

PUBLIC NOTICE

NOTICE OF APPLICATION FOR A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT TO DISCHARGE TREATED WASTEWATER INTO THE WATERS OF THE STATE OF GEORGIA.

The Georgia Environmental Protection Division (EPD) is considering the issuance of a NPDES permit for the following applicant, subject to specific pollutant limitations and special conditions:

City of Richmond Hill, P.O. Box 250, Richmond Hill, Georgia 31324, NPDES Permit No. GA0037648, for the Sterling Creek Water Reclamation Facility (WRF) located at 1701 Elbow Swamp Road, Richmond Hill, Georgia 31324. Up to 3.0 MGD of treated wastewater is being discharged to Elbow Swamp to Sterling Creek tributary in the Ogeechee River Basin, which includes up to 1.0 MGD for urban water reuse. The permit contains effluent limitations for expansion to 4.0 MGD including up to 1.0 MGD for urban water reuse.

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, 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 GA0037648 reissuance – City of Richmond Hill Sterling Creek Water Reclamation Facility (Bryan 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 for these permits. 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. The permit application, draft permit, comments received, and other information are available for review at 2 Martin Luther King, Jr. Drive, Suite 1152 East, Atlanta, GA 30334, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. For additional information contact: Gigi Steele, Wastewater Regulatory Program at (404) 463-1511.

Please bring this to the attention of persons who you know will be interested in this matter.

Georgia Department of Natural Resources

Environmental Protection Division • Watershed Protection Branch
2 Martin Luther King Jr. Drive • Suite 1152 East • Atlanta • Georgia 30334
(404) 463-1511; Fax (404) 656-2453

June 6, 2016

Mr. Chris Lovell, City Manager
City of Richmond Hill
P.O. Box 250
Richmond Hill, GA 31324

RE: City of Richmond Hill – Sterling Creek
Water Reclamation Facility (WRF)
Draft NPDES Permit No. GA0037648
Bryan County

Dear Mr. Lovell:

The Environmental Protection Division (EPD) has received your application for a permit to discharge treated wastewater to the waters of the State of Georgia. 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 issuing the permit, you must 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 Bryan County (the area affected by the discharge). 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 of Richmond Hill. 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 of Richmond Hill. At the end of the 30-day public notice comment period, EPD will make a determination on the issuance of the NPDES permit.

Enclosed is Attachment A which outlines the revisions being made to the permit. We request that key operational personnel and your consultants review the permit carefully with particular emphasis being placed on the revisions being made to the permit. Please complete and sign the attachment which summarizes the revisions and send it back along with the Public Notice verification.

Also enclosed is a copy of the Public Notice, Fact Sheet, Attachments A through D, and the draft NPDES permit. Should you have any questions, please contact Johanna Smith of my staff at (404) 656-6937 or via email at Johanna.Smith@dnr.ga.gov.

Sincerely,



Gigi Steele, Manager
Municipal Permitting Unit
Wastewater Regulatory Program

GMS/jds

cc: Mr. James Clardy – Hussey Gay Bell (Jclardy@husseygaybell.com)

ATTACHMENT A

City of Richmond Hill – Sterling Creek Water Pollution Control Plant (WPCP) NPDES Permit No. GA0037648

Please note the following changes to the NPDES permit. Please review these changes and sign below acknowledging these revisions.

- Part I.B.
 - Ortho-phosphorus, organic nitrogen, nitrate-nitrite, and TKN monitoring are required for stream modeling purposes. It has been determined that results from 12 samples per year (one per month) are sufficient. Monitoring requirements have been included in the draft permit. GA EPD will use the data for nutrient criteria development.
 - The permit contains ammonia effluent limitations that comply with U.S. EPA's 2013 Ammonia Toxicity Criteria. The ammonia effluent limitations are more stringent than those in the current permit.
 - Whole Effluent Toxicity (WET) limits have been included in the permit.
 - Total Recoverable Copper, Total Stream Hardness, and Total Recoverable Mercury monitoring have been removed from the permit as the permittee has submitted results for these parameters and EPD has determined that there is no potential to cause or contribute to a water quality standards violation in the receiving stream.
 - Bis(2-ethylhexyl)phthalate monitoring has been included in the permit for B.1. and B.2.
 - The facility is now operating under the current permit's B.2. limits; therefore, the previous B.1. limits (1.5 MGD) have been removed.

- Part I.C.10.
 - New quarterly WET testing language has been included in the permit.

- Part I.C.11.
 - Removed Total Recoverable Copper and Total Recoverable Mercury monitoring.
 - Bis(2-ethylhexyl)phthalate monitoring has been included in the permit.

- Part I.C.12. (Previously Effluent Testing Data)
 - This section has been removed from the permit.
 - Added language for priority pollutant scans.

Boilerplate Modifications

The permit boilerplate includes modified language or added language in the following sections:

- Part I.A.1.a. Percent Removal
- Part I.A.1.g. Composite Sample
- Part I.A.5. Effluent Toxicity and Biomonitoring Requirements
- Part I.C.2. Sampling Period
- Part I.C.10. Chronic Whole Effluent Toxicity
- Part I.D. Reporting Requirements
- Part II.B.7. Civil and Criminal Liability

Certification Statement:

I certify that I have reviewed the draft NPDES permit packages including the changes highlighted in the attachment. The review of these documents has been coordinated with appropriate members of the operational staff and consultants.

Printed Name of Person Signing

Title

Signature

Date Attachment Signed



**STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION (EPD)**

FACT SHEET

APPLICATION FOR A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TREATED WASTEWATER INTO WATERS OF THE STATE OF GEORGIA

Technical Contact: Johanna Smith

Phone Number: 404-656-6937

Permit is: (Check one)

- 1 New Issuance
- 2 Revocation/Reissuance with no significant modifications
- 3 Revocation/Reissuance with modifications
- 4 Modifications only

Permit No. GA0037648

1. SYNOPSIS OF APPLICATION

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

1.1 Name and Address of Applicant

City of Richmond Hill
P.O. Box 250
Richmond Hill, Georgia 31324

1.2 Facility Name & Location

Sterling Creek Water Reclamation Facility (WRF)
1701 Elbow Swamp Road
Richmond Hill, Georgia 31324
(Bryan County)

1.3 Design Capacity

B.1.a. 3.0 MGD	Current Permitted Flow
B.1.b. 1.0 MGD	Urban Water Reuse
B.2.a. 4.0 MGD	Expansion
B.2.b. 1.0 MGD	Urban Water Reuse

1.4 Receiving Water and River Basin

Elbow Swamp to Sterling Creek tributary in the Ogeechee River Basin

The Richmond Hill – Sterling Creek WRF has one discharge point to Elbow Swamp. The Richmond Hill constructed wetlands system had two previous outfall locations (002 and 005) to Elbow Swamp. Elbow Swamp is drained by Sterling Creek, which is a tributary to the Ogeechee River. Sterling Creek, from its confluence with the Ogeechee River upstream into Elbow Swamp, is a tidally-influenced fresh to brackish water system that has been significantly modified to provide drainage to the adjacent upland areas. The watershed area upstream from the wetlands discharge is approximately 22 square miles, the net tidal flow is 2.1 cubic feet per second (cfs), the 7Q10 streamflow rate is estimated to be 0 cfs, and the average annual streamflow is estimated to be 16 cfs. Since surface water flows are low, the significant source of surface water exchange is due to tidally induced flows that extend into Elbow Swamp.

Using information provided in the February 1, 2010 report, "Elbow Swamp Dilution Capacity in Support of Waste Load Allocation", EPD has determined the dilution provided by the tidal exchange in Elbow Swamp at the existing discharge location. The tidal exchange volume available for dilution is equivalent to 1.38 MGD (2.13 cfs) at the current outfall location. The dilution factor at the previous outfall locations (002 and 005) is 1.9. Using the previous outfalls and the proposed 3.0 and 4.0 MGD effluent flow rates, dilution factors of 1.5 and 1.3, respectively, have been calculated.

1.5 Description of the Wastewater Treatment Facility

The City received authorization to operate at the 3.0 MGD flow on April 22, 2016, effective May 1, 2016.

Expansion (3.0 MGD/4.0 MGD): The existing overland flow fields and constructed wetlands from the treatment process have been replaced with an activated sludge system with a membrane bioreactor system. Plant components include: fine screening, grit removal, magnetic flow meter for flow measurement, biological treatment and solids separation through membrane bioreactor technology, UV disinfection, flow monitoring, and a transfer pump station.

Sludge is processed through a MBR sludge thickener, sludge pump, belt press, and then hauled to Superior Landfill in Savannah, GA.

The City has recently constructed a new facility. The old plant is no longer utilized for treatment of wastewater, and the previous Outfalls 002 and 005 have been plugged. The plant now discharges from Outfall 001 at the location below. The lined aerated lagoons may be utilized for reuse water storage. The City will maintain the constructed wetlands which will be irrigated using reuse quality effluent.

Outfall #	Latitude	Longitude
001	31° 54' 14.11" N (31.903919)	84° 18' 44.38" W (-81.312328)

Urban Water Reuse (1.0 MGD): Reuse water is utilized as much as possible in plant to reduce the demand for potable water. A pressurized reuse water piping system serves influent screen spray nozzles, cleaning of the septage receiving station, belt filter press nozzles, and hose bibs throughout the plant site.

Reuse water is discharged into the two wetland trains to help support and maintain the existing vegetation and wildlife. Reuse water will not be allowed to overflow out of the constructed wetlands in accordance with the Wetlands Discharge Contingency Plan approved by EPD on June 1, 2016. This plan states that two (2) feet of freeboard at each staff gage in the wetlands will be maintained at all times and that the City will continually monitor the amount of water discharged to the wetlands.

1.6 Description of the discharge (as reported by applicant)

Effluent Characteristics *	Maximum Daily Value	Average Daily Value
Flow (MGD)	2.66	1.45
BOD ₅ (mg/L)	19.4	5.2
TSS (mg/L)	29.4	6.4
Fecal Coliform (#/100mL)	NA	NA

*The facility is in compliance with its monthly and weekly limits for these parameters. These are maximum values as reported in the permit application.

2. PROPOSED EFFLUENT LIMITATIONS

B.1.a. Effluent Limitations:

Parameters	Discharge Limitations mg/L (kg/day) unless otherwise specified	
	Monthly Average	Weekly Average
Flow (MGD) - Effluent	3.0	3.75
Carbonaceous Biochemical Oxygen Demand, 5-Day	5.0 (56.9)	7.5 (71.0)
Ammonia, as N		
May - October	1.0 (11.4)	1.5 (14.2)
November – April	1.1 (12.5)	1.7 (15.6)
Total Suspended Solids	20 (227)	30 (284)
Fecal Coliform Bacteria (#/100mL)	200	400
Total Phosphorus, as P	Report (Report)	Report (Report)

Parameters	Discharge Limitations mg/L unless otherwise specified
pH, Minimum – Maximum (Standard Unit)	6.0 – 8.0
Dissolved Oxygen, daily minimum	5.0
Ortho-Phosphorus	Report
Organic Nitrogen, as N	Report
Total Kjeldahl Nitrogen	Report
Nitrate-Nitrite	Report
Bis(2-ethylhexyl)phthalate	Report
Whole Effluent Toxicity (WET) Test (%)	NOEC ≥ 68%
Long Term Biochemical Oxygen Demand	Report
Priority Pollutants	Report

B.1.b. Effluent Limitations: Urban Water Reuse

Parameters	Discharge Limitations mg/L (kg/day) unless otherwise specified
Flow (MGD)	1.0
Carbonaceous Biochemical Oxygen Demand, 5-Day	5.0
Total Suspended Solids	5.0
Fecal Coliform Bacteria (#/100mL)	23
Turbidity (NTU)	3
Dissolved Oxygen, daily minimum	5.0

B.2.a. Effluent Limitations:

Parameters	Discharge Limitations mg/L (kg/day) unless otherwise specified	
	Monthly Average	Weekly Average
Flow (MGD) - Effluent	4.0	5.0
Carbonaceous Biochemical Oxygen Demand, 5-Day	5.0 (75.8)	7.5 (94.8)
Ammonia, as N		
May - October	0.9 (13.6)	1.4 (17.1)
November - April	1.0 (15.2)	1.5 (19.0)
Total Suspended Solids	20 (303)	30 (379)
Fecal Coliform Bacteria (#/100mL)	200	400
Total Phosphorus, as P	Report (Report)	Report (Report)

Parameters	Discharge Limitations mg/L (kg/day) unless otherwise specified
pH, Minimum - Maximum (Standard Unit)	6.0 - 8.0
Dissolved Oxygen, daily minimum	5.0
Ortho-Phosphorus	Report
Organic Nitrogen, as N	Report
Total Kjeldahl Nitrogen	Report
Nitrate-Nitrite	Report
Whole Effluent Toxicity (WET) Test (%)	Report NOEC
Long Term Biochemical Oxygen Demand	Report
Priority Pollutants	Report

B.2.b. Effluent Limitations: Urban Water Reuse

Parameters	Discharge Limitations mg/L (kg/day) unless otherwise specified
Flow (MGD)	1.0
Carbonaceous Biochemical Oxygen Demand, 5-Day	5.0
Total Suspended Solids	5.0
Fecal Coliform Bacteria (#/100mL)	23
Turbidity (NTU)	3
Dissolved Oxygen, daily minimum	5.0

3. BASIS FOR FINAL EFFLUENT LIMITS AND PERMIT CONDITIONS

The effluent permit limitations in the draft permit are based on the wasteload allocation dated October 20, 2015.

3.1 Technology Based Effluent Limitation Calculations (i.e. Flow, BOD₅ and TSS)

Weekly average flow:

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

Q = Flow
C = Concentration
M = Mass

Weekly average concentration:

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

Monthly average mass loading:

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

Weekly average mass loading:

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

3.2 Georgia's 303(d) List

The receiving segment of Sterling Creek for the discharge is listed on Georgia's integrated draft 2014 305(b)/303(d) list as not supporting its designated uses for coastal streams under Category 5. This category indicates that though the stream is not supporting its designated uses, a TMDL has not yet been completed. Additional analyses are necessary before completion of a TMDL.

2014 Coastal Streams – Not Supporting Designated Uses

Reach Name ID # Data Source	Reach Location/ County	River Basin Use	Criterion Violated	Potential Causes	Extent	Notes
Sterling Creek R03060204030 55	Headwaters to the Ogeechee River Bryan County	Ogeechee Fishing	FC	UR	9 miles	EPD needs to determine the "natural DO" for the area before it can be determined whether the dissolved oxygen criteria are being met.

55 DNR-EPD, Brunswick Coastal District
FC Fecal Coliform Bacteria
UR Urban Runoff/Urban Effects

3.3 Water Quality Based Effluent Limitations

a) Reasonable Potential (RP)

A Reasonable Potential analysis has been conducted on data submitted with the application. The RP analysis was completed using the most critical 7Q10 and 1Q10 for the stream and the net tidal flow. The results of the RP can be found in Attachment B to this document.

The permittee submitted three (3) Priority Pollutant scans (November 2014, April 2015, and July 2015) with the permit application. The reasonable potential analysis is discussed below.

Non-Metals:

The constituent bis(2-ethylhexyl)phthalate was detected in the November 2014 priority pollutant scan. Based upon the evaluation of the priority pollutant scan, the instream concentration for the pollutant was greater than 50% of the applicable instream criteria.

In accordance with EPD reasonable potential procedures, effluent monitoring for bis(2-ethylhexyl)phthalate has been added to the draft permit. Refer to Parts I.B. and I.C.11.

After EPD has received at least ten (10) months of monitoring data from the permittee, EPD will evaluate the need for a limit for this pollutant:

- If it is determined that bis(2-ethylhexyl)phthalate is present in the effluent at levels of concern, EPD may modify the permit to include a limit for this pollutant.
- If it is demonstrated that bis(2-ethylhexyl)phthalate in the effluent has no potential to cause or contribute to a water quality standards violation in the receiving stream, EPD will notify the permittee in writing to allow the City to cease sampling for bis(2-ethylhexyl)phthalate.

Metals:

Copper and lead were detected in the November 2014 priority pollutant scan submitted to EPD. Based upon the evaluation of this priority pollutant scan, the instream concentrations for the pollutants were not greater than 50% of the applicable instream criteria. Therefore, there is no reasonable potential for the pollutants to cause or contribute to a water quality standards violation in the receiving stream based on a stream hardness of 25 mg/L.

B.1. Priority Pollutants

The permittee must conduct three scans of the priority pollutants during the first year after issuance of this permit, with the first test being conducted within 90 days of the effective date of the permit. The priority pollutant scans must be measured at least to EPD detection limits and must represent seasonal variation. If substances are measured at levels of concern, then the permittee may be

required to perform additional priority pollutant analyses or the permit may be modified to include effluent limitations for priority pollutants.

Sampling type (grab or composite) must be in accordance with the approved analytical method. EPA Method 1631E must be used for Total Recoverable Mercury analyses. The sample for Total Recoverable Mercury must be collected as a grab sample.

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

B.2. Priority Pollutants

The permittee must conduct three scans of the priority pollutants during the first year after receiving EPD written authorization to commence operation under the B.2. effluent limitations (4.0 MGD), with the first test being conducted within 90 days of this authorization. The priority pollutant scans must be measured at least to EPD detection limits and must represent seasonal variation. If substances are measured at levels of concern, then the permittee may be required to perform additional priority pollutant analyses or the permit may be modified to include effluent limitations for priority pollutants.

Sampling type (grab or composite) must be in accordance with the approved analytical method. EPA Method 1631E must be used for Total Recoverable Mercury analyses. The sample for Total Recoverable Mercury must be collected as a grab sample.

If pollutants are present at levels of concern, the permit may be modified to include additional monitoring and/or a limit. Refer to Part I.C.12. of the draft permit.

b) Whole Effluent Toxicity Testing

Chronic WET testing measures the effect of wastewater on indicator organisms' growth, reproduction and survival. Effluent toxicity is predicted when the No Observable Effect Concentration (NOEC) for a test organism is less than the facility's Instream Wastewater Concentration. WET tests also require a measure of test sensitivity known as the Percent Minimum Significant Difference (PMSD). See Table 6 below from Section 10.2.8.3 p.52 of EPA 821-R-02-013 for PMSD variability criteria.

TABLE 6. VARIABILITY CRITERIA (UPPER AND LOWER PMSD BOUNDS) FOR SUBLETHAL HYPOTHESIS TESTING ENDPOINTS SUBMITTED UNDER NPDES PERMITS.1			
Test Method	Endpoint	Lower PMSD Bound	Upper PMSD Bound
<i>Method 1000.0 Fathead Minnow Larval Survival & Growth Tests</i>	Growth	12	30
<i>Method 1002.0 Ceriodaphnia dubia (C. dubia) Survival and Reproduction Test</i>	Reproduction	13	47
<i>Method 1006.0, Inland Silverside Larval Survival and Growth Test</i>	Growth	11	28
<i>Method 1007.0, Mysidopsis bahia Survival, Growth, and Fecundity Test</i>	Growth	11	37

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

PMSD must be calculated for each species tested as follows:

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

EPD evaluates WET tests submitted to determine whether toxicity has been demonstrated. The effluent discharge for the City of Richmond Hill - Sterling Creek WRF will not be considered toxic if the NOEC is greater than or equal to the Instream Wastewater Concentration (IWC) of 68% for the 3.0 MGD discharge or 74% for the 4.0 MGD discharge. 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. Refer to Attachment D for the IWC calculations.

Results analysis:

The permittee submitted the results of four (4) WET tests with the application. Sampling was conducted June 2013, March 2014, June 2014, and September 2014. Below are the results for each individual WET test. See Attachment C for details of the PMSD and NOEC values for each test.

- i. In WET test #1 (June 2013), the PMSD for *P. promelas* survival and growth (12.66%) was within EPA's Test Variability Criteria. The PMSD for the *C. dubia* survival and reproduction (12.16%) was slightly lower than EPA's Test Variability Criteria. Such tests should be considered sufficiently sensitive to detect toxic effects on growth or reproduction.

The reported NOEC for *P. promelas* and *C. dubia* was 93.1%, which is greater than or equal to the facility's NOEC (53%). Therefore, chronic toxicity of the facility's effluent was not present. Even though the PMSD is lower than the lower bound variability for the *C. dubia*, toxicity is not present in the effluent. Therefore, chronic toxicity is not predicted.

However, the permittee used the incorrect species when evaluating the toxicity; therefore, the WET Test should be repeated using the appropriate marine species for tidally influenced receiving streams.

- ii. In WET test #2 (March 2014), the PMSDs for Inland Silverside survival and growth (8.99%) and Mysid survival and growth (6.55%) were both slightly lower than EPA's Test Variability Criteria. The reported NOEC for Inland Silverside and Mysid was 91%, which is greater than or equal to the facility's NOEC. Even though the PMSD is lower than the lower bound variability for the species, toxicity is not present in the effluent. Therefore, chronic toxicity is not predicted and the WET test is valid.
- iii. In WET test #3 (June 2014), the PMSDs for Inland Silverside survival and growth (7.94%) and Mysid survival and growth (6.55%) were both slightly lower than EPA's Test Variability Criteria. The reported NOEC for Inland Silverside and Mysid was 91%, which is greater than or equal to the facility's NOEC. Even though the PMSD is lower than the lower bound variability for the species, toxicity is not present in the effluent. Therefore, chronic toxicity is not predicted and the WET test is valid.
- iv. In WET test #4 (September 2014), the PMSDs for Inland Silverside survival and growth (10%) and Mysid survival and growth (6.50%) were both slightly lower than EPA's Test Variability Criteria. The reported NOEC for Inland Silverside and Mysid was 51%, which is not greater than or equal to the facility's NOEC. Even though the PMSD is lower than the lower bound variability for the species, toxicity is present in the effluent. Therefore, chronic toxicity is predicted and the WET test failed.

Proposed WET limit and monitoring:

Since the WET test completed in September 2014 failed and the City must repeat WET test #1 with the correct species, a requirement to conduct quarterly chronic WET tests has been included in the draft permit, with the first test to be conducted within ninety (90) days of the effective date of the permit. The permittee must demonstrate that the No Observed Effect Concentration (NOEC) is greater than or equal to the Instream Wastewater Concentration (IWC).

The testing must include the most current U.S. Environmental Protection Agency (EPA) chronic aquatic toxicity testing manuals. The referenced document is entitled Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, 3rd Edition, U.S. EPA, 821-R-02-014, October 2002. Definitive tests must be run on the same samples concurrently using both *Menidia beryllina* (i.e., inland silverside) and *Mysidopsis bahia* (i.e., mysid) and should include a dilution equal to the facility's IWC.

EPD will evaluate the WET tests submitted to determine whether toxicity has been demonstrated. If effluent toxicity is exhibited (i.e., NOEC < IWC), the permittee may be required to submit a toxicity reduction evaluation and/or the permit may be modified to include chronic WET effluent limitations.

If results from four (4) consecutive quarterly tests show that the NOEC \geq IWC, the permittee may request the monitoring frequency to be decreased. Upon review of monitoring results, EPD will notify the permittee in writing to decrease the monitoring frequency from quarterly to annually, without further public notice. Refer to Part I.C.10. of the draft permit.

EPD is now including annual WET monitoring for all facilities with a permitted

discharge of 1.0 MGD or greater. Therefore, annual WET testing will be included in the permit once the permittee receives authorization from EPD that the WET monitoring is reduced in frequency from quarterly to annually.

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

3.4 Permit Requirements Based on EPD Policy

a) Long-Term BOD

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; therefore, long-term BOD testing has been included in the draft permit (Refer to Part I.C.9.). This information is needed for future modeling.

b) Watershed Protection Plan (WPP)

The City of Richmond Hill has an approved watershed assessment and watershed protection plan. The WPP was approved on November 20, 2012. The approved WPP is enforceable through this permit. Refer to Part I.C.8.

c) Total Residual Chlorine (TRC)

The facility currently uses ultraviolet (UV) for disinfection; therefore, a total residual chlorine limit has not been included in the permit.

3.5 Other Permit Requirements and Considerations

a) Ammonia

The permit contains ammonia effluent limitations that comply with U.S. EPA's 2013 Ammonia Toxicity Criteria. The ammonia effluent limitations are more stringent than those in the current permit.

Effluent Limitations Page	Flow Rate (MGD)	Month	Ammonia (mg/L)
B.1.	3.0	May - October	1.0
		November - April	1.1
B.2.	4.0	May - October	0.9
		November - April	1.0

b) pH

EPD's policy for pH is that if the Instream Wastewater Concentration (IWC) is greater than 50%, the pH limits are 6.0 – 8.5 standard units.

The IWCs for all the effluent flow rates are greater than 50% (Refer to page 9 of this Fact Sheet); therefore, the pH effluent limitations should be 6.0 – 8.5 standard units. However, the upper pH limits were lowered to 8.0 in order to reduce the potential for ammonia toxicity.

c) Fecal Coliform Bacteria

Discharge:

The effluent monthly average fecal coliform bacteria permit limit is 200 colonies per 100 milliliters according to the EPD's permitting guideline for fecal coliform bacteria. The compliance monitoring point for fecal coliform bacteria will be after the aerated pond and before the discharge.

Reuse:

The effluent monthly average fecal coliform bacteria permit limit for the 1.0 MGD urban water reuse is 23 colonies per 100 milliliters according to EPD's permitting guidelines for Water Reclamation and Urban Water Reuse.

d) Carbonaceous Biochemical Oxygen Demand (CBOD₅)

Under the B.1. and B.2. effluent limitations, the permit has limits for carbonaceous biochemical oxygen demand (CBOD₅) at the request of the permittee.

e) Total Phosphorus

For the discharge to Elbow Swamp, nutrients monitoring is required. According to the Strategy for addressing Phosphorus Loadings in State Waters, once standards are set, permits will be revised to include upcoming requirements. The City has elected to opt out of numerical permit limits until nutrient standards have been developed. Permittees that opt out of the proactive limits will be expected to meet the resulting nutrient permit limits very quickly, and should not expect to be placed on an extended schedule to come into compliance.

f) Ortho-Phosphorus, Organic Nitrogen, Nitrate-Nitrite & Total Kjeldahl Nitrogen (TKN) Monitoring

EPD is currently requiring all facilities to monitor for ortho-phosphorus, organic nitrogen, nitrate-nitrite, and TKN for stream modeling purposes. It has been determined that results from 12 samples per year (one per month) are sufficient for organic nitrogen, nitrate-nitrite, and TKN. Ortho-phosphorus should be sampled three times per week and analyzed from the sample of Total Phosphorus. Monitoring requirements have been included in the draft permit. The results will be used for nutrient criteria development.

g) Industrial Pre-treatment Program (IPP)

The City of Richmond Hill does not have an approved IPP. Refer to Part III of the permit.

h) Sludge Management Plan (SMP)

The City of Richmond Hill does not have an approved SMP. Biosolids are sent to Superior Landfill in Savannah, GA for disposal.

i) Service Delivery Strategy

The City of Richmond Hill is in compliance with the Department of Community Affairs approved Service Delivery Strategy.

j) Anti-Backsliding

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

4. REPORTING

On December 21, 2015, the U.S. Environmental Protection Agency (EPA) promulgated the NPDES Electronic Reporting Rule (E-Rule) in 40 CFR 127 to modernize Clean Water Act reporting for municipalities, industries, and other facilities by converting to electronic data reporting systems (NetDMR & NeT) for NPDES permits instead of submitting written paper reports such as your Discharge Monitoring Reports (DMRs). In accordance with 40 CFR 122.41(l)(4)(i), as of December 21, 2016, the DMR and supporting documents for the facility must be electronically using the NetDMR system.

The facility has been assigned to the following EPD office for reporting, compliance and enforcement. Signed copies of all required reports in Part I.D.3 of the permit shall be submitted to the following address:

Georgia Environmental Protection Division
Coastal District – Brunswick Office
400 Commerce Center Drive
Brunswick, Georgia 31523

5. REQUESTED VARIANCES OR ALTERNATIVES TO REQUIRED STANDARDS

Not applicable

6. EFFECTIVE DATE OF PROPOSED EFFLUENT LIMITS AND COMPLIANCE SCHEDULE

The effluent limitations will become effective immediately upon the effective date of this permit.

7. PERMIT EXPIRATION

The permit will expire five years from the effective date.

8. **SPECIFIC WATER QUALITY CRITERIA FOR CLASSIFIED WATER USAGE**
[391-3-6-.03(6)]

Fishing

1. 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.
2. pH - Within the range of 6.0 to 8.5.
3. Bacteria - 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.
4. 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.
5. Toxic Wastes, Other Deleterious Materials - None in concentrations that would harm man, fish, and game or other beneficial aquatic life.

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

9.1 **Comment Period**

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

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

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 the person listed as the technical contact above at 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 EPD.comments@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 NPDES 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:

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

PERMIT No. GA0037648

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

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 Richmond Hill
P.O. Box 250
Richmond Hill, Georgia 31324

is authorized to discharge from a facility located at

Sterling Creek Water Reclamation Facility
1701 Elbow Swamp Road
Richmond Hill, Georgia 31324
(Bryan County)

to receiving waters

Elbow Swamp to Sterling Creek tributary
(Ogeechee 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 July 27, 2015, 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.



Issued this XX day of XXXXX, 20XX.

DRAFT

Director,
Environmental Protection Division

- c. Denial of a permit renewal application.

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.

2. RIGHT OF 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.

3. SUBMITTAL OF 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. If the permittee determines that any relevant facts were not included in a permit application or that incorrect information was submitted in a permit application or in any report to the EPD, the permittee shall promptly submit the additional or corrected information.

4. TRANSFER OF OWNERSHIP OR CONTROL

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.

5. 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.

6. PERMIT MODIFICATION

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.

7. CIVIL AND CRIMINAL LIABILITY

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

8. 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.

9. EXPIRATION OF PERMIT

The permittee shall submit an application for permit reissuance at least 180 days before the expiration date of this permit. The permittee shall not discharge after the permit expiration date without written authorization from the EPD. To receive this authorization, the permittee shall submit the information, forms, and fees required by the EPD no later than 180 days before the expiration date.

10. 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.

11. 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.

12. PREVIOUS PERMITS

All previous State water quality permits issued to this facility for construction or operation are revoked by the issuance of this permit. The permit governs discharges from this facility under the National Pollutant Discharge Elimination System (NPDES).

DRAFT

PART III

INDUSTRIAL PRETREATMENT PROGRAM FOR PUBLICLY OWNED TREATMENT WORKS (POTW)

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

DRAFT

ATTACHMENT B COASTAL AND MARINE ESTUARINE

City of Richmond Hill - Sterling Creek WRF

NPDES Permit No. GA0037648

Stream Data:

Receiving stream Hardness:	25	mg/L
Upstream TSS:	10	mg/L
7Q10:	2.1	ft ³ /s
	1,357,171	gal/day
1Q10:	0.00	ft ³ /s
	0	gal/day

Effluent Data:

Flow	1,500,000	gal/day
TSS	6.08	mg/L
Instream TSS:	7.94	mg/L
Acute Dilution factor:	1.00	
Chronic Dilution factor:	1.90	

Water Quality Criteria:

Mean annual streamflow at discharge:	16.00	ft ³ /s
	10,340,352	gal/day
Dilution factor:	7.894	
IWC:	52.5	%

$$IWC = \frac{\text{Flow (gal/day)}}{\text{Flow (gal/day)} + 7Q10 \text{ (gal/day)}}$$

Acute Water Quality Criteria (WQC_{Acute})

Metal	K _{PO}	α	f _D	Maximum effluent C _T (μg/L)	Instream C _D (μg/L)	WQC _{Acute} (μg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00	0.00	0.00	69.00	no
Cadmium	4.00.E+06	-1.131	0.000	0.00	0.00	40.00	no
Chromium VI	3.36.E+06	-0.930	0.00	0.00	0.00	1100.00	no
Copper	1.04.E+06	-0.744	0.36	7.21	2.60	2.40	yes
Lead	3.10.E+06	-0.186	0.06	2.35	0.13	130.00	no
Mercury	NA	NA	NA	0.00875	NA	NA	NA
Nickel	4.90.E+05	-0.572	0.00	0.00	0.0	74.00	no
Silver	NA	NA	NA	0.00	NA	NA	NA
Zinc	1.25.E+06	-0.704	0.00	0.00	0.0	90.00	no

$$\text{Acute Dilution Factor} = \frac{1Q10 \left(\frac{\text{gal}}{\text{day}}\right) + \text{Flow} \left(\frac{\text{gal}}{\text{day}}\right)}{\text{Flow} \left(\frac{\text{gal}}{\text{day}}\right)}$$

← Non numerical standard

← Non numerical standard

Chronic Water Quality Criteria (WQC_{Chronic})

Metal	K _{PO}	α	f _D	Average effluent C _T (μg/L)	Instream C _D (μg/L)	WQC _{Chronic} (μg/L)	Action needed?
Arsenic	4.80.E+05	-0.729	0.00	0.00	0.0	36.00	no
Cadmium	4.00.E+06	-1.131	0.000	0.00	0.0	8.80	no
Chromium VI	3.36.E+06	-0.930	0.00	0.00	0.0	50.00	no
Copper	1.04.E+06	-0.744	0.36	2.40	0.5	2.40	no
Lead	3.10.E+06	-0.186	0.06	0.78	0.0	5.30	no
Mercury	2.91.E+06	-1.136	0.31	0.00457	0.0	0.025	no
Nickel	4.90.E+05	-0.572	0.00	0.00	0.0	8.20	no
Silver	NA	NA	NA	0.00	NA	NA	NA
Zinc	1.25.E+06	-0.704	0.00	0.00	0.0	81.00	no

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

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

$$\text{Chronic Dilution Factor} = \frac{7Q10 \left(\frac{\text{gal}}{\text{day}}\right) + \text{Flow} \left(\frac{\text{gal}}{\text{day}}\right)}{\text{Flow} \left(\frac{\text{gal}}{\text{day}}\right)}$$

← Non numerical standard

Total Recoverable Effluent Limit

Metal	C _S (μg/L)	Chronic C _T (μg/L)	Chronic C _T (Kg/day)	Acute C _T (μg/L)	Acute C _T (Kg/day)
Arsenic	0.0	N/A	N/A	N/A	N/A
Cadmium	0.0	N/A	N/A	N/A	N/A
Chromium VI	0.0	N/A	N/A	N/A	N/A
Copper	0.0	N/A	N/A	6.65	0.038
Lead	0.0	N/A	N/A	N/A	N/A
Mercury	0.0	N/A	N/A	N/A	N/A
Nickel	0.0	N/A	N/A	N/A	N/A
Silver	0.0	N/A	N/A	N/A	N/A
Zinc	0.0	N/A	N/A	N/A	N/A

NOTES:

- (1) Chronic and acute total recoverable metal effluent concentration (C_T) from EPA 823-B-96-007, June 1996, page 33:
 (2) Assuming background dissolved metal concentration (C_S) in the stream is 0 μg/L, equations above become:

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

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

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

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

Water Quality Criteria (WQC)

Nonmetal	Maximum effluent C _T (μg/L)	Instream Concentration (μg/L)	WQC (μg/L)	WQC/2 (μg/L)	Action needed?
Bis(2-Ethylhexyl)Phthalate	21.8	2.76	2.20	1.1	yes

$$\text{Dilution Factor} = \frac{\text{Mean annual streamflow at discharge} \left(\frac{\text{gal}}{\text{day}}\right) + \text{Flow} \left(\frac{\text{gal}}{\text{day}}\right)}{\text{Flow} \left(\frac{\text{gal}}{\text{day}}\right)}$$

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 in the effluent and it will not be included in the permit.
 *If the calculated instream concentration is 50% or more of the instream water quality criteria, then a permit limit for that constituent will be placed in the permit.

ATTACHMENT C

City of Richmond Hill- Sterling Creek WRF NPDES Permit No. GA0037648

WET TEST PMSD Values

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

TABLE 6. VARIABILITY CRITERIA (UPPER AND LOWER PMSD BOUNDS) FOR SUBLETHAL HYPOTHESIS TESTING ENDPOINTS SUBMITTED UNDER NPDES PERMITS. ¹			
Test Method	Endpoint	Lower PMSD Bound	Upper PMSD Bound
<i>Method 1000.0 Fathead Minnow Larval Survival & Growth Tests</i>	Growth	12	30
<i>Method 1002.0 Ceriodaphnia dubia (C. dubia) Survival and Reproduction Test</i>	Reproduction	13	47
<i>Method 1006.0, Inland Silverside Larval Survival and Growth Test</i>	Growth	11	28
<i>Method 1007.0, Mysidopsis bahia Survival, Growth, and Fecundity Test</i>	Growth	11	37
¹ Lower and upper PMSD bounds were determined from the 10 th and 90 th percentile, respectively, of PMSD data from EPA's WET Interlaboratory Variability Study (USEPA, 2001a; USEPA, 2001b).			

Not toxic if:
NOEC ≥ IWC

WET Test #1 June 25, 2013

Species	MSD	Control Mean	PMSD	
Ceriodaphnia dubia (C. dubia)	2.420	19.90	12.16	Below
Fathead minnow (P. promelas)	0.058	0.458	12.66	Within

IWC= 53 %

Reported NOEC
93.1 % PASS
93.1 % PASS

WET Test #2 March 11, 2014

Species	MSD	Control Mean	PMSD	
Menidia beryllina (inland silverside)	0.049	0.545	8.99	Below
Mysidopsis bahia (mysid)	0.015	0.229	6.55	Below

*Wrong species used

Reported NOEC
91 % PASS
91 % PASS

WET Test #3 June 19, 2014

Species	MSD	Control Mean	PMSD	
Menidia beryllina (inland silverside)	0.044	0.554	7.94	Below
Mysidopsis bahia (mysid)	0.015	0.229	6.55	Below

Reported NOEC
91 % PASS
91 % PASS

WET Test #4 September 17, 2014

Species	MSD	Control Mean	PMSD	
Menidia beryllina (inland silverside)	--	--	10.00	Below
Mysidopsis bahia (mysid)	--	--	6.50	Below

Reported NOEC
51 % FAIL
51 % FAIL

ATTACHMENT D

City of Richmond Hill- Sterling Creek WRF NPDES Permit No. GA0037648

Instream Wastewater Concentration (IWC) Calculations:

$$IWC = \frac{Q_{Plant}}{Q_{Plant} + Q_{Stream}} \times 100 \quad \%$$

*Since this discharge is tidally influenced, the 7Q10 of the receiving stream is estimated to be 0 cfs. Therefore, the net tidal flow is used to determine the IWC instead of the 7Q10.

Permitted flow		Net Tidal Flow	Instream Wastewater Concentration
(MGD)	(cfs)	(cfs)	(%)
3.0	4.6	2.1	68.85

Permitted flow		Net Tidal Flow	Instream Wastewater Concentration
(MGD)	(cfs)	(cfs)	(%)
4.0	6.2	2.1	74.67

Receiving Water: Elbow Swamp to Sterling Creek tributary in the Ogeechee River Basin

PART I

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

The Federal Act referred to is The Clean Water Act.

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

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

A. SPECIAL CONDITIONS

1. MONITORING

The concentration of pollutants in the discharge will be limited as indicated by the table(s) labeled "Effluent Limitations and Monitoring Requirements." The effluent shall meet the requirements in the table(s) or the condition in paragraph I.A.1.a., whichever yields the higher quality effluent.

- a. For 5 day biochemical oxygen demand (BOD₅) and total suspended solids (TSS), the arithmetic mean of the values of the effluent samples collected during a month shall not exceed 15 percent of the arithmetic mean of values for influent samples collected at approximately the same times (85 percent removal). In accordance with Chapter 391-3-6-.06(4)(d) 2., of the State Rules, under certain conditions the 85 percent removal requirement may not be applicable, as specified in 40 CFR 133.

For 5 day carbonaceous biochemical oxygen demand (CBOD₅) and total suspended solids (TSS), the arithmetic mean of the values of the effluent samples collected during a month shall not exceed 15 percent of the arithmetic mean of values for influent samples collected at approximately the same times (85 percent removal). In accordance with Chapter 391-3-6-.06(4)(d) 2., of the State Rules, under certain conditions the 85 percent removal requirement may not be applicable, as specified in 40 CFR 133.

- b. The monthly average, other than for fecal coliform bacteria, is the arithmetic mean of values obtained for samples collected during a calendar month.
- c. The weekly average, other than for fecal coliform bacteria, is the arithmetic mean of values obtained for samples collected during a 7 day period. The week begins 12:00 midnight Saturday and ends at 12:00 midnight the following Saturday. To define a different starting time for the sampling period, the permittee must notify the EPD in writing. For reporting required by I.C.2. of this permit, a week that starts in one month and ends in another month shall be considered part of the second month. The permittee may calculate and report the weekly average as a 7 day moving average.
- d. Fecal coliform bacteria will be reported as the geometric mean of the values for the samples collected during the time periods in I.A.1.b. and I.A.1.c.
- e. 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.
- f. 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 chlorination with written EPD approval.

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

- i. If secondary flow instruments malfunction or fail to maintain calibration as required in I.A.1.h., the flow shall be computed from manual measurements taken at the times specified for the collection of composite samples.
- j. Some parameters must be analyzed to the detection limits specified by the EPD. These 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.C.2. of this permit. The quantity shall be

reported on a dry weight basis (dry tons).

Pond treatment systems are required to report the total quantity of sludge removed from the facility only during the months that sludge is removed.

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

The permittee must notify EPD of:

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

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

5. EFFLUENT TOXICITY AND BIOMONITORING REQUIREMENTS

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

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

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

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

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

6. URBAN WATER REUSE

a. DEFINITIONS

1. Designated User or User: any site or facility where reclaimed water is beneficially used under a contract with the permittee. User may also be defined as the customer to be supplied with reclaimed water who has a written user agreement with the permittee. In addition, a designated user may also be a purveyor that provides reclaimed water to other customers.
2. Non-restricted Access: landscaped areas where reclaimed wastewater is used for irrigation purposes and public access cannot be controlled and adequate buffer zones cannot be maintained. Reclaimed wastewater used to irrigate non-restricted access areas must be treated to advanced limits with disinfection.
3. Preapplication Treatment System: the wastewater treatment facility which reduces high strength organic waste to low levels prior to application to the sprayfield area. The preapplication treatment system can consist of a mechanical plant or a pond system.
4. Restricted Access: landscaped areas where reclaimed wastewater is used for irrigation purposes and public access is restricted to specific and controlled periods of time. Reclaimed wastewater used to irrigate restricted access areas must be pretreated to secondary levels and receive disinfection.
5. Sprayfield: the wetted area of the land application site, excluding the buffer zone.
6. Urban Water Reuse: the use of reclaimed water as a substitute for other water sources for the beneficial irrigation of areas that may be accessible to the public. This includes areas such as golf courses, residential and commercial landscaping, parks, athletic fields, roadway medians, and landscape impoundments.
7. Reject Water: treated wastewater that is diverted from reuse customers because it does not meet the 3 NTU turbidity criteria due to a disinfection system failure, or has to be diverted due to a failure to meet 100#/100 ml on a single fecal coliform test.

b. DESIGNATED USERS

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

c. USER AGREEMENT

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

B.1.a. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001

Discharge to Elbow Swamp:

The discharge from the water pollution control plant shall be limited and monitored by the permittee as follows upon issuance of the permit and continuing until permit expiration or until the EPD provides written approval of completion of construction of the 4.0 MGD upgrade and written authorization to commence operation under Part I.B.2. of the permit has been provided by EPD.

Parameters	Discharge limitations in mg/L (kg/day) unless otherwise specified		Monitoring Requirements		
	Monthly Average	Weekly Average	Measurement Frequency	Sample Type	Sample Location ⁽³⁾
Flow (MGD) ⁽¹⁾	3.0	3.75	Seven Days/Week	Continuous Recording	Effluent
Carbonaceous Biochemical Oxygen Demand, 5-Day	5.0 (56.9)	7.5 (71.0)	Three Days/Week	Composite	Influent & Effluent
Ammonia, as N			Three Days/Week	Composite	Effluent
May - October	1.0 (11.4)	1.5 (14.2)			
November – April	1.1 (12.5)	1.7 (15.6)			
Total Suspended Solids	20 (227)	30 (284)	Three Days/Week	Composite	Influent & Effluent
Fecal Coliform Bacteria (#/100mL)	200	400	Three Days/Week	Grab	Effluent
Total Phosphorus, as P ⁽²⁾	Report (Report)	Report (Report)	Three Days/Week	Composite	Effluent

(1) The total combined discharge to the receiving stream and to urban reuse customers shall not exceed 3.0 MGD on a monthly average or 4.0 MGD on a weekly average.

(2) Total Phosphorus and Ortho-Phosphorus shall be analyzed from the same sample.

(3) Influent refers to flow into the wastewater treatment plant.

Effluent refers to the sample location at the plant after the magnetic flow meter and cascade but prior to being pumped to Outfall 001.

Outfall 001-- Latitude: 31°54'14.11" N and Longitude: 81°18'44.38" W

(Effluent limitations continued on the next page)

B.1.a. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 (continued):

Parameters	Discharge limitations in mg/L (kg/day) unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location ⁽⁸⁾
pH, Minimum – Maximum (Standard Unit)	6.0 – 8.0	Seven Days/Week	Grab	Effluent
Dissolved Oxygen, daily minimum ⁽¹⁾	5.0	Seven Days/Week	Grab	Effluent
Ortho-Phosphorus ⁽²⁾	Report (Report)	One Day/Month	Composite	Effluent
Organic Nitrogen, as N ⁽³⁾	Report	One Day/Month	Composite	Effluent
Total Kjeldahl Nitrogen ⁽³⁾	Report	One Day/Month	Composite	Effluent
Nitrate-Nitrite ⁽³⁾	Report	One Day/Month	Composite	Effluent
Bis(2-ethylhexyl)phthalate ⁽⁶⁾	Report	See Below	Composite	Effluent
Whole Effluent Toxicity (WET) Test (%) ⁽⁵⁾	NOEC ≥ 68%	Quarterly	Composite	Effluent
Long Term Biochemical Oxygen Demand ⁽⁴⁾	Report	See Below	Report	Effluent
Priority Pollutants ⁽⁷⁾	Report	See Below	Grab	Effluent

⁽¹⁾ The Dissolved Oxygen shall be sampled at the outfall with the static aerator.

⁽²⁾ Total Phosphorus and Ortho-Phosphorus shall be analyzed from the same sample.

⁽³⁾ Organic Nitrogen, Total Kjeldahl Nitrogen, and Nitrate-Nitrite shall be analyzed from the same sample.

⁽⁴⁾ Refer to Part I.C.9. LONG-TERM BIOCHEMICAL OXYGEN DEMAND

⁽⁵⁾ Refer to Part I.C.10. CHRONIC WHOLE EFFLUENT TOXICITY

⁽⁶⁾ Refer to Part I.C.11. BIS(2-ETHLYHEXYL)PHTHALATE

⁽⁷⁾ Refer to Part I.C.12. PRIORITY POLLUTANTS

⁽⁸⁾ Effluent refers to the sample location at the plant after the magnetic flow meter and cascade but prior to being pumped to Outfall 001.

Outfall 001-- Latitude: 31°54'14.11" N and Longitude: 81°18'44.38" W

B.1.b. URBAN WATER REUSE:

The discharge from the mechanical treatment system shall not exceed 1.0 MGD on a monthly average or 1.25 MGD on a weekly average. For monitoring purposes, influent shall refer to the influent to the facility and effluent shall refer to the discharge from the mechanical preapplication treatment plant to the above ground storage tank. The mechanical preapplication treatment plant shall be monitored by the permittee for the parameters and at the frequency listed below:

Parameters	Discharge limitations in mg/L (kg/day) unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow (MGD) ⁽²⁾	1.0	Seven Days/Week	Continuous	Effluent
Carbonaceous Biochemical Oxygen Demand, 5-Day	5.0	Three Days/Week	Composite	Influent & Effluent
Total Suspended Solids	5.0	Three Days/Week	Composite	Influent & Effluent
Fecal Coliform Bacteria (#/100mL)	23	Seven Days/Week	Grab	Effluent
Turbidity (NTU) ⁽¹⁾	3	Seven Days/Week	Continuous	Effluent
Dissolved Oxygen, daily minimum	5.0	Seven Days/Week	Grab	Effluent

(1) Continuously recorded turbidity measurements of the discharge from the preapplication treatment plant, prior to filter disinfection, will be required. Reclaimed water exceeding 3 NTU is to be considered rejected water (Refer to Part I.A.6.a.7.)

(2) For 3.0 MGD, the total combined discharge to the receiving stream and to urban reuse customers shall not exceed 3.0 MGD on a monthly average or 4.0 MGD on a weekly average.

The permittee must keep records of the volume of reuse water provided to each of its customers. A sample shall be taken only when the reuse facility is in operation.

For monitoring purposes, daily shall represent any day that reuse water is provided to the Reuse System.

For monitoring purposes, effluent shall be defined as the discharge from the mechanical preapplication treatment plant to the above ground storage tank.

Reuse water shall not be allowed to overflow out of the constructed wetlands in accordance with the Wetlands Discharge Contingency Plan approved by EPD on June 1, 2016. This plan states that two (2) feet of freeboard at each staff gage in the wetlands will be maintained at all times and that the City will continually monitor the amount of water discharged to the wetlands.

B.2.a. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001

Discharge to Elbow Swamp:

The discharge from the water pollution control plant shall be limited and monitored by the permittee as follows effective on the date EPD provides written approval of completion of construction of the 4.0 MGD upgrade and written authorization to commence operation under Part I.B.2. of the permit has been provided by EPD and continuing until permit expiration.

Parameters	Discharge limitations in mg/L (kg/day) unless otherwise specified		Monitoring Requirements		
	Monthly Average	Weekly Average	Measurement Frequency	Sample Type	Sample Location ⁽³⁾
Flow (MGD) ⁽¹⁾	4.0	5.0	Seven Days/Week	Continuous Recording	Effluent
Carbonaceous Biochemical Oxygen Demand, 5-Day	5.0 (75.8)	7.5 (94.8)	Three Days/Week	Composite	Influent & Effluent
Ammonia, as N			Three Days/Week	Composite	Effluent
May - October	0.9 (13.6)	1.4 (17.1)			
November - April	1.0 (15.2)	1.5 (19.0)			
Total Suspended Solids	20 (303)	30 (379)	Three Days/Week	Composite	Influent & Effluent
Fecal Coliform Bacteria (#/100mL)	200	400	Three Days/Week	Grab	Effluent
Total Phosphorus, as P ^{(2) (3)}	Report (Report)	Report (Report)	Three Days/Week	Composite	Effluent

⁽¹⁾ The total combined discharge to the receiving stream and to urban reuse customers shall not exceed 4.0 MGD on a monthly average or 5.0 MGD on a weekly average.

⁽²⁾ Total Phosphorus and Ortho-Phosphorus shall be analyzed from the same sample.

⁽³⁾ Influent refers to flow into the wastewater treatment plant.

Effluent refers to the sample location at the plant after the magnetic flow meter and cascade but prior to being pumped to Outfall 001.

Outfall 001-- Latitude: 31°54'14.11" N and Longitude: 81°18'44.38" W

(Effluent limitations continued on the next page)

B.2.a. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS: OUTFALL 001 (continued):

Parameters	Discharge limitations in mg/L (kg/day) unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location ⁽⁷⁾
pH, Minimum – Maximum (Standard Unit)	6.0 – 8.0	Seven Days/Week	Grab	Effluent
Dissolved Oxygen, daily minimum ⁽¹⁾	5.0	Seven Days/Week	Grab	Effluent
Ortho-Phosphorus ⁽²⁾	Report (Report)	One Day/Month	Composite	Effluent
Organic Nitrogen, as N ⁽³⁾	Report	One Day/Month	Composite	Effluent
Total Kjeldahl Nitrogen ⁽³⁾	Report	One Day/Month	Composite	Effluent
Nitrate-Nitrite ⁽³⁾	Report	One Day/Month	Composite	Effluent
Whole Effluent Toxicity (WET) Test (%) ⁽⁵⁾	Report IWC	Quarterly	Composite	Effluent
Long Term Biochemical Oxygen Demand ⁽⁴⁾	Report	See Below	Report	Effluent
Priority Pollutants ⁽⁶⁾	Report	See Below	Grab	Effluent

⁽¹⁾ The Dissolved Oxygen shall be sampled at the outfall with the static aerator.

⁽²⁾ Total Phosphorus and Ortho-Phosphorus shall be analyzed from the same sample.

⁽³⁾ Organic Nitrogen, Total Kjeldahl Nitrogen, and Nitrate-Nitrite shall be analyzed from the same sample.

⁽⁴⁾ Refer to Part I.C.9. LONG-TERM BIOCHEMICAL OXYGEN DEMAND

⁽⁵⁾ Refer to Part I.C.10. CHRONIC WHOLE EFFLUENT TOXICITY

⁽⁶⁾ Refer to Part I.C.12. PRIORITY POLLUTANTS

⁽⁷⁾ Effluent refers to the sample location at the plant after the magnetic flow meter and cascade but prior to being pumped to Outfall 001.

Outfall 001-- Latitude: 31°54'14.11" N and Longitude: 81°18'44.38" W

B.2.b. URBAN WATER REUSE:

The discharge from the mechanical treatment system shall not exceed 1.0 MGD on a monthly average or 1.25 MGD on a weekly average. For monitoring purposes, influent shall refer to the influent to the facility and effluent shall refer to the discharge from the mechanical preapplication treatment plant to the above ground storage tank. The mechanical preapplication treatment plant shall be monitored by the permittee for the parameters and at the frequency listed below:

Parameters	Discharge limitations in mg/L (kg/day) unless otherwise specified	Monitoring Requirements		
		Measurement Frequency	Sample Type	Sample Location
Flow (MGD) ⁽²⁾	1.0	Seven Days/Week	Continuous	Effluent
Carbonaceous Biochemical Oxygen Demand, 5-Day	5.0	Three Days/Week	Composite	Influent & Effluent
Total Suspended Solids	5.0	Three Days/Week	Composite	Influent & Effluent
Fecal Coliform Bacteria (#/100mL)	23	Seven Days/Week	Grab	Effluent
Turbidity (NTU) ⁽¹⁾	3	Seven Days/Week	Continuous	Effluent
Dissolved Oxygen, daily minimum	5.0	Seven Days/Week	Grab	Effluent

- (1) Continuously recorded turbidity measurements of the discharge from the preapplication treatment plant, prior to filter disinfection, will be required. Reclaimed water exceeding 3 NTU is to be considered rejected water (Refer to Part I.A.6.a.7.).
- (2) For 4.0 MGD, the total combined discharge to the receiving stream and to urban reuse customers shall not exceed 4.0 MGD on a monthly average or 5.0 MGD on a weekly average.

The permittee must keep records of the volume of reuse water provided to each of its customers. A sample shall be taken only when the reuse facility is in operation.

For monitoring purposes, daily shall represent any day that reuse water is provided to the Reuse System.

For monitoring purposes, effluent shall be defined as the discharge from the mechanical preapplication treatment plant to the above ground storage tank.

Reuse water shall not be allowed to overflow out of the constructed wetlands in accordance with the Wetlands Discharge Contingency Plan approved by EPD on June 1, 2016. This plan states that two (2) feet of freeboard at each staff gage in the wetlands will be maintained at all times and that the City will continually monitor the amount of water discharged to the wetlands.

C. MONITORING

1. REPRESENTATIVE SAMPLING

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

2. SAMPLING PERIOD

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

3. MONITORING PROCEDURES

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

4. RECORDING OF RESULTS

For each required parameter analyzed, the permittee shall record:

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

5. ADDITIONAL MONITORING BY PERMITTEE

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

6. RECORDS RETENTION

The permittee shall retain records of:

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

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

7. PENALTIES

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

8. WATERSHED PROTECTION PLAN

The permittee has a watershed protection plan that has been approved by EPD. The permittee's approved watershed protection plan shall be enforceable through this permit. Each June 30th the permittee is to submit the following to EPD:

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

9. 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 provided to EPD prior to renewal of the permit.

10. B.1. CHRONIC WHOLE EFFLUENT TOXICITY

Upon the effective date of the permit, the permittee shall begin conducting quarterly chronic whole effluent toxicity (WET) tests. The testing must include the most current U.S. Environmental Protection Agency (EPA) chronic aquatic toxicity testing manuals. The referenced document is entitled Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, 3rd Edition, U.S. EPA, 821-R-02-014, October 2002. Definitive tests must be run on the same samples concurrently using both *Menidia beryllina* (i.e., inland silverside) and *Mysidopsis bahia* (i.e., mysid) and should include a dilution equal to the facility's instream wastewater concentration of 68%.

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 68%.

If the test results indicate effluent toxicity (i.e., $NOEC < IWC$), the permittee may be required to submit a toxicity reduction evaluation and/or the permit may be modified to incorporate a WET limit.

If results from four consecutive quarterly tests show that the $NOEC \geq IWC$, the permittee may request the monitoring frequency be decreased. Upon review of monitoring results, EPD will notify the permittee in writing to decrease the monitoring frequency from quarterly to annually.

B.2. CHRONIC WHOLE EFFLUENT TOXICITY

The permittee shall conduct annual chronic Whole Effluent Toxicity (WET) tests. The testing must include the most current U.S. Environmental Protection Agency (EPA) chronic aquatic toxicity testing manuals. The referenced document is entitled Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms, 3rd Edition, U.S. EPA, 821-R-02-014, October 2002. Definitive tests must be run on the same samples concurrently using both *Menidia beryllina* (i.e., inland silverside) and *Mysidopsis bahia* (i.e., mysid) and should include a dilution equal to the facility's instream wastewater concentration of 74%.

If the test results indicate effluent toxicity, the permittee may be required to perform additional WET tests, and/or to submit a toxicity reduction evaluation upon notification by the EPD and/or the permit may be reopened to incorporate a WET limit.

11. BIS(2-ETHYLHEXYL)PHTHALATE

After EPD has received ten (10) months of bis(2-ethylhexyl)phthalate monitoring data from the permittee, 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 may reopen the permit to include a bis(2-ethylhexyl)phthalate limit. If it is determined that bis(2-ethylhexyl)phthalate in the effluent has, EPD shall notify the permittee in writing and remove the bis(2-ethylhexyl)phthalate monitoring requirements in Part I.B. of the permit.

12. B.1. PRIORITY POLLUTANTS

The permittee must conduct three scans of the priority pollutants during the first year, with the first test being conducted within 90 days of the effective date of the permit. The priority pollutant scans must be measured at least to EPD detection limits and 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 or the permit may be modified to include effluent limitations for priority pollutants.

B.2. PRIORITY POLLUTANTS

The permittee must conduct three scans of the priority pollutants during the first year after receiving EPD written authorization to commence operation under the B.2. effluent limitations (4.0 MGD), with the first test being conducted within 90 days of this authorization. The priority pollutant scans must be measured at least to EPD detection limits and 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 or the permit may be modified to include effluent limitations for priority pollutants.

D. REPORTING REQUIREMENTS

1. The permittee must electronically report the DMR, OMR and additional monitoring data using the web based electronic NetDMR reporting system, unless a waiver is granted by EPD.
 - a. The permittee must comply with the Federal National Pollutant Discharge Elimination System Electronic Reporting regulations in 40 CFR §127. The permittee must electronically report the DMR, OMR, and additional monitoring data using the web based electronic NetDMR reporting system online at: <https://netdmr.epa.gov/netdmr/public/home.htm>
 - b. Monitoring results obtained during the calendar month shall be summarized for each month and reported on the DMR. The results of each sampling event shall be reported on the OMR and submitted as an attachment to the DMR.
 - c. The permittee shall submit the DMR, OMR and additional monitoring data no later than 11:59 p.m. on the 15th day of the month following the sampling period.
 - d. All other reports required herein, unless otherwise stated, shall be submitted to the EPD Office listed on the permit issuance letter signed by the Director of EPD.
2. **No later than December 21, 2020**, the permittee must electronically report the following compliance monitoring data and reports using the online web based electronic system approved by EPD, unless a waiver is granted by EPD:
 - a. Sewage Sludge/Biosolids Annual Program Reports provided that the permittee has an approved Sewage Sludge (Biosolids) Plan;
 - b. Pretreatment Program Reports provided that the permittee has an approved Industrial Pretreatment Program;
 - 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."

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PART II

A. MANAGEMENT REQUIREMENTS

1. FACILITY OPERATION

The permittee shall 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. CHANGE IN DISCHARGE

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. NONCOMPLIANCE NOTIFICATION

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.

For reuse plants which do not have automatic diversion:

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

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. ADVERSE IMPACT

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 five (5) days (of the date of the spill or major spill), the owner of a POTW shall submit to EPD a written report which includes the same information required in 11(b)(1-4) above.
- f. Within 7 days (after the date of a major spill), the owner of a POTW responsible for the major spill, shall publish a notice in the largest legal organ of the County where the incident occurred. The notice shall include the same information required in 11(b)(1-4) above.
- g. The owner of a POTW shall immediately establish a monitoring program of the receiving waters affected by a major spill or by consistently exceeding an effluent limit, with such monitoring being at the expense of the POTW for at least one year. The monitoring program shall include an upstream sampling point as well as sufficient downstream locations to accurately characterize the impact of the major spill or the consistent exceedence of effluent limitations described in the definition of "Consistently exceeding effluent limitation" above. As a minimum, the following parameters shall be monitored in the receiving stream:
 1. Dissolved Oxygen;
 2. Fecal Coliform Bacteria;
 3. pH;
 4. Temperature; and
 5. Other parameters required by the EPD.

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

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

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

B. RESPONSIBILITIES

1. COMPLIANCE

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

- a. Enforcement action;
- b. Permit termination, revocation and reissuance, or modification; or