or group of permits. Additional information regarding public hearing procedures is available by writing the Environmental Protection Division.

A fact sheet or copy of the draft permit is available by writing the Environmental Protection Division. A copying charge of 10 cents per page will be assessed. The permit application, draft permit, comments received, and other information are available for review at 2 MLK, Jr. Dr., Suite 1152E, Atlanta, GA 30334, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. For additional information contact: Benoit Causse, Wastewater Regulatory Program, phone (404) 463-1511 or e-mail [benoit.causse@dnr.ga.gov](mailto:benoit.causse@dnr.ga.gov).



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

**Technical Contact:**

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

**Draft permit:**

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

**1. FACILITY INFORMATION**

**1.1 NPDES Permit No.:** GA0020222

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

City of Valdosta  
Post Office Box 1125  
Valdosta, Georgia 31603

**1.3 Name and Address of Facility**

Mud Creek Water Pollution Control Plant  
1638 New Stantenville Road  
Valdosta, Georgia 31603

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

| Outfall # | Latitude (°) | Longitude (°) | Receiving Waterbody |
|-----------|--------------|---------------|---------------------|
| 001       | 30.802194    | -83.226333    | Mud Creek           |

**1.5 Permitted Design Capacity**

Part I.B.1 (current flow): 3.22 MGD

Part I.B.2 (future expansion): 5.7 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 at 3.22 MGD:*

The treatment process consists of bar screens, grit chamber, biological treatment (anoxic and aerobic basins), secondary clarification, disk filters, reaeration, and UV disinfection. Treated wastewater is then discharged to Mud Creek.

*Wastewater treatment at 5.7 MGD:*

The treatment process will consist of mechanical screen, grit removal, biological treatment (anoxic and aerobic basins), secondary clarification, disk filtration, post aeration and UV disinfection. Treated wastewater will then be discharged to Mud Creek.

*Solids processing:*

Solids are stored in an aerobic digester and then thickened and dewatered with a belt press. Sludge is then hauled to a landfill for ultimate disposal.

**1.8 Type of Wastewater Discharge**

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

**1.9 Characterization of Effluent Discharge (as reported by applicant)**

Outfall No. 001:

| <b>Effluent Characteristics<br/>(as Reported by Applicant)</b> | <b>Maximum<br/>Daily Value</b> | <b>Average<br/>Daily Value</b> |
|--|--------------------------------|--------------------------------|
| Flow (MGD)   | 3.36                           | 2.47                           |
| Five-Day Biochemical Oxygen Demand (mg/L)                      | 3.1                            | 1.0                            |
| Total Suspended Solids (mg/L)                                  | 3.7                            | 2.1                            |
| Fecal Coliform Bacteria (#/100mL)                              | 316                            | 2                              |
| Ammonia, as N (mg/L)   | 0.56                           | 0.31                           |
| Total Phosphorus, as P (mg/L)                                  | 1.7                            | 1.1                            |

## 2. APPLICABLE REGULATIONS

### 2.1 State Regulations

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

### 2.2 Federal Regulations

| Source    | Activity                          | Applicable Regulation                        |
|-----------|-----------------------------------|--|
| Municipal | Municipal Effluent Discharge      | 40 CFR 122                                   |
|           |                                   | 40 CFR 125                                   |
|           |                                   | 40 CFR 133                                   |
|           | Non-Process Water Discharges      | 40 CFR 122                                   |
|           |                                   | 40 CFR 125                                   |
|           | Municipal Sludge Use and Disposal | 40 CFR 122<br>40 CFR 257<br>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 – Mud 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<br>(cfs) | 7Q10<br>(cfs) | 1Q10<br>(cfs) | Annual<br>Average<br>Flow (cfs) | Hardness<br>(mg<br>CaCO <sub>3</sub> /L) | Upstream Total<br>Suspended Solids<br>(mg/L) |
|------------|---------------|---------------|---------------|---------------------------------|--|--|
| 001        | 1.1           | 0.73          | 0.67          | 28.1                            | 65.8                                     | 10 <sup>(1)</sup>                            |

<sup>(1)</sup> Not available. A conservative value of 10 mg/L will be used for the reasonable potential analysis calculations.

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

|   |  |          |                |    |       |    |                                  |
|---|--|----------|----------------|----|-------|----|----------------------------------|
| Mud Creek (also known as Mud Swamp Creek) | Downstream Valdosta Mud Creek WPCP to Alapahoochee River | Suwannee | Not Supporting | FC | 9     | 4a | TMDL completed FC (2000 & 2005). |
| GAR031102021102                           | Lowndes  | Fishing  | 2,10           | UR | Miles |    |                                  |

Mud Creek is listed on the 2018 305(b)/303(d) list as not supporting its designated use (fishing) but TMDLs have been completed for the impacted parameters (fecal coliform bacteria).



### **3.4 Total Maximum Daily Loads (TMDLs)**

A TMDL evaluation for fifteen stream segments in the Suwannee River Basin for fecal coliform was completed in 2006. The TMDL recommended that all municipal treatment facilities with the potential for the occurrence of fecal coliform in their discharge will be given end of pipe limits equivalent to the water quality standard of 200 counts/100 ml or less. The fecal coliform bacteria limits in the draft permit are in accordance with the TMDL requirements.

### **3.5 Wasteload Allocation (WLA)**

The WLA for reissuance was issued on August 6, 2019. Refer to *Appendix A* of the Fact Sheet for a copy of the WLA.

## **4. EFFLUENT LIMITS AND PERMIT CONDITIONS**

### **4.1 Reasonable Potential Analysis (RP)**

Title 40 of the Federal Code of Regulations, 40 CFR 122.44(d) requires delegated States to develop procedures for determining whether a discharge causes, has the reasonable potential to cause, or contributes to an instream excursion above a narrative or numeric criteria within a State water. If such reasonable potential is determined to exist, the NPDES permit must contain pollutant effluent limits and/or effluent limits for whole effluent toxicity. Georgia's Reasonable Potential Procedures are based on Georgia's Rules and Regulations for Water Quality Control (Rules), Chapter 391-3-6-.06(4)(d)5. The chemical specific and biomonitoring data and other pertinent information in EPD's files will be considered in accordance with the review procedures specified in the Rules in the evaluation of a permit application and in the evaluation of the reasonable potential for an effluent to cause an exceedance in the numeric or narrative criteria.

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

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

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

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

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

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

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

PMSD must be calculated for each species tested as follows:

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

#### 4.2.1 Current Phase (3.22 MGD):

The effluent from the Mud Creek WPCP will not be considered toxic if the No Observed Effect Concentration (NOEC) is greater than or equal to the Instream Wastewater Concentration (IWC) of 87%. If results of the WET tests predict toxicity or are invalid, then the permittee may be required to perform additional WET tests or the permit may be modified to include chronic WET effluent limitations.

The permittee submitted the results of four WET tests with the application. For all tests, the NOEC for the *Ceriodaphnia dubia* survival and reproduction and the *Pimephales promelas* survival and growth were greater than or equal to the IWC of 86%; therefore, effluent is not considered toxic. Refer to WET Test results summary in the table below.

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

| Test | Sample Date | No Observed Effect Concentration (NOEC) |                  |                            |            |
|------|-------------|---|------------------|----------------------------|------------|
|      |             | <i>Ceriodaphnia dubia</i>               |                  | <i>Pimephales promelas</i> |            |
|      |             | Survival (%)                            | Reproduction (%) | Survival (%)               | Growth (%) |
| 1    | 2015        | 100                                     | 86               | 100                        | 100        |
| 2    | 2016        | 100                                     | 100              | 100                        | 100        |
| 3    | 2017        | 100                                     | 100              | 100                        | 100        |
| 4    | 2018        | 100                                     | 100              | 100                        | 100        |

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

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

#### **4.2.2 Future Phase (5.7 MGD):**

The permittee must conduct one whole effluent toxicity (WET) test for four consecutive quarters during the first year after receiving EPD written authorization to commence operation under Part I.B.2 (5.7 MGD) effluent limitations, with the first test being conducted within 90 days of this authorization.

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

### **4.3 Applicable Water Quality Based Effluent Limitations (WQBELs)**

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

WQBELs are designed to protect water quality by ensuring that water quality standards are met in the receiving water and downstream uses are protected. On the basis of the requirements of Title 40 of the *Code of Federal Regulations* (CFR) 125.3(a), additional

or more stringent effluent limitations and conditions, such as WQBELs, are imposed when TBELs are not sufficient to protect water quality.

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

#### 4.4 Conventional Pollutants

##### 4.4.1 Current Phase (3.22 MGD):

| Pollutants of Concern                                  | Basis   |
|--|---|
| pH   | The instream wastewater concentration (IWC) is 87%. 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 <sub>5</sub> ) | According to the steady-state dissolved oxygen Georgia DOSAG model, a monthly average BOD <sub>5</sub> limit of 10.0 mg/L, when combined with the ammonia limit (refer to Section 4.5 below), is protective of the instream Water Quality Standard for dissolved oxygen described in Section 3.1 above. Refer to the WLA in <i>Appendix A</i> for model inputs. |
| Total Suspended Solids (TSS)                           | The facility is equipped with disk filters. A review of Discharge Monitoring Report data indicates that the plant is able to consistently meet the monthly average technology-based TSS limit of 10 mg/L; therefore this limit has been reduced from 30 mg/L to 10 mg/L in the draft permit.  |
| Fecal Coliform Bacteria (FCB)                          | The monthly average FCB limit of 200 #/100mL is in accordance with the instream Water Quality Standards in Section 3.1 and TMDL requirements in Section 3.4 above.  |

**4.4.2 Future Phase (5.7 MGD):**

| Pollutants of Concern                                  | Basis  |
|--|--|
| pH   | The instream wastewater concentration (IWC) is 92%. 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 <sub>5</sub> ) | According to the steady-state dissolved oxygen Georgia DOSAG model, a monthly average BOD <sub>5</sub> limit of 2.9 mg/L, when combined with the ammonia limit (refer to Section 4.5 below), is protective of the instream Water Quality Standard for dissolved oxygen described in Section 3.1 above. Refer to the WLA in <i>Appendix A</i> for model inputs. |
| Total Suspended Solids (TSS)                           | The facility will be equipped with disk filters. A monthly average TSS limit of 10 mg/L has been included in the draft permit based on facility design (i.e., technology-based limit).   |
| Fecal Coliform Bacteria (FCB)                          | The monthly average FCB limit of 200 #/100mL is in accordance with the instream Water Quality Standards in Section 3.1 and TMDL requirements in Section 3.4 above.   |

**4.5 Nonconventional Pollutants****4.5.1 Current Phase (3.22 MGD)**

| <b>Pollutants of Concern</b>  | <b>Basis</b>  |
|-------------------------------|---|
| Total Residual Chlorine (TRC) | Chlorine is not used at the facility; therefore, a TRC limit is not required.   |
| Dissolved Oxygen (DO)         | According to the steady-state dissolved oxygen Georgia DOSAG model, a minimum effluent DO of 6.0 mg/L is protective of the instream Water Quality Standard for dissolved oxygen described in Section 3.1 above.   |
| Total Phosphorus (TP)         | Modeling results show that Florida's instream criteria for TP is met; therefore, a TP limit has not been included in the draft permit. Total phosphorus monitoring has been included in the draft permit in accordance with EPD's <i>Strategy for Addressing Phosphorus in NPDES Permitting</i> , 2011.   |
| Total Nitrogen (TN)           | <p>A monthly average and an annual average TN limits of 13.75 mg/L and 11 mg/L, respectively, 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.</p> <p>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.</p> <p>A review of the DMRs indicate that the facility is unable to consistently meet the new limits, therefore a 36-month compliance schedule has been included in the draft permit to meet the monthly average limit. Twelve months of data is needed to calculate an annual average (12-month rolling average); therefore, the annual average TN limit of 11 mg/L will be applicable only 48 months after the effective date of the permit (i.e. 12 months after the monthly average limit is effective).</p> |



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Orthophosphate, Total Kjeldahl  
Nitrogen (TKN), Organic  
Nitrogen, Nitrate-Nitrite

Orthophosphate, TKN, organic nitrogen, and nitrate-nitrite monitoring has been included in the draft permit. The data will be used to determine nutrient speciation and to quantify nutrient loadings in the Suwannee River Basin.

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Ammonia (NH<sub>3</sub>)

According to the steady-state dissolved oxygen Georgia DOSAG model, a monthly average ammonia limit of 1.5 mg/L, when combined with the monthly average BOD<sub>5</sub> 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 monthly average ammonia limit of 1.5 mg/L is also in accordance with EPD's *NPDES Permitting Strategy for Addressing Ammonia Toxicity*, 2017.

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**4.5.2 Future Phase (5.7 MGD)**

| <b>Pollutants of Concern</b>   | <b>Basis</b>  |
|--|---|
| Total Residual Chlorine (TRC)  | Chlorine is not used at the facility; therefore a TRC limit is not required.  |
| Dissolved Oxygen (DO)  | According to the steady-state dissolved oxygen Georgia DOSAG model, a minimum effluent DO of 6.0 mg/L is protective of the instream Water Quality Standard for dissolved oxygen described in Section 3.1 above.   |
| Total Phosphorus (TP)  | A monthly average limit of 1.0 mg/L is in accordance with EPD's <i>Strategy for Addressing Phosphorus in NPDES Permitting</i> , 2011 and is protective of the Florida's instream criteria for TP.   |
| Total Nitrogen   | <p>A monthly average and annual average (12-month rolling average) TN limits of 12.5 mg/L and 10 mg/L, respectively, 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.</p> <p>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.</p> <p>The monthly average TN limitation of 10 mg/L will be effective immediately upon receiving authorization to operate. Twelve months of data is needed to calculate an annual average (12-month rolling average); therefore, the annual average TN limit of 10 mg/L will be applicable only 12 months after receiving authorization to operate.</p> |
| Orthophosphate, Total Kjeldahl Nitrogen (TKN), Organic Nitrogen, Nitrate-Nitrite | Orthophosphate, TKN, organic nitrogen, and nitrate-nitrite monitoring has been included in the draft permit. The data will be used to determine nutrient speciation and to quantify nutrient loadings in the Suwannee River Basin.  |

Ammonia (NH<sub>3</sub>)

According to the steady-state dissolved oxygen Georgia DOSAG model, a monthly average ammonia limit of 0.6 mg/L, when combined with the monthly average BOD<sub>5</sub> 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 monthly average ammonia limit of 0.6 mg/L is also in accordance with EPD's *NPDES Permitting Strategy for Addressing Ammonia Toxicity*, 2017.

#### 4.6 Toxics & Manmade Organic Compounds

##### 4.6.1 Current Phase (3.22 MGD):

The permittee submitted the results of three Priority Pollutant Scans (PPS) with the permit application. Monitoring data for Total Recoverable Zinc was also evaluated. All the parameters were non-detect except for the following:

| Pollutants of Concern     | Basis   |
|---------------------------|---|
| Total Recoverable Zinc    | <p>This parameter was evaluated and its instream concentration was found to be less than 50% of the instream water quality standards. Refer to <i>Appendix B</i> of the Fact Sheet for reasonable potential evaluations.</p> <p>In accordance with EPD reasonable potential procedures, total recoverable zinc is not considered a pollutant of concern and additional monitoring is not required.</p>    |
| Total Recoverable Mercury | <p>This parameter was evaluated and its instream concentration was found to be less than 50% of the instream water quality standards. Refer to <i>Appendix B</i> of the Fact Sheet for reasonable potential evaluations.</p> <p>In accordance with EPD reasonable potential procedures, total recoverable mercury is not considered a pollutant of concern and additional monitoring is not required.</p> |
| Chloroform                | <p>This parameter was evaluated and its instream concentration was found to be less than 50% of the instream water quality standards. Refer to <i>Appendix B</i> of the Fact Sheet for reasonable potential evaluations.</p> <p>In accordance with EPD reasonable potential procedures, chloroform is not considered a pollutant of concern and additional monitoring is not required.</p>                |

## Methylene Chloride

This parameter was evaluated and its instream concentration was found to be less than 50% of the instream water quality standards. Refer to *Appendix B* of the Fact Sheet for reasonable potential evaluations.

In accordance with EPD reasonable potential procedures, chloroform is not considered a pollutant of concern and additional monitoring is not required.

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## Bis(2-ethylhexyl)phthalate

This parameter was evaluated and its instream concentration was found to be greater than 50% of the instream standard. Refer to *Appendix B* of the Fact Sheet for reasonable potential evaluations.

In accordance with EPD reasonable potential procedures, bis(2-ethylhexyl)phthalate is considered a pollutant of concern and additional monitoring has been included in the draft permit under the Part I.B.1.a. and Part I.B.1.b. effluent limitations.

EPD will conduct a reasonable potential evaluation after 12-months of monitoring. If it is determined that bis(2-ethylhexyl)phthalate is present in the effluent levels of concern, EPD will reopen the permit to include a limit for this pollutant, which may be subjected to the expanded flow of 5.7 MGD effluent limitations (Part I.B.2).

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**4.6.2 Future Phase (5.7 MGD):**

The permittee must conduct one scan of the priority pollutants for three consecutive quarters after receiving EPD written authorization to commence operation under Part I.B.2 effluent limitations (5.7 MGD), with the first scan conducted within 90 days of the authorization. The priority pollutant scans must represent seasonal variation. Total recoverable mercury must be sampled and analyzed using EPA Method 1631E.

If substances are measured at levels of concern, then the permittee may be required to perform additional priority pollutant analyses in accordance with Part I.C.5 or the permit may be modified to include effluent limitations for priority pollutants.

## 4.7 Calculations for Effluent Limits

### 4.7.1 Instream Waste Concentration (IWC):

Q = Flow  
C = Concentration  
M = Mass

- *IWC at 3.22 MGD:*

$$\begin{aligned} \text{IWC} &= \frac{Q_{\text{Effluent}} (\text{ft}^3/\text{sec})}{Q_{\text{Effluent}} (\text{ft}^3/\text{sec}) + 7Q_{10} (\text{ft}^3/\text{sec})} \% \\ &= \frac{4.98}{4.98 + 0.73} \\ &= 87\% \end{aligned}$$

- *IWC at 5.7 MGD:*

$$\begin{aligned} \text{IWC} &= \frac{Q_{\text{Effluent}} (\text{ft}^3/\text{sec})}{Q_{\text{Effluent}} (\text{ft}^3/\text{sec}) + 7Q_{10} (\text{ft}^3/\text{sec})} \% \\ &= \frac{8.82}{8.82 + .73} \\ &= 92\% \end{aligned}$$

### 4.7.2 Flow:

- *Weekly Average Flow at 3.22 MGD:*

$$\begin{aligned} Q_{\text{Weekly}} &= Q_{\text{Monthly}} (\text{MGD}) \times 1.25 \\ &= 3.22 \times 1.25 \\ &= 4.03 \text{ MGD} \end{aligned}$$

- *Weekly Average Flow at 5.7 MGD:*

$$\begin{aligned} Q_{\text{Weekly}} &= Q_{\text{Monthly}} (\text{MGD}) \times 1.25 \\ &= 5.7 \times 1.25 \\ &= 7.13 \text{ MGD} \end{aligned}$$

**4.7.3 Five-Day Biochemical Oxygen Demand:**

- Weekly Average Concentration at 3.22 MGD:*

$$\begin{aligned}
 [C]_{\text{Weekly}} &= [C]_{\text{Monthly}} (\text{mg/L}) \times 1.5 \\
 &= 10 \times 1.5 \\
 &= 15 \text{ mg/L}
 \end{aligned}$$

- Weekly Average Concentration at 5.7 MGD:*

$$\begin{aligned}
 [C]_{\text{Weekly}} &= [C]_{\text{Monthly}} (\text{mg/L}) \times 1.5 \\
 &= 2.9 \times 1.5 \\
 &= 4.4 \text{ mg/L}
 \end{aligned}$$

- Monthly Average Mass Loading at 3.22 MGD:*

$$\begin{aligned}
 M_{\text{Monthly}} &= \frac{Q_{\text{Monthly}} (\text{MGD}) \times [C]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})}{2.2 (\text{lbs/Kg})} \\
 &= \frac{3.22 \times 10 \times 8.34}{2.2} \\
 &= 122.1 \text{ kg/day}
 \end{aligned}$$

- Monthly Average Mass Loading at 5.7 MGD:*

$$\begin{aligned}
 M_{\text{Monthly}} &= \frac{Q_{\text{Monthly}} (\text{MGD}) \times [C]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})}{2.2 (\text{lbs/Kg})} \\
 &= \frac{5.7 \times 2.9 \times 8.34}{2.2} \\
 &= 62.7 \text{ kg/day}
 \end{aligned}$$

- Weekly Average Mass Loading at 3.22 MGD:*

$$\begin{aligned}
 M_{\text{Weekly}} &= \frac{Q_{\text{Weekly}} (\text{MGD}) \times [C]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})}{2.2 (\text{lbs/Kg})} \\
 &= \frac{4.03 \times 10 \times 8.34}{2.2} \\
 &= 152.8 \text{ kg/day}
 \end{aligned}$$



- *Weekly Average Mass Loading at 5.7 MGD:*

$$\begin{aligned}
 M_{\text{Weekly}} &= \frac{Q_{\text{Weekly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L or ppm)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{7.13 \times 2.9 \times 8.34}{2.2} \\
 &= 78.4 \text{ kg/day}
 \end{aligned}$$

#### 4.7.4 Total Suspended Solids:

- *Weekly Average Concentration at 3.22 MGD:*

$$\begin{aligned}
 [C]_{\text{Weekly}} &= [C]_{\text{Monthly}} \text{ (mg/L)} \times 1.5 \\
 &= 10 \times 1.5 \\
 &= 15 \text{ mg/L}
 \end{aligned}$$

- *Weekly Average Concentration at 5.7 MGD:*

$$\begin{aligned}
 [C]_{\text{Weekly}} &= [C]_{\text{Monthly}} \text{ (mg/L)} \times 1.5 \\
 &= 10 \times 1.5 \\
 &= 15 \text{ mg/L}
 \end{aligned}$$

- *Monthly Average Mass Loading at 3.22 MGD:*

$$\begin{aligned}
 M_{\text{Monthly}} &= \frac{Q_{\text{Monthly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L or ppm)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{3.22 \times 10 \times 8.34}{2.2} \\
 &= 122 \text{ kg/day}
 \end{aligned}$$

- *Monthly Average Mass Loading at 5.7 MGD:*

$$\begin{aligned}
 M_{\text{Monthly}} &= \frac{Q_{\text{Monthly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L or ppm)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{5.7 \times 10 \times 8.34}{2.2} \\
 &= 216 \text{ kg/day}
 \end{aligned}$$

- *Weekly Average Mass Loading at 3.22 MGD:*

$$\begin{aligned}
 M_{\text{Weekly}} &= \frac{Q_{\text{Weekly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L or ppm)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{4.03 \times 10 \times 8.34}{2.2} \\
 &= 153 \text{ kg/day}
 \end{aligned}$$

- *Weekly Average Mass Loading at 5.7 MGD:*

$$\begin{aligned}
 M_{\text{Weekly}} &= \frac{Q_{\text{Weekly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L or ppm)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{7.13 \times 10 \times 8.34}{2.2} \\
 &= 270 \text{ kg/day}
 \end{aligned}$$

#### 4.7.5 Fecal Coliform Bacteria:

- *Daily Maximum Concentration at 3.22 MGD and 5.7 MGD:*

$$\begin{aligned}
 C_{\text{Max}} &= C_{\text{Monthly}} \text{ (\#/100 mL)} \times 2 \\
 &= 200 \times 2 \\
 &= 400 \text{ \#/100 mL}
 \end{aligned}$$

#### 4.7.6 Total Residual Chlorine (TRC):

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

#### 4.7.7 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:

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

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

- *Weekly Average Concentration at 3.22 MGD:*

$$\begin{aligned} [\text{C}]_{\text{Weekly}} &= [\text{C}]_{\text{Monthly}} (\text{mg/L}) \times 1.5 \\ &= 1.5 \times 1.5 \\ &= 2.25 \text{ mg/L} \end{aligned}$$

- *Weekly Average Concentration at 5.7 MGD:*

$$\begin{aligned} [\text{C}]_{\text{Weekly}} &= [\text{C}]_{\text{Monthly}} (\text{mg/L}) \times 1.5 \\ &= 0.6 \times 1.5 \\ &= 0.9 \text{ mg/L} \end{aligned}$$

- *Monthly Average Mass Loading at 3.22 MGD:*

$$\begin{aligned} M_{\text{Monthly}} &= \frac{Q_{\text{Monthly}} (\text{MGD}) \times [\text{C}]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})}{2.2 (\text{lbs/Kg})} \\ &= \frac{3.22 \times 1.5 \times 8.34}{2.2} \\ &= 18.3 \text{ kg/day} \end{aligned}$$

- *Monthly Average Mass Loading at 5.7 MGD:*

$$\begin{aligned} M_{\text{Monthly}} &= \frac{Q_{\text{Monthly}} (\text{MGD}) \times [\text{C}]_{\text{Monthly}} (\text{mg/L or ppm}) \times 8.34 (\text{lbs/gal})}{2.2 (\text{lbs/Kg})} \\ &= \frac{5.7 \times 0.6 \times 8.34}{2.2} \\ &= 13.0 \text{ kg/day} \end{aligned}$$

- *Weekly Average Mass Loading at 3.22 MGD:*

$$\begin{aligned}
 M_{\text{Weekly}} &= \frac{Q_{\text{Weekly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L or ppm)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{4.03 \times 1.5 \times 8.34}{2.2} \\
 &= 22.9 \text{ kg/day}
 \end{aligned}$$

- *Weekly Average Mass Loading at 5.7 MGD:*

$$\begin{aligned}
 M_{\text{Weekly}} &= \frac{Q_{\text{Weekly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L or ppm)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{7.13 \times 0.6 \times 8.34}{2.2} \\
 &= 16.2 \text{ kg/day}
 \end{aligned}$$

Refer to *Appendix D* for detailed calculations.

#### 4.7.8 Total Phosphorus

- *Weekly Average Concentration at 5.7 MGD:*

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

- *Monthly Average Mass Loading at 5.7 MGD:*

$$\begin{aligned}
 M_{\text{Monthly}} &= \frac{Q_{\text{Monthly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L or ppm)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{5.7 \times 1.0 \times 8.34}{2.2} \\
 &= 21.6 \text{ kg/day}
 \end{aligned}$$

- *Weekly Average Mass Loading at 5.7 MGD:*

$$\begin{aligned}
 M_{\text{Weekly}} &= \frac{Q_{\text{Weekly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L or ppm)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{7.13 \times 1.0 \times 8.34}{2.2} \\
 &= 27.0 \text{ kg/day}
 \end{aligned}$$

#### 4.7.9 Total Nitrogen

- *Weekly Average Concentration at 3.22 MGD:*

$$\begin{aligned}
 [C]_{\text{Weekly}} &= [C]_{\text{Monthly}} \text{ (mg/L)} \times 1.5 \\
 &= 13.75 \times 1.5 \\
 &= 20.6 \text{ mg/L}
 \end{aligned}$$

- *Weekly Average Concentration at 5.7 MGD:*

$$\begin{aligned}
 [C]_{\text{Weekly}} &= [C]_{\text{Monthly}} \text{ (mg/L)} \times 1.5 \\
 &= 12.5 \times 1.5 \\
 &= 18.75 \text{ mg/L}
 \end{aligned}$$

- *Monthly Average Mass Loading at 3.22 MGD:*

$$\begin{aligned}
 M_{\text{Monthly}} &= \frac{Q_{\text{Monthly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L or ppm)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{3.22 \times 13.75 \times 8.34}{2.2} \\
 &= 167.8 \text{ kg/day}
 \end{aligned}$$

- *Monthly Average Mass Loading at 5.7 MGD:*

$$\begin{aligned}
 M_{\text{Monthly}} &= \frac{Q_{\text{Monthly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L or ppm)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{5.7 \times 12.5 \times 8.34}{2.2} \\
 &= 270.1 \text{ kg/day}
 \end{aligned}$$

- *Weekly Average Mass Loading at 3.22 MGD:*

$$\begin{aligned}
 M_{\text{Weekly}} &= \frac{Q_{\text{Weekly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L or ppm)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{4.03 \times 13.75 \times 8.34}{2.2} \\
 &= 210.1 \text{ kg/day}
 \end{aligned}$$

- *Weekly Average Mass Loading at 5.7 MGD:*

$$\begin{aligned}
 M_{\text{Weekly}} &= \frac{Q_{\text{Weekly}} \text{ (MGD)} \times [C]_{\text{Monthly}} \text{ (mg/L or ppm)} \times 8.34 \text{ (lbs/gal)}}{2.2 \text{ (lbs/Kg)}} \\
 &= \frac{7.13 \times 12.5 \times 8.34}{2.2} \\
 &= 337.9 \text{ kg/day}
 \end{aligned}$$

#### 4.7.10 Metals

Refer to *Appendix B* for metal calculations.

#### 4.8 Applicable Technology Based Effluent Limits (TBELS)

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

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

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



The table below shows the secondary treatment standards:

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

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

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

##### 4.9.1. Current phase (3.22 MGD):

| Parameter                                 | WQBELS <sup>(1)</sup>          | TBELS <sup>(1)</sup>   |
|---|--------------------------------|------------------------|
|   | <i>Monthly Average</i>         | <i>Monthly Average</i> |
| Five-Day Biochemical Oxygen Demand (mg/L) | <b>10.0</b>                    | 30.0                   |
| Total Suspended Solids (mg/L)             | None                           | <b>10</b>              |
| Ammonia (mg/L)                            | <b>1.5</b>                     | None                   |
| Fecal Coliform Bacteria (#/100 mL)        | <b>200</b>                     | None                   |
| Dissolved Oxygen (mg/L), Daily Minimum    | <b>6.0</b>                     | None                   |
| Total Nitrogen, as N (mg/L)               |                                |                        |
|   | <b>13.75</b> (monthly average) | None                   |
|   | <b>11.0</b> (annual average)   | None                   |
| pH (S.U.), Daily Minimum – Daily Maximum  | <b>6.0 – 8.5</b>               | 6.0 – 9.0              |

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

**4.9.2. Future phase (5.7 MGD):**

| <b>Parameter</b>                          | <b>WQBELS <sup>(1)</sup></b>  | <b>TBELS <sup>(1)</sup></b> |
|---|-------------------------------|-----------------------------|
|   | <i>Monthly Average</i>        | <i>Monthly Average</i>      |
| Five-Day Biochemical Oxygen Demand (mg/L) | <b>2.9</b>                    | 30.0                        |
| Total Suspended Solids (mg/L)             | None                          | <b>10</b>                   |
| Total Phosphorus (mg/L)                   | <b>1.0</b>                    | None                        |
| Ammonia (mg/L)                            | <b>0.6</b>                    | None                        |
| Fecal Coliform Bacteria (#/100 mL)        | <b>200</b>                    | None                        |
| Dissolved Oxygen (mg/L), Daily Minimum    | <b>6.0</b>                    | None                        |
| Total Nitrogen, as N (mg/L)               |                               |                             |
|   | <b>12.5</b> (monthly average) | None                        |
|   | <b>10.0</b> (annual average)  | None                        |
| pH (S.U.), Daily Minimum – Daily Maximum  | <b>6.0 – 8.5</b>              | 6.0 – 9.0                   |

<sup>(1)</sup> Effluent limits in bold were included in the permit. Refer to Sections 4.5, 4.6, 4.7, and 4.8 above for more information.

**5. OTHER PERMIT REQUIREMENTS AND CONSIDERATIONS****5.1 Long-Term BOD (LTBOD) Test**

For facilities with a capacity of 1.0 MGD or greater, a 120-day long-term BOD test should be performed on an effluent sample collected during the critical period from June 1 through September 30; a requirement for long term BOD testing has been included in the draft permit under the B.2 effluent limitations (5.7 MGD).

**5.2 Industrial Pre-treatment Program (IPP)**

The City of Valdosta has an approved IPP; therefore language has been included in the draft permit to reflect the approved program.

**5.3 Sludge Management Plan (SMP)**

The current permit includes language for an approved SMP to land apply sludge at agronomic rates. However, sludge is disposed of in the Advanced Disposal Evergreen Landfill located at 3163 Wetherington Lane, Valdosta, Georgia 31601. The City does not plan to land apply sludge in the future; therefore, a SMP is not required and the City is no longer authorized to land apply sludge at agronomic rates. Provisions to allow land application of sludge has been removed in the draft permit.

**5.4 Watershed Protection Plan (WPP)**

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

**5.5 Service Delivery Strategy**

The City of Valdosta is in compliance with the Department of Community Affairs approved Service Delivery Strategy for Lowndes County.

**5.6 Compliance Schedules*****Current Phase (3.22 MGD):***

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

The total nitrogen annual average limitation will become applicable 48-months after the effective date of the permit.

***Future Phase (5.7 MGD):***

Effluent limitations will be applicable immediately upon receiving EPD approval of construction completion and written authorization to operate.

**5.7 Anti-Backsliding**

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

**5.8 Instream Monitoring**

Upstream and downstream monitoring of Mud Creek for stream flow, dissolved oxygen, pH, temperature, fecal coliform and conductivity has been maintained in the draft permit. Data is used to evaluate the impact of the effluent on the receiving stream and to validate water quality modeling accuracy.

Upstream and downstream locations have been maintained in the draft permit.

**6. REPORTING**

**6.1 Compliance Office**

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

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

**6.2 E-Reporting**

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

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

Not applicable

**8. PERMIT EXPIRATION**

The permit will expire five years from the effective date.

**9. PROCEDURES FOR THE FORMULATION OF FINAL DETERMINATIONS**

**9.1 Comment Period**

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

The permit application, draft permit, and other information are available for review at 2 Martin Luther King Jr. Drive, Suite 1152 East, Atlanta, Georgia 30334, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. For additional information, you can contact 404-463-1511.

**9.2 Public Comments**

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

### 9.3 Public Hearing

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

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

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

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

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

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

### 9.4 Final Determination

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

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

## **9.5 Contested Hearings**

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

Petitions for a contested hearing must include the following:

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



# **FACT SHEET**

## **Appendix A**

**Mud Creek Water Pollution Control Plant  
NPDES Permit No. GA0020222**

**Waste Load Allocation (WLA)**

# National Pollutant Discharge Elimination System Wasteload Allocation Form

## Part I: Background Information

WLA Request Type: Reissuance ☒ Expansion ☐ Relocation ☐ New Discharge ☐  
 Facility Name: Valdosta - Mud Creek WPCP County: Lowndes WQMU: 0903  
 NPDES Permit No.: GA0020222 Expiration Date: 10/16/2019 Outfall Number: 001  
 Receiving Water: Mud Creek River Basin: Suwannee 10-Digit HUC: 0311020211  
 Discharge Type: Domestic ☒ Industrial ☐ Both ☐ Proportion (D:I): Flow(s) Requested (MGD): 3.22, 5.7  
 Industrial Contributions Type(s):  
 Treatment Process Description: Activated sludge: Preliminary treatment is followed by biological treatment using one-stage nitrification, secondary clarification, and multi-media filtration. Filters are followed by diffused air re-aeration, and ultraviolet (UV) light is utilized for disinfection.  
 Additional Information: (history, special conditions, other facilities):  
 Requested by: Benoit Causse Title: EE Program: WRP  
 Telephone: 404-463-4958 Date: 3/5/2019

## Part II: Receiving Water Information

Receiving Water: Mud Creek Designated Use Classification: Fishing  
 Integrated 305(b)/303(d) List: Yes ☒ No ☐ Supporting ☐ Not Supporting ☒ Criteria: Fecal coliform  
 Total Maximum Daily Load: Yes ☒ No ☐ Parameter(s) Fecal coliform WLA Complies with TMDL Yes ☒ No ☐  
 The 2000 and 2006 fecal coliform TMDL require a fecal coliform bacteria limit of 200 counts per 100 mL for NPDES point source dischargers.

## Part III: Water Quality Model Review Information

Model Type: Uncalibrated ☒ Calibrated ☐ Verified ☐ Cannot be Modeled ☐ Model Length (mi): 24.3  
 Field Data: None ☐ Fair ☒ Good ☐ Excellent ☐  
 Model and Field Data Description: Steady state dissolved oxygen Georgia DOSAG model  
 Critical Water Temperature (°C): 26 Drainage Area (mi²): 36.5 Mean annual streamflow at discharge (cfs): 28.1  
 7Q10 Yield (cfs/mi²): 0.02 Velocity (range fps): 0.25 - 0.29 30Q3 streamflow at discharge (cfs): 1.1  
 Effluent Flow Rate (cfs): 4.98, 8.82 7Q10 IVC (%): 87, 92 7Q10 streamflow at discharge (cfs): 0.73  
 Slope (range - fpm): 1.0 - 7.8 K1: 0.15, 0.02 K3: 0.2 K2: 0.45 - 3.6 1Q10 streamflow at discharge (cfs): 0.67  
 SOD: 0.2, 0.5 f-Ratio (BOD<sub>u</sub>/BOD<sub>5</sub>): 3.6 Escape Coef. (ft) 0.11  
 The predicted minimum dissolved oxygen concentration is 5.56 mg/L, occurring 0.2 mile downstream from the discharge (3.22 MGD)  
 The predicted minimum dissolved oxygen concentration is 5.76 mg/L, occurring 0.2 mile downstream from the discharge (5.7 MGD)

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

Rationale: Same as current ☐ Revised ☒ New ☐  
 Location: Mud Creek (30.802181° N, 83.226342° W)

| Effluent Flow Rate (MGD) | BOD <sub>5</sub> | NH <sub>3</sub> -N | DO (minimum) | TRC <sup>1</sup> (daily max.) | Fecal Coliform (No./100ml) | pH (std. units) | Total Phosphorus | Ortho-P | Total Nitrogen <sup>2</sup> | TKN, Nitrate-Nitrite, Organic Nitrogen |
|--------------------------|------------------|--------------------|--------------|-------------------------------|----------------------------|-----------------|------------------|---------|-----------------------------|--|
| 3.22                     | 10               | 1.5                | 6.0          | 0.01                          | 200                        | 6.0 - 8.5       | Monitor          | Monitor | 13.75 (11)                  | Monitor                                |
| 5.7                      | 2.9              | 0.6                | 6.0          | 0.01                          | 200                        | 6.0 - 8.5       | 1.0              | Monitor | 12.5 (10)                   | Monitor                                |

### Additional Comments:

<sup>1</sup>The TRC limits apply only when chlorine is used at the facility.

<sup>2</sup>The total nitrogen limits are necessary to meet Florida's instream criteria for total nitrogen. The values in parentheses are annual average limits.

- Priority pollutant permit limits, effluent toxicity testing requirements, and other parameters required by categorical effluent guidelines or identified during review of permit application are to be determined by WRP.

- The current ammonia limits meet U.S. EPA's Aquatic Life Ambient Water Quality Criteria for Ammonia-Freshwater 2013 under the 30Q3 stream flow condition.

- Effluent monitoring for Total Phosphorus, Ortho-P, TKN, nitrate-nitrite, and organic nitrogen is recommended. Total phosphorus and Ortho-P should be analyzed from the same effluent sample; TKN, nitrate-nitrite, and NH<sub>3</sub> should be analyzed from the same effluent sample. Organic nitrogen should be calculated as TKN minus NH<sub>3</sub>.

- The facility shall continue the instream water quality monitoring of Mud Creek.

Prepared by: Larry Guerra LCG Date: 7/25/2019 Reviewed by: Josh Welte JW Date: 31-JUL-19

## Part V: Program Manager Comments

*Elizabeth A. Booth*  
 Elizabeth Booth

Date: 8/6/19

# **FACT SHEET**

## **Appendix B**

**Mud Creek Water Pollution Control Plant  
NPDES Permit No. GA0020222**

Reasonable Potential Analysis

# FACT SHEET

## Appendix B City of Valdosta (Mud Creek WPCP) NPDES Permit No. GA0020222

### Current Phase (3.22 MGD)

#### Stream Data (upstream of the discharge):

|            |       |                    |
|------------|-------|--------------------|
| TSS:       | 10    | mg/L               |
| 7Q10:      | 0.73  | ft <sup>3</sup> /s |
| 1Q10:      | 0.67  | ft <sup>3</sup> /s |
| Mean flow: | 28.10 | ft <sup>3</sup> /s |

#### Effluent Data:

|       |           |                    |
|-------|-----------|--------------------|
| TSS:  | 2.1       | mg/L               |
| Flow: | 3,220,000 | gal/day            |
| Flow: | 4.98      | ft <sup>3</sup> /s |

#### Stream data (downstream of the discharge):

|                                    |      |      |                           |
|------------------------------------|------|------|---------------------------|
| Hardness (at 7Q10):                | 10.0 | mg/L |                           |
| TSS (at 7Q10):                     | 3.11 | mg/L |                           |
| Dilution factor (at average flow): | 6.6  |      | IWC (at average flow): 15 |
| Dilution factor (at 7Q10):         | 1.15 |      | IWC (at 7Q10): 87         |
| Dilution factor (at 1Q10):         | 1.13 |      | IWC (at 1Q10): 88         |

#### Acute Water Quality Criteria (WQC<sub>Acute</sub>) - Metals:

| Metal        | K <sub>PO</sub> | α      | f <sub>D</sub> | Maximum effluent C <sub>T</sub> (μg/L) | Instream C <sub>D</sub> (μg/L) | WQC <sub>Acute</sub> (μg/L) | Action needed? |
|--------------|-----------------|--------|----------------|--|--------------------------------|-----------------------------|----------------|
| Arsenic      | 4.80.E+05       | -0.729 | 0.00           | 0.0                                    | 0.0                            | 340.00                      | no             |
| Cadmium      | 4.00.E+06       | -1.131 | 0.000          | 0.0                                    | 0.0                            | 0.21                        | no             |
| Chromium III | 3.36.E+06       | -0.930 | 0.00           | 0.0                                    | 0.0                            | 86.44                       | no             |
| Chromium VI  | 3.36.E+06       | -0.930 | 0.00           | 0.0                                    | 0.0                            | 16.00                       | no             |
| Copper       | 1.04.E+06       | -0.744 | 0.00           | 0.0                                    | 0.00                           | 1.54                        | no             |
| Lead         | 2.80.E+06       | -0.800 | 0.00           | 0.0                                    | 0.0                            | 4.91                        | no             |
| Mercury      | 2.91.E+06       |        |                | 0.00245                                | 0.0022                         | 1.40                        | no             |
| Nickel       | 4.90.E+05       | -0.572 | 0.00           | 0.0                                    | 0.0                            | 66.75                       | no             |
| Zinc         | 1.25.E+06       | -0.704 | 0.36           | 42.0                                   | 13.47                          | 16.66                       | no             |

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

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

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

# FACT SHEET

## Appendix B City of Valdosta (Mud Creek WPCP) NPDES Permit No. GA0020222

### Current Phase (3.22 MGD)

#### Chronic Water Quality Criteria (WQC<sub>Chronic</sub>) - Metals:

| Metal        | K <sub>PO</sub> | α      | f <sub>D</sub> | Average effluent C <sub>T</sub> (μg/L) | Instream C <sub>D</sub> (μg/L) | WQC <sub>Chronic</sub> (μg/L) | Action needed? |
|--------------|-----------------|--------|----------------|--|--------------------------------|-------------------------------|----------------|
| Arsenic      | 4.80.E+05       | -0.729 | 0.00           | 0.0                                    | 0.0                            | 150.00                        | no             |
| Cadmium      | 4.00.E+06       | -1.131 | 0.000          | 0.0                                    | 0.0                            | 0.05                          | no             |
| Chromium III | 3.36.E+06       | -0.930 | 0.00           | 0.0                                    | 0.0                            | 11.24                         | no             |
| Chromium VI  | 3.36.E+06       | -0.930 | 0.00           | 0.0                                    | 0.0                            | 11.00                         | no             |
| Copper       | 1.04.E+06       | -0.744 | 0.00           | 0.00                                   | 0.00                           | 1.25                          | no             |
| Lead         | 2.80.E+06       | -0.800 | 0.00           | 0.0                                    | 0.0                            | 0.19                          | no             |
| Mercury      | 2.91.E+06       |        |                | 0.00206                                | 0.001797                       | 0.012                         | no             |
| Nickel       | 4.90.E+05       | -0.572 | 0.00           | 0.0                                    | 0.0                            | 7.41                          | no             |
| Zinc         | 1.25.E+06       | -0.704 | 0.36           | 19.9                                   | 6.31                           | 16.79                         | no             |

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

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

#### Water Quality Criteria (WQC) - Non Metals:

| Pollutant                  | Effluent C <sub>T</sub> (μg/L) | Instream Concentration (μg/L) | WQC (μg/L) | WQC/2 (μg/L) | Action needed? |
|----------------------------|--------------------------------|-------------------------------|------------|--------------|----------------|
| Bis(2-ethylhexyl)phthalate | 8.3                            | 1.25                          | 2.2        | 1.1          | yes            |
| Methylene Chloride         | 10.9                           | 1.64                          | 590        | 295.0        | no             |
| Chloroform                 | 1.3                            | 0.19                          | 470        | 235.0        | no             |
|                            |                                |                               |            |              |                |

#### NOTES:

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

# FACT SHEET

## Appendix B City of Valdosta (Mud Creek WPCP) NPDES Permit No. GA0020222

### Future Phase (5.7 MGD)

#### Stream Data (upstream of the discharge):

|            |       |                    |
|------------|-------|--------------------|
| TSS:       | 10    | mg/L               |
| 7Q10:      | 0.73  | ft <sup>3</sup> /s |
| 1Q10:      | 0.67  | ft <sup>3</sup> /s |
| Mean flow: | 28.10 | ft <sup>3</sup> /s |

#### Effluent Data:

|       |           |                    |
|-------|-----------|--------------------|
| TSS:  | 2.1       | mg/L               |
| Flow: | 5,700,000 | gal/day            |
| Flow: | 8.82      | ft <sup>3</sup> /s |

#### Stream data (downstream of the discharge):

|                                    |      |      |                        |    |
|------------------------------------|------|------|------------------------|----|
| Hardness (at 7Q10):                | 10.0 | mg/L |                        |    |
| TSS (at 7Q10):                     | 2.70 | mg/L |                        |    |
| Dilution factor (at average flow): | 4.2  |      | IWC (at average flow): | 24 |
| Dilution factor (at 7Q10):         | 1.08 |      | IWC (at 7Q10):         | 92 |
| Dilution factor (at 1Q10):         | 1.08 |      | IWC (at 1Q10):         | 93 |

#### Acute Water Quality Criteria (WQC<sub>Acute</sub>) - Metals:

| Metal        | K <sub>PO</sub> | $\alpha$ | f <sub>D</sub> | Maximum effluent C <sub>T</sub> (μg/L) | Instream C <sub>D</sub> (μg/L) | WQC <sub>Acute</sub> (μg/L) | Action needed? |
|--------------|-----------------|----------|----------------|--|--------------------------------|-----------------------------|----------------|
| Arsenic      | 4.80.E+05       | -0.729   | 0.00           | 0.0                                    | 0.0                            | 340.00                      | no             |
| Cadmium      | 4.00.E+06       | -1.131   | 0.000          | 0.0                                    | 0.0                            | 0.21                        | no             |
| Chromium III | 3.36.E+06       | -0.930   | 0.00           | 0.0                                    | 0.0                            | 86.44                       | no             |
| Chromium VI  | 3.36.E+06       | -0.930   | 0.00           | 0.0                                    | 0.0                            | 16.00                       | no             |
| Copper       | 1.04.E+06       | -0.744   | 0.00           | 0.0                                    | 0.00                           | 1.54                        | no             |
| Lead         | 2.80.E+06       | -0.800   | 0.00           | 0.0                                    | 0.0                            | 4.91                        | no             |
| Mercury      | 2.91.E+06       |          |                | 0.00245                                | 0.0023                         | 1.40                        | no             |
| Nickel       | 4.90.E+05       | -0.572   | 0.00           | 0.0                                    | 0.0                            | 66.75                       | no             |
| Zinc         | 1.25.E+06       | -0.704   | 0.37           | 42.0                                   | 14.57                          | 16.66                       | no             |

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

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

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

# FACT SHEET

## Appendix B City of Valdosta (Mud Creek WPCP) NPDES Permit No. GA0020222

### Future Phase (5.7 MGD)

#### Chronic Water Quality Criteria (WQC<sub>Chronic</sub>) - Metals:

| Metal        | K <sub>PO</sub> | α      | f <sub>D</sub> | Average effluent C <sub>T</sub> (μg/L) | Instream C <sub>D</sub> (μg/L) | WQC <sub>Chronic</sub> (μg/L) | Action needed? |
|--------------|-----------------|--------|----------------|--|--------------------------------|-------------------------------|----------------|
| Arsenic      | 4.80.E+05       | -0.729 | 0.00           | 0.0                                    | 0.0                            | 150.00                        | no             |
| Cadmium      | 4.00.E+06       | -1.131 | 0.000          | 0.0                                    | 0.0                            | 0.05                          | no             |
| Chromium III | 3.36.E+06       | -0.930 | 0.00           | 0.0                                    | 0.0                            | 11.24                         | no             |
| Chromium VI  | 3.36.E+06       | -0.930 | 0.00           | 0.0                                    | 0.0                            | 11.00                         | no             |
| Copper       | 1.04.E+06       | -0.744 | 0.00           | 0.00                                   | 0.00                           | 1.25                          | no             |
| Lead         | 2.80.E+06       | -0.800 | 0.00           | 0.0                                    | 0.0                            | 0.19                          | no             |
| Mercury      | 2.91.E+06       |        |                | 0.00206                                | 0.001903                       | 0.012                         | no             |
| Nickel       | 4.90.E+05       | -0.572 | 0.00           | 0.0                                    | 0.0                            | 7.41                          | no             |
| Zinc         | 1.25.E+06       | -0.704 | 0.37           | 19.9                                   | 6.86                           | 16.79                         | no             |

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

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

#### Water Quality Criteria (WQC) - Non Metals:

| Pollutant                  | Effluent C <sub>T</sub> (μg/L) | Instream Concentration (μg/L) | WQC (μg/L) | WQC/2 (μg/L) | Action needed? |
|----------------------------|--------------------------------|-------------------------------|------------|--------------|----------------|
| Bis(2-ethylhexyl)phthalate | 8.3                            | 1.98                          | 2.2        | 1.1          | yes            |
| Methylene Chloride         | 10.9                           | 2.60                          | 590        | 295.0        | no             |
| Chloroform                 | 1.3                            | 0.30                          | 470        | 235.0        | no             |
|                            |                                |                               |            |              |                |

#### NOTES:

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



# **FACT SHEET**

## **Appendix C**

**Mud Creek Water Pollution Control Plant  
NPDES Permit No. GA0020222**

Whole Effluent Toxicity Test Percent Minimum Significant Data

# FACT SHEET

## Appendix C

### City of Valdosta - Mud Creek WPCP NPDES Permit No. GA0020222

#### WET Test PMSD Values:

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

#### WET Test #1

2015

| Species                      | PMSD Bounds | MSD  | Control Mean | PMSD        |       |
|------------------------------|-------------|------|--------------|-------------|-------|
| Water Flea (C. dubia)        | 13-47       | 2.41 | 21.00        | <b>11.5</b> | Lower |
| Fathead Minnow (P. promelas) | 12-30       | 0.08 | 0.69         | <b>11.0</b> | Lower |

#### WET Test #2

2016

| Species                      | PMSD Bounds | MSD  | Control Mean | PMSD        |        |
|------------------------------|-------------|------|--------------|-------------|--------|
| Water Flea (C. dubia)        | 13-47       | 2.99 | 20.70        | <b>14.4</b> | Within |
| Fathead Minnow (P. promelas) | 12-30       | 0.09 | 0.43         | <b>21.6</b> | Within |

#### WET Test #3

2017

| Species                      | PMSD Bounds | MSD  | Control Mean | PMSD        |        |
|------------------------------|-------------|------|--------------|-------------|--------|
| Water Flea (C. dubia)        | 13-47       | 2.67 | 21.90        | <b>12.2</b> | Lower  |
| Fathead Minnow (P. promelas) | 12-30       | 0.15 | 0.76         | <b>19.5</b> | Within |

#### WET Test #4

2018

| Species                      | PMSD Bounds | MSD  | Control Mean | PMSD        |        |
|------------------------------|-------------|------|--------------|-------------|--------|
| Water Flea (C. dubia)        | 13-47       | 3.23 | 21.90        | <b>14.8</b> | Within |
| Fathead Minnow (P. promelas) | 12-30       | 0.11 | 0.61         | <b>18.1</b> | Within |

# **FACT SHEET**

## **Appendix D**

**Mud Creek Water Pollution Control Plant  
NPDES Permit No. GA0020222**

Ammonia Toxicity Calculations

# Ammonia Toxicity Analysis for Waste Load Allocation Development

Date: 6/18/2019

Facility: City of Valdosta - Mud Creek WPCP

NPDES Permit Number: Reissuance

Receiving Stream: Mud Creek

Engineer: Larry Guerra

Comments: USING ANNUAL 30Q3

Background stream pH and NH<sub>3</sub> based on average data (May-Oct) available at RV\_09\_3309 Mud Ck at Inner Perimeter Road

## Stream and Facility Data:

Background Stream pH (standard units): 6.4

Effluent pH (standard units): 8.5

Final Stream pH (standard units): 7.13

Stream Temperature (Celsius): 26.0

30Q3 Streamflow (cfs): 1.1

Stream background concentration (Total NH<sub>3</sub>-N, mg/L): 0.1

Facility Discharge (MGD/cfs): 3.22 4.98

Total Combined Flow (cfs): 6.08

Effluent concentration (Total NH<sub>3</sub>-N, mg/L) = 1.5

If 1.5 is greater than 17.4 mg/L, use 17.4 mg/L in WLA modeling.

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

Instream CCC = criterion continuous concentration (chronic criterion):

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

Allowable instream concentration CCC (Total NH<sub>3</sub>-N, mg/l) = 1.21

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.

# Ammonia Toxicity Analysis for Waste Load Allocation Development

Date: 6/18/2019

Facility: City of Valdosta - Mud Creek WPCP

NPDES Permit Number: Reissuance

Receiving Stream: Mud Creek

Engineer: Larry Guerra

Comments: USING ANNUAL 30Q3

Background stream pH and NH<sub>3</sub> based on average data (May-Oct) available at RV\_09\_3309 Mud Ck at Inner Perimeter Road

## Stream and Facility Data:

Background Stream pH (standard units): 6.4

Effluent pH (standard units): 8.5

Final Stream pH (standard units): 7.33

Stream Temperature (Celsius): 26.0

30Q3 Streamflow (cfs): 1.1

Stream background concentration (Total NH<sub>3</sub>-N, mg/L): 0.1

Facility Discharge (MGD/cfs): 5.7 8.82

Total Combined Flow (cfs): 9.92

Effluent concentration (Total NH<sub>3</sub>-N, mg/L) = 1.2

If 1.2 is greater than 17.4 mg/L, use 17.4 mg/L in WLA modeling.

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

Instream CCC = criterion continuous concentration (chronic criterion):

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

Allowable instream concentration CCC (Total NH<sub>3</sub>-N, mg/l) = 1.08

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.



**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 Valdosta  
Post Office Box 1125  
Valdosta, Georgia 31603

is authorized to discharge from a facility located at

Mud Creek Water Pollution Control Plant  
1638 New Stantenville Road  
Valdosta, Georgia 31603  
(Lowndes County)

to receiving waters

Mud 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 February 21, 2019 any other applications upon which this permit is based, supporting data entered therein or attached thereto, and any subsequent submittal of supporting data.

This permit shall become effective on XXXXXXXX, 20XX.

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



**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. MONITORING**

- a. The monthly average, other than for fecal coliform bacteria is the arithmetic mean of values obtained for samples collected during a calendar month.
- b. The weekly average, other than for fecal coliform bacteria is the arithmetic mean of values obtained for samples collected during a 7-day period. The week begins 12:00 midnight Saturday and ends at 12:00 midnight the following Saturday. To define a different starting time for the sampling period, the permittee must notify the EPD in writing. For reporting required by 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.
- c. Fecal coliform bacteria will be reported as the geometric mean of the values for the samples collected during the time periods in I.A.1.a. and I.A.1.b.
- d. Untreated wastewater influent samples required by I.B. shall be collected before any return or recycle flows. These flows include returned activated sludge, supernatants, centrates, filtrates, and backwash.
- e. Effluent samples required by I.B. of this permit shall be collected after the final treatment process and before discharge to receiving waters. Composite samples may be collected before disinfection with written EPD approval.
- f. A composite sample shall consist of a minimum of 13 subsamples collected at least once every 2 hours for at least 24 hours and shall be composited proportionately to flow.
- g. Flow measurements shall be conducted using the flow measuring device(s) in accordance with the approved design of the facility. If instantaneous measurements are required, then the permittee shall have a primary flow measuring device that is correctly installed and maintained. If continuous recording measurements are required, then flow measurements must be made using continuous recording equipment. Calibration shall be maintained of the continuous recording instrumentation to  $\pm 10\%$  of the actual flow.

Flow shall be measured manually to check the flow meter calibration at a frequency of once a month. If secondary flow instruments are in use and malfunction or fail to maintain



calibration as required, the flow shall be computed from manual measurements or by other method(s) approved by EPD until such time as the secondary flow instrument is repaired. For facilities which utilize alternate technologies for measuring flow, the flow measurement device must be calibrated semi-annually by qualified personnel.

Records of the calibration checks shall be maintained.

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

## 2. SLUDGE DISPOSAL REQUIREMENTS

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

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

## 3. SLUDGE MONITORING REQUIREMENTS

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

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

The permittee must notify EPD of:

- a. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the Federal Act if the pollutants were directly discharged to a receiving stream; and
- b. Any substantial change in the volume or character of pollutants from a source that existed when the permit was issued.

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

5. EFFLUENT TOXICITY AND BIOMONITORING REQUIREMENTS

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

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

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

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

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

**B.1.a EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

Discharge to Mud Creek - Outfall #001 (30.802194°, -83.226333°):

The discharge from the water pollution control plant shall be limited and monitored by the permittee as specified below starting on the effective date of this permit and continuing for 36 months OR until EPD provides approval of construction completion and written authorization to operate under the B.2 effluent limitations (5.7 MGD), whichever occurs earlier:

| Parameters  | Discharge limitations in<br>mg/L (kg/day)<br>unless otherwise specified |                   | Monitoring Requirements  |                         |                        |
|---|---|-------------------|--------------------------|-------------------------|------------------------|
|   | Monthly<br>Average  | Weekly<br>Average | Measurement<br>Frequency | Sample<br>Type          | Sample<br>Location     |
| Flow (MGD)  | 3.22  | 4.03              | Seven<br>Days/Week       | Continuous<br>Recording | Effluent               |
| Five-Day Biochemical Oxygen Demand <sup>(1)</sup> | 10.0 (122.1)  | 15.0 (152.8)      | Three Days/Week          | Composite               | Influent &<br>Effluent |
| Total Suspended Solids <sup>(1)</sup>             | 10 (122.1)  | 15 (152.8)        | Three Days/Week          | Composite               | Influent &<br>Effluent |
| Ammonia, as N <sup>(2)</sup>                      | 1.5 (18.3)  | 2.25 (22.9)       | Three Days/Week          | Composite               | Effluent               |
| Fecal Coliform Bacteria (#/100 mL)                | 200   | 400               | Two Days/Week            | Grab                    | Effluent               |

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

<sup>(2)</sup> Ammonia, organic nitrogen, nitrate-nitrite, and total Kjeldahl nitrogen (TKN) must be analyzed or calculated from the same sample. Organic nitrogen, as N = TKN – ammonia, as N.

(Effluent limitations continued on the next page)

B.1.a EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

(CONTINUED)

Discharge to Mud Creek - Outfall #001 (30.802194°, -83.226333°):

| Parameters   | Discharge limitations in mg/L unless otherwise specified | Monitoring Requirements |             |                 |
|--|--|-------------------------|-------------|-----------------|
|  |  | Measurement Frequency   | Sample Type | Sample Location |
| Five-Day Biochemical Oxygen Demand Removal, Minimum (%) <sup>(1)</sup> | 85   | See Below               | See Below   | See Below       |
| Total Suspended Solids Removal, Minimum (%) <sup>(1)</sup>             | 85   | See Below               | See Below   | See Below       |
| pH, Daily Minimum – Daily Maximum (Standard Unit)                      | 6.0 – 8.5  | Seven Days/Week         | Grab        | Effluent        |
| Dissolved Oxygen, Daily Minimum  | 6.0  | Seven Days/Week         | Grab        | Effluent        |
| Total Nitrogen, as N <sup>(2)(3)</sup>                                 | Report   | One Day/Month           | Composite   | Effluent        |
| Total Phosphorus, as P <sup>(4)</sup>                                  | Report   | One Day/Month           | Composite   | Effluent        |
| Orthophosphate, as P <sup>(4)</sup>                                    | Report   | One Day/Month           | Composite   | Effluent        |
| Organic Nitrogen, as N <sup>(5)</sup>                                  | Report   | One Day/Month           | Composite   | Effluent        |
| Nitrate-Nitrite, as N <sup>(5)</sup>                                   | Report   | One Day/Month           | Composite   | Effluent        |
| Total Kjeldahl Nitrogen, as N <sup>(6)</sup>                           | Report   | One Day/Month           | Composite   | Effluent        |
| Bis(2-ethylhexyl)phthalate (µg/L) <sup>(6)</sup>                       | Report   | One Day/Month           | Composite   | Effluent        |
| Chronic Whole Effluent Toxicity (%) <sup>(7)</sup>                     | Report NOEC  | See Below               | Composite   | Effluent        |

- (1) Percent removal shall be calculated from monthly average influent and effluent concentrations. Influent and effluent samples shall be collected at approximately the same time.
- (2) Refer to Part I.C.14 TOTAL NITROGEN COMPLIANCE SCHEDULE.
- (3) 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.
- (4) Total phosphorus and orthophosphate must be analyzed from the same sample.
- (5) Ammonia, organic nitrogen, nitrate-nitrite, and total Kjeldahl nitrogen (TKN) must be analyzed or calculated from the same sample. Organic nitrogen, as N = TKN – ammonia, as N
- (6) Refer to Part I.C.10 BIS(2-ETHYLHEXYL)PHTHALATE MONITORING.
- (7) Refer to Part I.C.11 WHOLE EFFLUENT TOXICITY TESTING.

**B.1.b EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

Discharge to Mud Creek - Outfall #001 (30.802194°, -83.226333°):

The discharge from the water pollution control plant shall be limited and monitored by the permittee as specified below starting 36 months after the effective date of the permit and continuing until EPD provides approval and construction completion and written authorization to operate under the B.2. effluent limitations (5.7 MGD):

| Parameters  | Discharge limitations in<br>mg/L (kg/day)<br>unless otherwise specified |                   | Monitoring Requirements  |                         |                        |
|---|---|-------------------|--------------------------|-------------------------|------------------------|
|   | Monthly<br>Average  | Weekly<br>Average | Measurement<br>Frequency | Sample<br>Type          | Sample<br>Location     |
| Flow (MGD)  | 3.22  | 4.03              | Seven<br>Days/Week       | Continuous<br>Recording | Effluent               |
| Five-Day Biochemical Oxygen Demand <sup>(1)</sup> | 10.0 (122.1)  | 15.0 (152.8)      | Three Days/Week          | Composite               | Influent &<br>Effluent |
| Total Suspended Solids <sup>(1)</sup>             | 10 (122.1)  | 15 (152.8)        | Three Days/Week          | Composite               | Influent &<br>Effluent |
| Ammonia, as N <sup>(2)</sup>                      | 1.5 (18.3)  | 2.25 (22.9)       | Three Days/Week          | Composite               | Effluent               |
| Total Nitrogen, as N <sup>(3)(4)</sup>            | 13.75 (167.8)   | 20.6 (210.1)      | Three Days/Week          | Composite               | Effluent               |
| Fecal Coliform Bacteria (#/100 mL)                | 200   | 400               | Two Days/Week            | Grab                    | Effluent               |

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

<sup>(2)</sup> Ammonia, organic nitrogen, nitrate-nitrite, and total Kjeldahl nitrogen (TKN) must be analyzed or calculated from the same sample. Organic nitrogen, as N = TKN – ammonia, as N.

<sup>(3)</sup> Refer to Part I.C.14 TOTAL NITROGEN COMPLIANCE SCHEDULE.

<sup>(4)</sup> The 12-month rolling average shall not exceed 11.0 mg/L. This limit is applicable 48 months after the effective date of the permit.

(Effluent limitations continued on the next page)

B.1.b EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

(CONTINUED)

Discharge to Mud Creek - Outfall #001 (30.802194°, -83.226333°):

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

- (1) Percent removal shall be calculated from monthly average influent and effluent concentrations. Influent and effluent samples shall be collected at approximately the same time.
- (2) Total phosphorus and orthophosphate must be analyzed from the same sample.
- (3) Ammonia, organic nitrogen, nitrate-nitrite, and total Kjeldahl nitrogen (TKN) must be analyzed or calculated from the same sample. Organic nitrogen, as N = TKN – ammonia, as N
- (4) Refer to Part I.C.10 BIS(2-ETHYLHEXYL)PHTHALATE MONITORING.
- (5) Refer to Part I.C.11 WHOLE EFFLUENT TOXICITY TESTING.

**B.2 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

Discharge to Mud Creek - Outfall #001 (30.802194°, -83.226333°):

The discharge from the water pollution control plant shall be limited and monitored by the permittee until EPD provides approval and construction completion and written authorization to operate under the B.2. effluent limitations (5.7 MGD):

| Parameters  | Discharge limitations in mg/L<br>(kg/day)<br>unless otherwise specified |                   | Monitoring Requirements  |                         |                        |
|---|---|-------------------|--------------------------|-------------------------|------------------------|
|   | Monthly<br>Average  | Weekly<br>Average | Measurement<br>Frequency | Sample<br>Type          | Sample<br>Location     |
| Flow (MGD)  | 5.7   | 7.13              | Seven Days/Week          | Continuous<br>Recording | Effluent               |
| Five-Day Biochemical Oxygen Demand <sup>(1)</sup> | 2.9 (62.7)  | 4.4 (78.4)        | Five Days/Week           | Composite               | Influent &<br>Effluent |
| Total Suspended Solids <sup>(1)</sup>             | 10 (216)  | 15 (270)          | Five Days/Week           | Composite               | Influent &<br>Effluent |
| Ammonia, as N <sup>(2)</sup>                      | 0.6 (13)  | 0.9 (16)          | Five Days/Week           | Composite               | Effluent               |
| Total Nitrogen, as N <sup>(3)(4)</sup>            | 12.5 (270.1)  | 18.75 (337.9)     | Five Days/Week           | Composite               | Effluent               |
| Total Phosphorus, as P <sup>(4)</sup>             | 1.0 (21.6)  | 1.5 (27.0)        | Five Days/Week           | Composite               | Effluent               |
| Fecal Coliform Bacteria (#/100 mL)                | 200   | 400               | Three Days/Week          | Grab                    | Effluent               |

- (1) Numeric limits only apply to the effluent.
- (2) Ammonia, organic nitrogen, nitrate-nitrite, and total Kjeldahl nitrogen (TKN) must be analyzed or calculated from the same sample. Organic nitrogen, as N = TKN – ammonia, as N.
- (3) Total phosphorus and orthophosphate must be analyzed from the same sample.
- (4) The 12-month rolling average shall not exceed 10.0 mg/L. This limit is applicable 12-months after receiving written authorization to operate under the B.2. effluent limitations (5.7 MGD).

(Effluent limitations continued on the next page)



**B.2 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

**(CONTINUED)**

Discharge to Mud Creek - Outfall #001 (30.802194°, -83.226333°):

| Parameters   | Discharge limitations in mg/L unless otherwise specified | Monitoring Requirements |             |                 |
|--|--|-------------------------|-------------|-----------------|
|  |  | Measurement Frequency   | Sample Type | Sample Location |
| Five-Day Biochemical Oxygen Demand Removal, Minimum (%) <sup>(1)</sup> | 85   | See Below               | See Below   | See Below       |
| Total Suspended Solids Removal, Minimum (%) <sup>(1)</sup>             | 85   | See Below               | See Below   | See Below       |
| pH, Daily Minimum – Daily Maximum (Standard Unit)                      | 6.0 – 8.5  | Seven Days/Week         | Grab        | Effluent        |
| Dissolved Oxygen, Daily Minimum  | 6.0  | Seven Days/Week         | Grab        | Effluent        |
| Orthophosphate, as P <sup>(2)</sup>                                    | Report   | One Day/Month           | Composite   | Effluent        |
| Organic Nitrogen, as N <sup>(3)</sup>                                  | Report   | One Day/Month           | Composite   | Effluent        |
| Nitrate-Nitrite, as N <sup>(3)</sup>                                   | Report   | One Day/Month           | Composite   | Effluent        |
| Total Kjeldahl Nitrogen, as N <sup>(3)</sup>                           | Report   | One Day/Month           | Composite   | Effluent        |
| Priority Pollutants <sup>(4)</sup>                                     | Report   | See Below               | Composite   | Effluent        |
| Whole Effluent Toxicity Test (%) <sup>(5)</sup>                        | Report NOEC  | See Below               | Composite   | Effluent        |
| Long-Term Biochemical Oxygen Demand <sup>(6)</sup>                     | Report   | See Below               | Composite   | Effluent        |

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

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

<sup>(3)</sup> Ammonia, organic nitrogen, nitrate-nitrite, and total Kjeldahl nitrogen (TKN) must be analyzed or calculated from the same sample. Organic nitrogen, as N = TKN – ammonia, as N

<sup>(4)</sup> Refer to Part I.C.12 PRIORITY POLLUTANTS.

<sup>(5)</sup> Refer to Part I.C.11 WHOLE EFFLUENT TOXICITY TESTING.

<sup>(6)</sup> Refer to Part I.C.13 LONG-TERM BIOCHEMICAL OXYGEN DEMAND TESTING.

**B.3. INSTREAM SURFACE WATER QUALITY MONITORING**

Mud Creek:

The receiving stream shall be monitored by the permittee as specified below:

| Parameters                                       | Instream Surface Water Quality Monitoring | Monitoring Requirements |               |                         |
|--|---|-------------------------|---------------|-------------------------|
|  |   | Measurement Frequency   | Sample Type   | Sample Location         |
| Streamflow (ft <sup>3</sup> /s) <sup>(1)</sup>   | Report (at the time of sampling)          | One Day/Week            | Instantaneous | Instream                |
| Dissolved Oxygen (mg/L) <sup>(2)</sup>           | Report Monthly Minimum                    | One Day/Week            | Grab          | Upstream and Downstream |
| pH (Standard Unit) <sup>(2)</sup>                | Report Monthly Minimum & Monthly Maximum  | One Day/Week            | Grab          | Upstream and Downstream |
| Temperature (°F) <sup>(2)</sup>                  | Report Monthly Minimum & Monthly Maximum  | One Day/Week            | Grab          | Upstream and Downstream |
| Conductivity (µmho/cm) <sup>(2)</sup>            | Report Monthly Average                    | One Day/Week            | Grab          | Upstream and Downstream |
| Fecal Coliform Bacteria (#/100mL) <sup>(3)</sup> | Report Monthly Geometric Mean             | Quarterly               | Grab          | Upstream and Downstream |

- (1) Streamflow shall either be measured or estimated at the Valdosta Mud Creek WPCP discharge at the time of sampling.
- (2) Upstream sampling location refers to the crossing at Inner Perimeter Road. Downstream sampling location refers to the crossing at Johnson Road.
- (3) Instream fecal coliform bacteria monitoring shall be conducted quarterly and shall be performed over a 30-day period at intervals of not less than 24-hours in which at least four samples are collected and analyzed to determine a geometric mean.

**C. MONITORING AND REPORTING**

**1. REPRESENTATIVE SAMPLING**

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

**2. SAMPLING PERIOD**

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

**3. MONITORING PROCEDURES**

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

**4. RECORDING OF RESULTS**

For each required parameter analyzed, the permittee shall record:

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

5. ADDITIONAL MONITORING BY PERMITTEE

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

6. RECORDS RETENTION

The permittee shall retain records of:

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

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

7. PENALTIES

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

8. WATERSHED PROTECTION PLAN

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

Each June 30<sup>th</sup> the permittee is to submit the following to EPD:

- a. An annual certification statement documenting that the plan is being implemented as approved. The certification statement shall read as follows: "I certify, under penalty of law, that the Watershed Protection Plan is being implemented. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."
- b. All Watershed Plan data collected during the previous year in an electronic format. This data shall be archived using a digital format such as a spreadsheet developed in coordination with EPD. All archived records, data, and information pertaining to the Watershed Protection Plan shall be maintained permanently.
- c. A progress report that provides a summary of the BMPs that have been implemented and documented water quality improvements. The progress report shall also include any necessary changes to the Watershed Protection Plan.

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

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

9. BIS(2-ETHYLHEXYL)PHTHALATE MONITORING

Upon the effective date of the permit, the permittee shall collect and analyze one sample per month of bis(2-ethylhexyl)phthalate in the effluent. Monitoring for this parameter shall continue for a period of twelve months.

Within thirteen months of the effective date of the permit, the permittee shall submit a report to EPD that includes a summary of the bis(2-ethylhexyl)phthalate effluent data collected as well as copies of all the analytical laboratory reports. The report shall be submitted to EPD at the address below:

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

Upon receipt of the report, EPD will conduct a reasonable potential evaluation. If it is determined that bis(2-ethylhexyl)phthalate is present in the effluent at levels of concern, EPD will reopen the permit to include a limit for this pollutant. Limits may be subjected to the expanded flow of 5.7 MGD (Part I.B.2) if deemed necessary.

10. CHRONIC WHOLE EFFLUENT TOXICITY (WET)

a. Part I.B.1 (3.22 MGD):

The permittee must conduct annual chronic Whole Effluent Toxicity (WET) tests. The testing must be conducted in accordance with the most current U.S. Environmental Protection Agency (EPA) chronic aquatic toxicity testing manuals. The referenced document is entitled Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4<sup>th</sup> Edition, U.S. EPA, 821-R-02-013, October 2002. Definitive tests must be run on the same samples concurrently using both an invertebrate species (i.e., *Ceriodaphnia dubia*) and a vertebrate species (i.e., *Pimephales promelas*). The testing must include a dilution equal to the facility's instream wastewater concentration (IWC) of 87%.

EPD will evaluate the WET tests submitted to determine whether toxicity has been demonstrated. An effluent discharge will not be considered toxic if the No Observed Effect Concentration (NOEC) is greater than or equal to the Instream Wastewater Concentration (IWC) of 87%. If the test results indicate effluent toxicity, the permittee may be required to perform additional tests or studies in accordance with Part I.C.5 of the permit and/or the permit may be modified to include a chronic WET limit.

b. Part I.B.2 (5.7 MGD):

The permittee shall conduct one chronic whole effluent toxicity (WET) test for four consecutive quarters after receiving EPD written authorization to commence operation under Part I.B.2 effluent limitations (5.7 MGD), with the first test conducted within 90 days of the authorization. The testing must be conducted in accordance with the most current U.S. Environmental Protection Agency (EPA) chronic aquatic toxicity testing manuals. The referenced document is entitled Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, 4<sup>th</sup> Edition, U.S. EPA, 821-R-02-013, October 2002. Definitive tests must be run on the same samples concurrently using both an invertebrate species (i.e., *Ceriodaphnia dubia*) and a vertebrate species (i.e., *Pimephales promelas*). The testing must include a dilution equal to the facility's instream wastewater concentration (IWC) of 92%.

EPD will evaluate the WET tests submitted to determine whether toxicity has been demonstrated. An effluent discharge will not be considered toxic if the No Observed Effect Concentration (NOEC) is greater than or equal to the Instream Wastewater Concentration (IWC) of 92%. The results of the tests shall be submitted to EPD with the permittee's monthly Discharge Monitoring Reports.

Within thirteen months of receiving authorization to operate under Part I.B.2 effluent limitations (5.7 MGD), the permittee shall submit a report to EPD that includes a summary of the effluent data collected as well as copies of all the analytical laboratory reports. The report shall be submitted to EPD at the address below:

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

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

11. PRIORITY POLLUTANTS

The permittee must conduct one scan of the priority pollutants for three consecutive quarters after receiving EPD written authorization to commence operation under Part I.B.2 effluent limitations (5.7 MGD), with the first scan conducted within 90 days of the authorization. The priority pollutant scans must represent seasonal variation. Total recoverable mercury must be sampled and analyzed using EPA Method 1631E. The results of the tests shall be submitted to EPD with the permittee's monthly Discharge Monitoring Reports.

Within thirteen months of receiving authorization to operate under Part I.B.2 effluent limitations (5.7 MGD), the permittee shall submit a report to EPD that includes a summary of the effluent data collected as well as copies of all the analytical laboratory reports. The report shall be submitted to EPD at the address below:

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

Upon receipt of the report, EPD will conduct a reasonable potential evaluation. If substances are measured at levels of concern, then the permittee may be required to perform additional priority pollutant analyses in accordance with Part I.C.5 or the permit may be modified to include effluent limitations for priority pollutants.

12. LONG-TERM BIOCHEMICAL OXYGEN DEMAND TESTING

The permittee shall perform a 120-day Long-Term BOD test once during the permit cycle. The test should be performed on an effluent sample collected during the critical period from June 1 through September 30. The results of this test shall be submitted to EPD at least 180 days prior to the permit expiration date to the following address:

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



13. TOTAL NITROGEN COMPLIANCE SCHEDULE

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

- a. Within 6 months of the effective date of the permit, the permittee shall submit a design development report (DDR) and an Environmental Information Document (EID) to EPD for any modifications needed at the facility that will allow the facility to meet the total residual chlorine and total nitrogen effluent limitations in Part I.B.1.b of this permit.
- b. Within 12 months of the effective date of the permit, the permittee shall submit plans and specifications for any modifications needed at the facility that will allow it to meet the total residual chlorine and total nitrogen effluent limitations in Part I.B.1.b of this permit.
- c. Within 18 months of the effective date of the permit, the permittee shall submit a report to EPD that outlines the progress towards completing construction of the treatment process modifications. The report shall include an estimate of what percentage of the construction is complete and is to describe what work remains to be completed in order to meet the ammonia effluent limitations in Part I.B.1.b. of this permit.
- d. Within 27 months of the effective date of the permit, the permittee shall submit a report to EPD that outlines the progress towards completing construction of the treatment process modifications. The report shall include an estimate of what percentage of the construction is complete and is to describe what work remains to be completed in order to meet the total nitrogen effluent limitations in Part I.B.1.b of this permit.
- e. Within 36 months of the effective date of the permit, the permittee shall comply with the total residual chlorine and total nitrogen effluent limitations in Part I.B.1.b of this permit.

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

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

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

**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 15<sup>th</sup> day of the month following the sampling period.
  - d. All other reports required herein, unless otherwise stated, shall be submitted to the EPD Office listed on the permit issuance letter signed by the Director of EPD.
2. **No later than December 21, 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 I 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 exceedance of effluent limitations described in the definition of "Consistently exceeding effluent limitation" above. As a minimum, the following parameters shall be monitored in the receiving stream:
1. Dissolved Oxygen;
  2. Fecal Coliform Bacteria;
  3. pH;
  4. Temperature; and
  5. Other parameters required by the EPD.

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

- h. Within 24 hours of becoming aware of a major spill, the owner of a POTW shall provide notice of a major spill to every county, municipality, or other public agency whose public



water supply is within a distance of 20 miles downstream and to any others which could be potentially affected by the major spill.

12. UPSET PROVISION

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

B. RESPONSIBILITIES

1. DUTY TO COMPLY

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

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

2. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

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

3. INSPECTION AND ENTRY

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

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

4. DUTY TO PROVIDE INFORMATION

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

5. TRANSFER OF OWNERSHIP

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

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

6. AVAILABILITY OF REPORTS

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

7. PERMIT ACTIONS

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

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

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

8. CIVIL AND CRIMINAL LIABILITY

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

9. PROPERTY RIGHTS

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

10. DUTY TO REAPPLY

The permittee shall submit an application for permit reissuance at least 180 days before the expiration date of this permit. The permittee shall not discharge after the permit expiration date. 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**

**A. APPROVED INDUSTRIAL PRETREATMENT PROGRAM FOR PUBLICLY OWNED TREATMENT WORKS (POTWs)**

1. The permittee's approved pretreatment program shall be enforceable through this permit. The permittee shall also comply with the provisions of 40 CFR 403.
2. The permittee shall administer the approved pretreatment program by:
  - a. Maintaining records identifying the character and volume of pollutants contributed by industrial users to the POTW.
  - b. Enforcing and obtaining appropriate remedies for noncompliance by any industrial user with any applicable pretreatment standard or requirement defined by Section 307(b) and (c) of the Federal Act, 40 CFR Part 403.5 and 403.6 or any State or local requirement, whichever is more stringent.
  - c. Revising the adopted local limits based on technical analyses to ensure that the local limits continue to prevent:
    1. Interference with the operation of the POTW;
    2. Pass-through of pollutants in violation of this permit;
    3. Municipal sludge contamination; and
    4. Toxicity to life in the receiving stream.

Within 180 days of the effective date of this permit issuance or reissuance (excluding permit modifications), the permittee shall review the local limits of the program and submit to EPD a written technical evaluation of the need to revise the local limits.

- d. Ensuring that industrial wastewater discharges from industrial users are regulated through discharge permits or equivalent individual control mechanisms. Compliance schedules will be required of each industrial user for the installation of control technologies to meet applicable pretreatment standards and the requirements of the approved program.
- e. Inspecting, surveying, and monitoring to determine if the industrial user is in compliance with the applicable pretreatment standards.
- f. Equitably maintaining and adjusting revenue levels to ensure adequate and continued pretreatment program implementation.
- g. Preparing a list of industrial users which, during the reporting period April 1 through March 31 have been in significant noncompliance with the pretreatment requirements enumerated in 40 CFR Part 403.8 (f)(2)(viii). This list will be published annually each April in the newspaper with the largest circulation in the service area.

**B. APPROVED PRETREATMENT PROGRAM ANNUAL REPORT**

1. Within 30 days of the close of the reporting period April 1 through March 31, the permittee shall submit a report to the EPD that includes:
  - a. An updated list of POTW industrial users;
  - b. The results of POTW sampling and analyses required by the EPD;
  - c. A summary of POTW industrial user inspections;
  - d. A summary of POTW operations including information on upsets, interferences, pass through events, or violations of the permit related to industrial user discharges;
  - e. A summary of all activities to involve and inform the public of pretreatment requirements;
  - f. A summary of the annual pretreatment program budget;
  - g. A descriptive summary of any compliance activities initiated, ongoing, or completed against industrial users which shall include the number of administrative orders, show cause hearings, penalties, civil actions, and fines;
  - h. A list of contributing industries using the treatment works, divided into Standard Industrial Classification Code (SIC) categories, which have been issued permits or similar enforceable individual control mechanisms, and a status of compliance for each industrial user. The list should also identify the industries that are categorical or significant industrial users;
  - i. The name and address of each industrial user that has received a conditionally revised discharge limit;
  - j. A list of all industrial users who were in significant noncompliance with applicable pretreatment standards and requirements;
  - k. A list of all industrial users showing the date that each was notified that a categorical pretreatment standard had been promulgated by EPA for their industrial category and the status of each industrial user in achieving compliance within the 3 year period allowed by the Federal Act; and
  - l. A description of all substantial changes proposed for the program. All substantial changes must first be approved by the EPD before formal adoption by the POTW. Substantial changes shall include but not be limited to:
    1. Changes in legal authority;
    2. Changes in local limits;
    3. Changes in the control mechanisms;
    4. Changes in the method for implementing categorical pretreatment standards.

5. A decrease in the frequency of self-monitoring or reporting required of industrial users;
  6. A decrease in the frequency of industrial user inspections or sampling by the POTW;
  7. Significant reductions in the program resources including personnel commitments, equipment, and funding levels;
  8. Changes in confidentiality procedures; and
  9. Changes in the POTW sludge disposal and management practices.
2. Reports submitted by an industrial user will be retained by the permittee for at least 3 years and shall be available to the EPD for inspection and copying. This period shall be extended during the course of any unresolved litigation concerning the discharge of pollutants by an industrial user or concerning the operations of the program or when requested by the Director.

**C. INDUSTRIAL PRETREATMENT STANDARDS**

Effluent limitations for the permittee's discharge are listed in Part I. Other pollutants attributable to industrial users may also be present in the discharge. When sufficient information becomes available, this permit may be revised to specify effluent limitations for these pollutants based on best practicable technology or water quality standards. Once the specific nature of industrial contributions has been identified, data collection and reporting may be required for parameters not specified in Part I.

**D. REQUIREMENTS FOR EFFLUENT LIMITATIONS ON POLLUTANTS ATTRIBUTABLE TO INDUSTRIAL USERS**

1. The permittee shall require all industrial dischargers to the POTW to meet State pretreatment regulations promulgated in response to Section 307(b) of the Federal Act. Other information about new industrial discharges may be required and will be requested from the permittee after the EPD has received notice of the discharge.
2. The permittee may be required to supplement the requirements of the State and Federal pretreatment regulations to ensure compliance with all applicable effluent limitations listed in Part I. Supplemental actions by the permittee concerning some or all of the industries discharging to the POTW may be necessary.

**E. RETAINER**

EPD may require the permittee to amend an approved pretreatment program to incorporate revisions in State Pretreatment Regulations or other EPD requirements. Any approved POTW pretreatment program identified by EPD that needs to modify its program to incorporate requirements that have resulted from revision to the Rules shall develop and submit those revisions to EPD no later than one (1) year of notification by EPD to modify the Program. Any modifications made to the approved pretreatment program must be incorporated into the permit and the program pursuant to Chapter 391-3-6-.09(7) of the State Rules. Implementation of any revision or amendments to the program shall be described in the subsequent annual report to the EPD.