

National Pollutant Discharge Elimination System Wasteload Allocation Form

Part I: Background Information

WLA Request Type: Reissuance ☒ Expansion ☐ Relocation ☐ New Discharge ☐
 Facility Name: Ray City WPCP County: Berrien WQMU: 0904
 NPDES Permit No.: GA0033553 Expiration Date: 6/14/2017 Outfall Number: 001
 Receiving Water: Cat Creek River Basin: Suwannee 10-Digit HUC: 0311020303
 Discharge Type: Domestic ☒ Industrial ☐ Both ☐ Proportion (D:I): Flow(s) Requested (MGD): 0.1
 Industrial Contributions Type(s):
 Treatment Process Description: Influent bar screen, a three-celled aerated waste stabilization pond, chlorination and de-chlorination
 Additional Information: (history, special conditions, other facilities): Effluent limitations are based on the facility design. 1st reissuance WLA
 Requested by: Johanna Smith Title: EE Program: WRP
 Telephone: 404-656-6937 Date: 1/11/2017

Part II: Receiving Water Information

Receiving Water: Cat Creek to the Withlacoochee River Designated Use Classification: Fishing
 Integrated 305(b)/303(d) List: Yes ☒ No ☐ Support: ☐ Not Support: ☒ Criteria: Dissolved Oxygen
 Total Maximum Daily Load: Yes ☒ No ☐ Parameter(s): DO WLA Complies with TMDL Yes ☒ No ☐
 The Georgia EPD developed a TMDL for DO in the Suwannee River Basin in 2001, which recommended a 38% reduction in load allocations to nonpoint sources to meet natural water quality standard for Cat Creek. Facilities with a design flow of 0.1 MGD or less were not included in the TMDL WLAs.

Part III: Water Quality Model Review Information

Model Type: Uncalibrated ☐ Calibrated ☒ Verified ☐ Cannot be Modeled ☐ Model Length (mi): 8.3
 Field Data: None ☐ Fair ☒ Good ☐ Excellent ☐
 Model and Field Data Description: Steady-state dissolved oxygen Georgia DOSAG model
 Critical Water Temperature (°C): 28 Drainage Area (mi²): 42.8 Mean annual streamflow at discharge (cfs): 36.6
 7Q10 Yield (cfs/mi²): 0.002 Velocity (range fps): 0.33 30Q3 streamflow at discharge (cfs): 0.38
 Effluent Flow Rate (cfs): 0.15 IWC (%): 66 7Q10 streamflow at discharge (cfs): 0.078
 Slope (range - fpm): 4.7 - 6.0 K1: 0.15 / 0.02 K3: 0.4 K2: 2.8 - 3.6 1Q10 streamflow at discharge (cfs): 0.052
 SOD: 0.5 Escape Coef. (ft⁻¹): 0.11 f-Ratio BOD_u/BOD_s: 1.5 Background Hardness (as CaCO₃)(mg/L): 18
 The predicted minimum DO is 3.9 mg/L, occurring approximately 2.7 miles downstream from the discharge. The predicted natural DO at this location is 4.28 mg/L, with an allowable minimum DO of 3.85 mg/L (90 percent of the natural DO concentration) according to the Georgia EPD's DO permitting strategy.

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

Rationale: Same as current ☐ Revised ☒ New ☐
 Location: Cat Creek

Effluent Flow Rate (MGD)	BOD ₅	NH ₃ -N	DO (minimum)	TSS	TRC (daily max.)	Fecal Coliform (No./100ml)	pH (std. units)	Total Phosphorus Ortho-Phosphorus	TKN Nitrite - Nitrate Organic Nitrogen
0.10	30	Monitor	Monitor	90	0.02	200	6.0 - 8.5	Monitor	Monitor

Additional Comments:

- Priority pollutants permit limits, aquatic toxicity testing requirements, and other parameters required by categorical effluent guidelines are to be determined by WRP.
- When the instream wastewater concentration is 50% or greater, the effluent pH permit limit range of 6.0 to 8.5 standard units is recommended in accordance with the GA EPD's permitting guideline for effluent pH.
- Effluent monitoring for total phosphorus, ortho-phosphorus, TKN, nitrate-nitrite, and organic nitrogen are recommended. TKN, nitrate-nitrite, and organic nitrogen should be analyzed from the same effluent sample. Total phosphorus and ortho-phosphorus should be analyzed from the same effluent sample. Nutrient monitoring data will be used to determine nutrient speciation and the nutrient loads being discharged into waters entering Florida.
- To implement EPA's Aquatic Life Ambient Water Quality Criteria for Ammonia-Freshwater 2013 and the DO TMDL in the Suwannee River Basin, monitoring for the effluent ammonia and DO are recommended.

Prepared by: Lucy Sun *LS* Date: 4/11/2017 Reviewed by: Josh Welte *JW* Date: 12/28/17

Part V: Program Manager Comment

Elizabeth A. Booth
 Elizabeth Booth

Date: 4/12/17