



Richard E. Dunn, Director

Watershed Protection Branch
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404-463-1511

Persons who commented on
Draft NPDES Permit No. GA0036838

11/10/2020

**RE: EPD Response to Comments
Columbus Water Works
Combined Sewer System
NPDES Permit No. GA0036838**

Dear Sir/Madam:

Thank you for your comments regarding the permit issuance for the Columbus Water Works Combined Sewer System NPDES Permit. Attached is a summary of comments from the public and our responses to the issues raised. In addition, we have attached documents identifying the permit and fact sheet revisions documenting the changes made to the attached permit. We appreciate your interest in this matter.

After consideration of your comments, EPD has determined that the permit is protective of water quality standards and we have issued the permit.

If you have any questions, please contact Benoit Causse of my staff at 404-463-4958 or benoit.causse@dnr.ga.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Audra Dickson".

**Audra Dickson, Manager
Wastewater Regulatory Program**

AD/bsc
Attachment: Response to Comments

**Public Comments and EPD Responses on Draft NPDES Permit
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COMMENTS RECEIVED	EPD RESPONSE
<u>Sampling of the Minor CSS Discharges</u>	
1. It was never contemplated that the minor CSS structures would be monitored and they were therefore not designed to accommodate monitoring. The outfalls of several of the structures are under water in the River and are therefore inaccessible. Monitoring inside the structures would also be impracticable for many of them, which have no power available for lighting or other purposes—such as automatic samplers—and are underground enclosed spaces that require confined space entry procedures and are designed to be fully flooded, which make them unsafe for entry by persons and equipment needed to perform sampling during rain events. 2. Columbus understands and appreciates that additional data collected from areas in closer proximity to the CSS discharge points (i.e. “near-field”) may be beneficial to validate that water quality standards are being satisfied throughout the watershed. Accordingly, Columbus intends to propose a plan for EPD approval and incorporation into the final Permit for the collection of in-stream water quality data at various locations downstream of the CSO overflow discharges to confirm the magnitude, duration and frequency criteria of water quality standards are consistently being satisfied. 3. Monitoring requirements for the minor outfalls should be included in the permit.	EPD agrees that end-of-pipe monitoring of each minor outfall may be impracticable due to access concerns. However, Outfall 009 – 7th Street, which was included in the Columbus Water Works (CWW) evaluation as part of the Long-Term Control Plan, has been retained in the permit. To characterize the remaining minor outfalls, EPD has incorporated stream monitoring in the permit at the following locations: 1. Lake Oliver for background conditions; 2. below North Highlands Dam to capture water quality influences from Rocky Creek and Riverside stormwater; 3. 14th Street Bridge to capture water quality influences from 24th, 19th (Uptown Park), 16th, 15th, and 14th Street outfalls; 4. Trade Center to capture water quality influences from 12th, 11th, 9th, 7th Street outfalls, and Mill Creek; 5. Rotary Park to capture water quality influences from Golden Park, 5th Street, and Lumpkin Street outfalls; and 6. Above Upatoi Creek to capture water quality influences from all CSOs, urban tributaries, WWTPs. The above sampling locations will provide instream water quality data and characterize the impact of the discharges from the minor combined sewer outfalls on the receiving stream. The minor outfalls are designed to only discharge during peak rainfall events and during those events 0.63” per hour will be diverted to the major facilities for treatment. Therefore, it is very unlikely that a minor outfall will discharge when one or both of the major facilities is not online. Thus, the instream sampling should capture storm events that would include any minor discharges.

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2008 TMDL –Fecal Coliform Bacteria In the 2008 TMDL, Columbus Uptown Park and Columbus South Commons were assigned a wasteload allocation (“WLA”) for the stream segment in which the CSO discharges—i.e., “North Highland Dam to Upatoi Creek.” Specifically, the WLA was based on the CSO’s design flow and a fecal coliform concentration of 200 counts per 100 mL as a 30-day geometric mean. The WLA was never incorporated into the Columbus permit as a numeric effluent limitation. In 2014, impairment due to fecal coliform was removed from the 303(d) list for this segment because water quality standards for the pollutant were being (and continue to be) met. As background, the “North Highland Dam to Bull Creek” segment of the Chattahoochee River, which is the segment into which the CSS discharges, was put on the 303(d) list in 2002 because EPD concluded the segment was not meeting water quality standards for fecal coliform. EPD finalized a TMDL to address this impairment in January 2008 and revised the TMDL in November 2008. In 2014, six years after the 2008 amended TMDL was completed, the agency split the “North Highland Dam to Upatoi Creek” into two segments: “North Highland Dam to Bull Creek” (the segment into which the CSS discharges) and “Bull Creek to Upatoi Creek” (the segment immediately downstream). The agency removed fecal coliform as a cause of impairment for the “North Highland Dam to Bull Creek” segment because water quality criteria for fecal coliform had been, and continued to be, met for that segment. In other words, the segment was “delisted” with regard to fecal coliform. EPD simply does not have a legal basis for relying on the 2008 TMDL to incorporate an effluent limitation for fecal coliform because delisting the segment rendered the TMDL for fecal coliform, and the WLA included within it, no longer applicable.	In accordance with §122.44(d)(1)(ii) of the federal regulations, EPD considers all POTWs, Private and Institutional Developments, and CSO Control Facilities, discharging all or a portion of domestic sanitary wastewater, to have the reasonable potential to cause or contribute to instream water quality standard violations for bacteria, including fecal coliform and <i>E.coli</i>. EPD has determined these facilities discharge the conventional pollutant fecal coliform bacteria, wastewater treatment systems are consistently designed to treat fecal coliform bacteria, and fecal coliform bacterium are highly variable in the receiving stream after treatment. EPD does not consider dilution in our analysis as we don’t believe it’s appropriate for bacteria due to its inherent ability to reproduce in the receiving stream. In addition to the existing reasonable potential, under CWA Section 303(d), States are required to develop lists of impaired waters. Impaired waters are those that do not meet the water quality standards set for them, even after point sources of pollution have installed the minimum required levels of pollution control technology. In 2002, Georgia’s 305(b)/303(d) listed the Chattahoochee River between N Highland Dam to Upatoi Creek as partially supporting designated uses. Criterion violated included Fecal Coliform Bacteria and Fish Consumption Guidelines. The law requires that those jurisdictions (GA EPD) establish priority rankings for waters on their CWA section 303(d) list and develop a Total Maximum Daily Load (TMDL) for those waters. In 2008, a TMDL for Fecal Coliform Bacteria was approved to restore and maintain Water Quality Standards for Fecal Coliform Bacteria. Once a TMDL is approved, it remains in place to continue water quality

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COMMENTS RECEIVED	EPD RESPONSE
	protection, even though the assessed waterbody's category may be revised in the future. The NPDES regulations at § 40 CFR 122.44(d)(1)(vii)(B) require that NPDES permits include effluent limitations developed consistent with the assumptions and requirements of the Waste Load Allocation (WLA) that has been assigned to the discharge as part of an approved TMDL. Through the NPDES permitting process if it is determined that a point source discharge has a pollutant of concern, in this case the pollutant of concern is fecal coliform bacteria, and there is reasonable potential of discharging fecal coliform bacteria from the point sources at levels that may cause or contribute to instream water quality standard violations, an effluent limit is required in the permit. The major CSO Control Facilities are authorized by this NPDES permit to discharge from point source outfall nos. 002 and 012 partially treated domestic sanitary wastewater containing fecal coliform bacteria. In addition to the TMDL requiring fecal coliform effluent limits, EPD reviewed and analyzed effluent discharge data from both of the outfalls and determined that those discharges have the reasonable potential for fecal coliform bacteria to be present at levels that may cause or contribute to instream water quality standard violations, hence numeric effluent limits are appropriate and included in this permit. The effluent data evaluated is included in the permit file. On September 29, 2017, a draft permit was placed on public notice. The effluent limits in the draft permit were expressed as a cumulative count of fecal coliform over a period of 30 days (monthly loading) and were calculated assuming a continuous discharge from Outfall nos. 002 and 012. Since the facility is designed to discharge intermittently under specific wet weather conditions, it has been determined that the fecal coliform limits in the draft permit were inappropriate and did not meet

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	the requirements of the TMDL. EPD has updated the proposed permit to include the required fecal coliform bacteria limit allocated in the TMDL. Per the TMDL, the allowable loading is “flow (Q) times fecal coliform concentration of 200/100mL (30-day geometric mean).” The CSO facilities are engineered and designed to treat a specific volume of water based on historical and modeled data. As determined by the permittee and approved by EPD, the design storm event is defined as a rainfall event of 0.23 inches per hour with a one-hour duration. Discharges from any CSO facility are intermittent and variable in nature, again dependent on wet weather, hence a numeric permitted flow limit in the permit is inappropriate for the CSO facilities. Since the flow (Q) referenced in the TMDL is variable, it cannot be used in the calculation prescribed in the TMDL to determine the wasteload allocation for fecal coliform bacteria. Therefore, to implement the requirements of the TMDL a conservative limit of 200 #/100mL (30-day geometric mean) is required in the permit. This limit is also protective of the designated use of the receiving water body and of human health. Based upon the reasonable potential analysis and wasteload allocation in the TMDL, the permit has been revised to include a fecal coliform bacteria limit of 200 #/100mL for Outfall nos. 002 and 012. EPD’s implementation of the TMDL and corresponding numeric effluent limits of 200 #/100 mL has been reviewed and approved by U.S. EPA in a letter dated September 12, 2019. Refer to Appendix C of the Fact Sheet.

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The “Phase II permit requirements” EPD cites as a primary reason for requiring effluent limits and additional monitoring of minor CSS outfalls refers to the requirements for the development and approval of CSO permits that are detailed in EPA’s 1994 CSO Policy... The EPD statement that the new effluent limits and monitoring of minor CSS outfalls are required for Columbus to meet the Phase II permit requirements is contrary to previous statements by EPD and with previous permit requirements that suggest EPD approved compliance by Columbus with the Policy... For EPD to change this approach at this juncture without demonstrating that the previously approved Columbus LTCP is insufficient is a repudiation of the implicit agreement between the parties that Columbus’ compliance with the CSO Policy would be sufficient to satisfy the CWA because it had been proven to meet water quality standards. As demonstrated above, ongoing monitoring has proven water quality standards are being met and even demonstrated that the receiving water is not impaired. To change the requirements now, without a compelling reason to do so appears, in light of the evidence in the record, to be an arbitrary decision that is not needed to achieve compliance, and is manifestly unfair.	EPD is not changing its approach in addressing Phase II Permits, however additional information is needed to verify compliance with the CSO Control Policy. EPD is implementing the requirements of the TMDL in accordance with 40 CFR 122.44(d)(1)(vii)(B) and the CSO Control Policy which states that where water quality standards or the receiving waters designated uses are not met, a TMDL including a wasteload allocation and load allocation should be used to apportion pollution loads. The fecal coliform bacteria effluent limits are in accordance with the TMDL. In addition, the CSO Control Policy states that permittees are responsible for documenting the implementation of the nine minimum controls and implementing the long-term CSO control plan. As part of the post-construction compliance monitoring program, the CSO Control Policy states that the program should include a plan to be approved by the NPDES authority that details monitoring protocols to be followed including the necessary effluent and ambient monitoring and where appropriate other monitoring protocols such as biological assessments, whole effluent toxicity testing, and sediment sampling. The monitoring program is to verify compliance with water quality standards and protection of designated uses, as well as, ascertain the effectiveness of CSO Controls. Monitoring of individual minor outfalls with the exception of Outfall 009 – 7th Street is not required at this time; however specific ambient stream monitoring sites are included in the permit to help determine and characterize instream impacts. These additional instream sampling locations proposed by the permittee provide instream water quality data collected from areas in closer proximity to the CSS discharge points.

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COMMENTS RECEIVED	EPD RESPONSE
<u>Public Notice and Signage</u> The draft permit would add the following requirement regarding public notice: The permittee shall continue to implement a public notification process to inform citizens of when and where CSO discharges occur, ...include[ing] ... signs posted in clear view at the Combined Sewer Overflow Control Facilities' outfalls and at all public points of access to the receiving stream for at least the first half mile downstream of the Combined Sewer Overflow Control Facilities and the CSO WQCF outfalls. Columbus agrees it is important for the public to be aware of any potential for contact with harmful levels of bacteria and Columbus does not object to using permanent signage to inform the public that the Major CSOs are subject to discharge during certain rain events. Columbus believes, however, it would not be practicable to use signage—or any other form of notification—to notify the public after any <i>particular discharge</i> because, by the time the installation of the signs could be effected, the discharge will have already mixed with the river, been fully diluted, and have flowed downstream. Thus, any notification made after a discharge would be ineffective for warning the user of the River where a recent discharge may be. In other words, by the time a warning is transmitted, the contents of the discharge will be gone. Columbus will consider appropriate permanent signage in addition to or in lieu of what is already in place, plus other community education methods to explain to the public the impact the discharges may have on the River and its users. In any event, it should be understood that discharges will only occur during heavy rain events when it is less likely that people will be in the	EPD believes the public has the right to know where a NPDES Point Source Discharge is located. Chapter 391-3-6-.06(17) of the Georgia Rules and Regulations of the Water Quality Control Act (Rule) requires any person or entity that has been issued an NPDES permit by the Division for a point source discharge of treated process wastewater or treated domestic sewage to waters of the State to identify the outfall. Therefore, the “major” and “minor” outfalls should have a permanent sign posted to comply with the Rule. Part I.A.2.10 of the permit requires a public information program to inform the public of the occurrence of a combined sewer discharge consistent with the CSO Control Policy’s Nine Minimum Controls. While EPA’s guidance for the Nine Minimum Controls mentions posting temporary signs to meet this control, the draft permit does not require temporary signs to be posted when an overflow occurs. Other form of notification can be used including websites, newspaper, radio or TV announcements.

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River and, as Columbus has demonstrated, during these rain events, storm water from nonpoint sources impacts the water quality more than any CSO discharge.	
<u>Consistency with Other CSOs - Effluent Limits</u> It is important to the CSO program for all of the Georgia CSO permits to be consistent, at least when it comes to having effluent limits. This concept may make sense when uniformity is needed to enhance efficiency in issuing large numbers of permits for similar actions or when conditions at different permitted sites are so similar that having substantially different permit terms is indefensible. Here, however, neither is the case...For one, it [Columbus CSS] is the only system to use the demonstration approach under the CSO Policy. It also uses entirely different treatment methods for CSOs. There is simply no reason related to the design or efficacy of the Columbus system that militates in favor of it having similar permit requirements with other Georgia CSSs.	Comment noted. EPD also believes consistency in the CSO program is important where applicable and appropriate. EPD has taken into consideration CWW chose the demonstrative approach almost years 30 ago, hence permit language is site-specific and based on the permittee's demonstration. The proposed permit holds the permittee accountable for implementing CSO controls as planned and reflected in the Long-Term Control Plan.
<u>"Vulnerability" of Permit</u> Columbus stated EPA believes the Permit as currently written is vulnerable to challenges from outside groups. Vulnerability only exists when the permit is not legally defensible and environmentally appropriate for the situation. Columbus demonstrates that because the current permit is effective and has been so for 20 plus years, it is not vulnerable as it is currently issued, but that it may in fact be vulnerable if it issued as proposed because of the unnecessarily restrictive new conditions that would be added.	EPD agrees vulnerability exists when the permit is not legally defensible and environmentally appropriate for the situation. EPD believes the proposed permit as drafted with new restrictions will make the permit less vulnerable to challenge.

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COMMENTS RECEIVED		EPD RESPONSE
<u>Outfall #013</u>		
Weracoba Creek minor outfall #013 has been eliminated and therefore should be removed. This language appears in several areas in both the draft permit and the fact sheet.	Comment noted. The permit and fact sheet have been revised and Outfall #013 has been removed.	
<u>Treatment Facility Description</u>		
Description should be changed to read as follows: Flows to these minor outfalls are intercepted and transported to one of the two CSS treatment facilities by collector conduits having almost three times the capacity of the treatment facilities. The minor CSS outfalls only discharge under storm conditions greater than 0.63 inches per hour rainfall which is greater than the established design condition of a 0.23-inch, 1-hour storm.	Comment noted. The fact sheet has been updated to reflect the proposed language.	
<u>Effluent Characteristics</u>		
Outfalls No. 001, 003-011, 013: Effluent Characteristics section in fact sheet should be deleted because there has been no previous requirement for monitoring of these minor outfalls and for other reasons stated in the foregoing comments.	EPD recognizes that the current permit does not include monitoring for the minor outfalls. The effluent characteristics listed in the fact sheet are a summary of what was provided in the permit application. The fact sheet has been updated to indicate no sample data was provided.	
<u>Nine Minimum Controls (NMC)</u>		
NMC have been fully implemented and approved as stated in previous permit Fact Sheets.	EPD agrees the NMC are being implemented and the fact sheet requires no modification. CWW must continue to implement the NMCs.	

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COMMENTS RECEIVED	EPD RESPONSE
<u>Long-Term Control Plan (LTCP) – Annual Report</u> LTCP has been fully implemented and approved to be in compliance with the CSO Policy as stated in previous permit fact sheets and therefore no annual reports or updates should be required.	EPD agrees the 1997 LTCP was approved and implemented. The CSO Control Policy states that CSO discharges remaining after the implementation of the planned control program will not preclude the attainment of WQS or the receiving waters designated used or contribute to their impairment. Also, the CSO Control Policy states that post construction compliance monitoring needs to be included in the permit to ensure goals are met (Section II.C.9 of the CSO Control Policy). If the post construction goals are not being met, the permittee will need to evaluate the LTCP and revise it in accordance with the CSO Control Policy, including requirements to reassess CSOs in sensitive areas. Therefore, the LTCP should be evaluated to ensure the CSO Controls are meeting goals. An annual report is included in the permit to track the evaluation. Should the evaluation indicate goals are not being met; the annual status report will include a schedule for submitting a revised CSO LTCP.
<u>Parameters – Instream Monitoring</u> Why have the following instream monitoring parameters been added: Biochemical Oxygen Demand (BOD), Temperature, Ammonia, Total Residual Chlorine (TRC), Total Suspended Solids (TSS), pH, Stream Hardness, Cadmium, Lead, Zinc, Nickel, and Copper?	Instream monitoring for BOD, TSS, Ammonia, Cadmium, Lead, Zinc, Nickel, and Copper are not new to the permit. Instream Hardness monitoring has been added to evaluate the metals. Instream temperature and pH were included in the permit due to the varied impacts both pH and temperature have on biological and chemical processes in a waterbody. Instream TRC monitoring has been removed from the permit.

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COMMENTS RECEIVED	EPD RESPONSE
	Per the permittee's request, several additional instream monitoring locations are included in the permit in lieu of minor outfall sampling locations due to access concerns. Monitoring of Outfall 009 – 7th Street remains in the permit to verify design assumptions.
<u>Parameters –Outfalls</u> Why have new parameters been added To B.1. (Outfall No. 002 - Uptown Park)? (Ammonia, BOD, TSS, Total Hardness, Total Recoverable Cadmium, Total Recoverable Lead, Total Recoverable Zinc; Total Recoverable Nickel, and Total Recoverable Copper.) Monitoring requirements for five-Day BOD and TSS are new to this permit and should therefore not be stated as “maintained.” Monitoring frequency for Total Recoverable Mercury has been changed from first year only in previous [proposed] drafts to now once per year [in the draft permit dated September 21, 2017].	Ammonia, BOD, TSS, Total Hardness, Total Recoverable Cadmium, Total Recoverable Lead, Total Recoverable Zinc, Total Recoverable Nickel, and Total Recoverable Copper are listed in the previous permit for Uptown Park (Outfall No. 002). Total Hardness is will be collected as part of the instream sampling rather than from the effluent. The reference in the fact sheet for BOD and TSS are maintained for Outfalls Uptown Park WRF 002 and South Commons WRF 012 only. The previous permit required annual Priority Pollutant Scans (Scans). Annual Scans have been maintained in the current permit. Total Recoverable Mercury is one of the parameters to be analyzed as part of the Scans and must be analyzed using EPA test method 1631E. Since Test Method 245.1 was submitted, CWW will need to submit one total recoverable mercury analysis within the first year of the permit effective date to meet the application requirements using the appropriate test method. This is in addition to the priority pollutant scans.
<u>Typographical Errors</u> 1. The reference to “Appendix B” should be changed to “Attachments A and B” regarding the reasonable potential evaluation.	Comments noted and permit revised.

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COMMENTS RECEIVED	EPD RESPONSE
2. Table of Contents does not align with actual permit sections. 3. The approved sampling point should be corrected to 32.480430 latitude and -84.989635 longitude because this is where the Uptown Park treatment facility actually discharges to the waters of the state and where all previous effluent samples have been taken. 4. Sample Type for all metals, priority pollutants, chloromethane, and chloroethane should be “Composite” not “Grab.” 5. Permit Part I.B. - Footnote (1) Reference to Part I.A.1.i should be part I.A.1.j. This is referenced incorrectly throughout the permit and should be changed. 6. Permit Part I.C.10 - This section is a repeat of the reopener clause Part I.A.8. found on page 11.	
	<u>Composite Sample</u>
Composite Samples shall be collected on a “time” proportional basis not a “flow” proportional basis. This will be consistent with the 30, 60, 90, 120 minute sampling requirements.	Time proportioned composite samples are appropriate for CSO discharges. Therefore, the definition for composite samples has been modified.
	<u>Definition Change – Permitted Discharge</u>
Discharges occurring above the design storm event should still be defined as “permitted” even without minimum treatment. The provision should read as follows: “Permitted Discharge: The effluent that is discharged	EPD has modified the definition of “Permitted Discharge” so that the term is applicable all conveyance structures within the Columbus Combined Sewer System.

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COMMENTS RECEIVED	EPD RESPONSE
from the outfall conveyance structure of a Combined Sewage Control Facility into waters of the State.”	
Columbus Water Works has no control authority over storm water runoff (Part I.A.2.8 of the Permit). The City of Columbus has control authority over storm water runoff. Therefore, this section should be deleted.	<u>City of Columbus and CWW</u> When the City of Columbus and Muscogee County consolidated in 1971, the Board of the Columbus Water Works was brought into the consolidated government's charter. CWW, as part of the consolidated government, should support storm water best management practices, such as public education of the combined sewer system. Therefore, the section has been maintained.
Request changing “legitimate water uses” to “designated water uses.”	<u>Legitimate Water Uses</u> Part I.A.3 has been revised to remove any reference to legitimate or designated water uses.
Request subjectivity of statement be removed by removing the term “unsightly.”	<u>Unsightly</u> Part I.A.3 has been revised to remove any reference to the term unsightly.

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COMMENTS RECEIVED	EPD RESPONSE
Part I.C.13 of the Permit: The IWC of 5.4% conflicts with the IWC defined in Section C.1 on page 20. This difference should be reconciled.	Part I.C.13 Non-Metal Monitoring, requires the permittee to conduct acute WET testing should the parameters Chloroethane and Chloromethane be detected in one of three consecutive wet weather events. The IWC provided is for establishing dilutions for chronic WET testing requirements. Due to the variable nature of the discharges that occur, acute WET testing requirements are appropriate for CSO discharges. Therefore, language has been revised to clarify definitive acute WET testing requirements.
Part A.11.1 - This paragraph does not apply since there are no BOD or TSS limits in this permit.	EPD agrees that the draft permit does not include BOD or TSS effluent limits. However, this section is directly from Georgia Rules and Regulations for Water Quality Control Chapter 391-3-6.05 concerning the emergency actions for spills and the language in the permit will not be modified.

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COMMENTS RECEIVED	EPD RESPONSE
	<u>Fecal Coliform Bacteria Calculations</u>
1. Part I.A.4.d - Regarding how the monthly average fecal coliform concentration shall be calculated, “at intervals not less than 24 hours” should be deleted because it conflicts with the sampling requirements of 30, 60, 90, and 120 minutes. 2. The requirement to report “not applicable” if fewer than 4 samples appears to conflict with the requirement to report all values. This requires clarification.	EPD agrees there is some confusion concerning fecal coliform bacteria in the draft permit placed on public notice. Therefore, the following language replaces Part I.A.4.d: “Grab effluent samples for Fecal Coliform Bacteria: The permittee shall collect grab sample(s) from each discharge sampling event from the Combined Sewage Control Facilities. One grab sample shall be collected at 50, 70, 90, 110, and 130 minutes following the initiation of a discharge event and once during each successive 24-hour period of continuous discharge until the discharge stops. Results for each sample shall be reported on the Operating Monitoring Report (OMR). Additionally, the following footnote was added to the tables in Parts I.B.1 and I.B.2: The monthly geometric mean limitation of 200#/100 mL is only applicable if a minimum of 6 (six) grab samples are collected over the calendar month and at least one discharge event lasts a minimum of 90 minutes during that month. The permittee is to report the appropriate No Data Indicator (NODI) code on the DMR if the limit is not applicable. The individual fecal coliform grab samples shall be reported on the OMR for all discharge events.

PERMIT REVISIONS
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(Muscogee County)

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

If yes, specify:

Table of Contents	Corrected Table of Contents
Part I.A.1.g	Updated Composite sample definition to read: “Composite Sample: A sample consisting of a combination of subsamples collected during a discharge sampling event. Composite samples shall be collected on a time proportional basis.”
Part I.A.2.7	Updated this section to include reference to NPDES Permit No. GA0020516.
Part I.A.3	Modified section to read: “WATER QUALITY BASED EFFLUENT LIMITATIONS The CSO discharge(s) from the CSO Control Facilities must be controlled to prevent discharge(s) of the following: a. Materials which will settle to form sludge deposits; b. Oil and scum; c. Floating debris; d. Materials which produce turbidity, color, or odor; and e. Toxic, corrosive, acidic, or caustic substances.”
Part I.A.4	Modified section to read: “ADDITIONAL MONITORING REQUIREMENTS AND EFFLUENT LIMITATIONS FOR THE CSO CONTROL FACILITIES a. The conditions of this permit are based on the permittee’s compliance with the demonstration approach as contained in the EPA CSO Control Policy dated April 19, 1994, which provides that the CSOs will not preclude the attainment of Water Quality Standards (WQS) or the receiving waters’ designated uses or contribute to their impairment. The permittee shall attain the Georgia WQS pursuant to the State Rules and Chapter 12-5-29.1 and 12-5-30.2 of the Code. b. Composite effluent samples shall be collected at the designated sampling location as specified in the Sampling Plan. Composite effluent subsamples shall be collected at 50, 70, 90, 110, and 130 minutes following the initiation of a discharge event and hourly thereafter until the discharge stops. The collection period is not to exceed 24 hours for each composite sample. A composite sample must be taken every 24 hours until the end of the discharge event. c. Grab effluent samples shall be collected at the designated sampling location as specified in the Sampling Plan. Grab samples shall be collected during the first 50 to 60 minute interval following the initiation of a discharge event and at 24-hour intervals thereafter until the discharge stops.

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	d. Grab effluent samples for Fecal Coliform Bacteria: The permittee shall collect grab sample(s) from each discharge sampling event from the Combined Sewage Control Facilities. One grab sample shall be collected at 50, 70, 90, 110, and 130 minutes following the initiation of a discharge event and once during each successive 24-hour period of continuous discharge until the discharge stops. Results for each sample shall be reported on the Operating Monitoring Report (OMR). e. Grab effluent samples for Total Residual Chlorine: The permittee shall collect grab samples from each discharge event from the Combined Sewage Control Facilities. One grab sample shall be collected at 50, 70, 90, 110, and 130 minutes following the initiation of a discharge event and once during each successive 24-hour period of continuous discharge until the discharge stops. The permittee shall report the result of every grab sample for total residual chlorine on its Operating Monitoring Report (OMR). f. The permittee shall dispose of any solids and screening materials accumulated by disposal in an approved municipal solid waste landfill or by an alternative method approved by EPD.
Former Part I.A.5	Removed Sampling Plan Update language.
Part I.A.5	Updated language to include long-term control plan approval date and facility construction dates.
Part I.A.6	Modified section to read: LONG-TERM CONTROL PLAN ANNUAL REPORT The LTCP and Nine Minimum Controls have been implemented. The permittee must demonstrate in their post-construction sampling and the LTCP that Clean Water Act compliance is being met in accordance with the CSO Control Policy. By January 31 of each year, the permittee shall submit an annual report for events from the preceding year (January – December) that provides a summary of actions, activities, and measures taken by the permittee to comply with the terms of this permit. The annual report, at a minimum, shall contain the following: a. A summary of the frequency, duration, and volume of the CSS discharges for the past calendar year. b. Details of the implementation of the Nine Minimum Control's (NMCs) and the Long Term Control Plan (LTCP) and documentation that the water quality standards are being met. Control Measures to review include proper operation and maintenance of the sewer system and CSOs, review and modification of pretreatment program to assure CSO impacts are minimized, public education, maximizing flow to the Columbus South Water Reclamation Facility, pollution prevention, control of solid and floatable materials, and other controls developed by the permittee. The

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	report shall also contain a summary of all the actions and steps taken to implement the NMCs and the LTCP and their effectiveness. c. If goals of the CSO Controls are not met in accordance with the CSO Control Policy, the permittee should include revisions to the NMC and LTCP and an implementation schedule. d. Summaries of any permit violations and corrective actions. e. A summary of monitoring data collected for the CSS outfalls.
Part I.B.1	Modified effluent imitations and monitoring requirements for Outfall 002 as follows: 1. Corrected measurement frequency to each discharge sampling event; 2. Corrected sample type to composite for Priority Pollutants, Chloromethane and Chloroethane; 3. Removed metals and hardness monitoring as these parameters are included in the priority pollutants scans; 4. Added one time sample for Total Recoverable Mercury using test method EPA 1631; 5. Included a Fecal Coliform Bacteria effluent limitation of 200 #/100 mL 6. Modified footnotes to correspond with corrected table information. 7. Included language regarding the applicability of the effluent limits and monitoring requirements.
Part I.B.2	Modified effluent imitations and monitoring requirements for Outfall 012 as follows: 1. Corrected measurement frequency to each discharge sampling event; 2. Corrected sample type to composite for Priority Pollutants, 3. Removed Chloromethane and Chloroethane monitoring as these pollutants were not detected in the South Commons WRF effluent and therefore are not considered pollutants of concerns. 4. Removed metals and hardness monitoring as these parameters are included in the priority pollutants scans; 5. Added one time sample for Total Recoverable Mercury using test method EPA 1631; 6. Included a Fecal Coliform Bacteria effluent limitation of 200 #/100 mL 7. Modified footnotes to correspond with corrected table information. 8. Included language regarding the applicability of the effluent limits and monitoring requirements.
Part I.B.3	Modified monitoring requirements for Outfalls: 001, 003, 004, 005, 006, 007, 008, 009, 010, 011 as follows: Limited monitoring requirement to Outfall 009 – 7th Street only. All other outfalls are monitored through additional instream monitoring locations. Parameters to monitor are overflow volume, rainfall, and duration of discharge.
Part I.B.4	Revised instream monitoring requirements as follows:

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		1. Added sampling locations: Whitewater Launch (below North Highlands Dam), 14th Street Bridge, Trade Center, Rotary Park, and Chattahoochee River just upstream Upatoi Creek; 2. Metals include reporting in µg/L; 3. Hardness corrected to Total Hardness, as CaCO₃; 4. Sample location for stream flow is USGS Gage at 14th Street Bridge
Part I.C.2		Revised section to state: 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.
Part I.C.5		Revised section to state: DETECTION LIMIT REQUIREMENTS Some parameters will be reported as "not detected" when they are below the detection limit and will then be considered in compliance with the effluent limit. The detection limit will also be reported.
Formerly I.C.10	Part	Removed reopener clause. This was repeated in Part I.A.8.
Part I.C.10		Modified language to read: PRIORITY POLLUTANTS The permittee shall perform an annual scan of the 126 priority pollutants at Outfalls 002 and 012. Total recoverable mercury must be sampled and analyzed using EPA Method 1631E. The permittee shall take the samples as composite samples. If substances are measured at levels of concern, the permittee may be required to perform additional priority pollutant analyses or the permit may be modified to address the specific pollutant of concern.
Part I.C.12		Added section to allow for a 12-month compliance schedule for the installation of automatic samplers.
Part I.C.13		Modified language to read: NON-METALS MONITORING Chloroethane and chloromethane shall be monitored for three consecutive wet weather events. If these constituents are not detected, further monitoring will not be required. If chloromethane and chloroethane are detected, an acute WET Test will be required to determine toxicity. The Acute WET Test must include the most current U.S. Environmental Protection Agency (EPA) acute aquatic toxicity testing manuals. The referenced document is

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	entitled Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, 5th Edition, U.S. EPA, 821-R-02-012, October 2002, or the most recently approved EPA acute aquatic toxicity testing manuals. Definitive tests must be run on the same samples concurrently using both an invertebrate species (i.e., Ceriodaphnia dubia) and a vertebrate species (i.e., Pimephales promelas). The LC50 must be greater than or equal to 100% effluent. 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, and/or to submit a toxicity reduction evaluation upon notification by the EPD and/or the permit may be reopened to incorporate acute WET effluent limitations.
Part I.C.14	Added following language: TOTAL RECOVERABLE MERCURY The permittee must collect one sample to be analyzed for total recoverable mercury at each major outfall within the first year of effective date of the permit. The tests must be collected during the first overflow event that occurs after the effective date of the permit. Total recoverable mercury must be analyzed using EPA Method 1631E. The sample type for total recoverable mercury must be grab samples. If mercury is measured at levels of concern, then the permittee may be required to perform additional priority pollutant analyses in accordance with Part I.C.8 of the permit and/or the permit may be modified to include effluent limitations for total recoverable mercury.
Part II.B.14	Modified paragraph to read: PREVIOUS PERMITS All previous State wastewater permits issued to this facility, whether for construction or operation, are hereby revoked by the issuance of this permit. This action is taken to assure compliance with the Georgia Water Quality Control Act, as amended, and the Federal Clean Water Act, as amended. Receipt of the permit constitutes notice of such action. The conditions, requirements, terms and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System govern discharges from this facility.

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Were there any revisions between the draft and the final fact sheet? ☒ Yes ☐ No

If yes, specify:

Section 1.4	Included all major and minor outfall locations in the table.
Section 1.7	Provided a more detailed description of the facilities (major & minor) and their operation
Section 1.8	Moved narrative to Section 1.7
Section 3.1	Updated description of applicable water quality standards for waters with designated use of fishing
Section 3.2	Updated section to include 2018 305(b)/303(d) listing for receiving stream. Removed categorical language.
Section 3.4	Removed Fecal Coliform Bacteria loading limitations (#/30 days) Refer to Section 4.9 to explain implementation of a concentration-based Fecal Coliform Bacteria limit (#/100 mL)
Section 4.1	Limited monitoring requirements for the minor outfalls to Outfall 009 as it is representative of all other minor outfalls.
Section 4.3	Modified section to state: “Annual Report Columbus Water Works has developed a LTCP that conforms with the CSO Control Policy. Part I.A.5 of the draft permit contains a condition that requires the permittee to comply with its LTCP developed. Part I.A.6 of the permit requires the permittee to submit annual reports that provide a summary of actions, activities and measures to meet the goals of both the NMCs and the LTCP by January 31 of each year. Data elements of the NMCs and LTCP will be tracked in accordance with 40 CFR 127 (Electronic Reporting Rule).”
Section 4.4	Updated instream monitoring requirements as follows: “ CWW has stated that the design conditions are similar for each of the minor outfalls and there are potential safety concerns to collect an effluent sample, hence the permit includes monitoring for only one outfall at this time, Outfall 009 - 7th Street (Part I.B.3 of the permit), as a representation of each of the minor outfalls. Outfall 009 will be monitored to characterize the volume and duration of the discharges. To characterize the water quality impacts of the minor outfalls, EPD has incorporated stream monitoring in the permit. The permittee must conduct instream monitoring for biochemical oxygen demand, fecal coliform bacteria, temperature, ammonia, total suspended solids, total phosphorus, pH, stream hardness and the following metals: cadmium, lead, zinc, nickel, and copper. Sampling of the Chattahoochee River shall be performed at the following locations: 1. Lake Oliver for background conditions;

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	2. below North Highlands Dam to capture water quality influences from Rocky Creek and Riverside stormwater; 3. 14th Street Bridge to capture water quality influences from 24th, 19th (Uptown Park), 16th, 15th, and 14th Street outfalls; 4. Trade Center to capture water quality influences from 12th, 11th, 9th, 7th Street outfalls, and Mill Creek; 5. Rotary Park to capture water quality influences from Golden Park, 5th Street, and Lumpkin Street outfalls; and 6. Just above Upatoi Creek to capture water quality influences from all CSOs, urban tributaries, WWTPs. The additional instream locations (2–5 above) are in lieu of sampling each individual minor outfall. EPD believes monitoring one minor outfall for volume and duration and ambient monitoring of the receiving stream at the locations above will adequately characterize impacts of the minor outfall discharges on the Chattahoochee River. However, upon review of the data, additional monitoring may be required.”
Section 4.5	Updated monitoring requirements as follows: “For the major outfalls, the permittee must conduct monitoring during all discharge sampling events for the following parameters: overflow volume, ammonia, five-day biochemical oxygen demand, total suspended solids, total phosphorus, total residual chlorine, and fecal coliform bacteria. Flow has been modified to Overflow Volume as this is more representative of the nature of a CSS discharge. Discharges above the design treatment capacity of 48 MGD and 76 MGD for the two major outfalls (Outfall Nos. 002 and 012) are not subject to the effluent limitations, as EPD believes discharges above the design capacity will be dilute and not have reasonable potential to cause or contribute to the instream water quality violations as these discharges from the CSO are wet weather discharges and not occurring during low flows. However, if EPD determines that these discharges (discharges from the major outfalls above the design treatment capacity) have reasonable potential, EPD will reevaluate the permit and make appropriate changes ensuring discharges from the CSO outfalls do not have reasonable potential to violate instream water quality standards.”
Section 4.6	Updated monitoring requirements as follows: “The permittee must conduct a scan of the priority pollutants from each of the major outfalls (Outfall Nos. 002 and 012) once per year from a discharge sampling event.”
Section 4.7	Moved and updated section header and associated standard language to Water Quality Based Effluent Limitations (WQBELs) & Technology Based Effluent Limits (TBELs)
Section 4.8	Moved and updated section header and associate standard language to Reasonable Potential Analysis (RPA)
Section 4.9	In accordance with §122.44(d)(1)(ii) of the federal regulations, EPD considers all

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POTWs, Private and Institutional Developments, and CSO Control Facilities, discharging all or a portion of domestic sanitary wastewater, to have the reasonable potential to cause or contribute to instream water quality standard violations for bacteria, including fecal coliform and *E.coli*. EPD has determined these facilities discharge the conventional pollutant fecal coliform bacteria, wastewater treatment systems are consistently designed to treat fecal coliform bacteria, and fecal coliform bacterium are highly variable in the receiving stream after treatment. EPD does not consider dilution in our analysis as we don't believe it's appropriate for bacteria due to its inherent ability to reproduce in the receiving stream.

In addition to the existing reasonable potential, under CWA Section 303(d), States are required to develop lists of impaired waters. Impaired waters are those that do not meet the water quality standards set for them, even after point sources of pollution have installed the minimum required levels of pollution control technology. In 2002, Georgia's 305(b)/303(d) listed the Chattahoochee River between N Highland Dam to Upatoi Creek as partially supporting designated uses. Criterion violated included Fecal Coliform Bacteria and Fish Consumption Guidelines.

The law requires that those jurisdictions (GA EPD) establish priority rankings for waters on their CWA section 303(d) list and develop a Total Maximum Daily Load (TMDL) for those waters.

In 2008, a TMDL for Fecal Coliform Bacteria was approved to restore and maintain Water Quality Standards for Fecal Coliform Bacteria. Once a TMDL is approved, it remains in place to continue water quality protection, even though the assessed waterbody's category may be revised in the future.

The NPDES regulations at § 40 CFR 122.44(d)(1)(vii)(B) require that NPDES permits include effluent limitations developed consistent with the assumptions and requirements of the Waste Load Allocation (WLA) that has been assigned to the discharge as part of an approved TMDL. Through the NPDES permitting process if it is determined that a point source discharge has a pollutant of concern, in this case the pollutant of concern is fecal coliform bacteria, and there is reasonable potential of discharging fecal coliform bacteria from the point sources at levels that may cause or contribute to instream water quality standard violations, an effluent limit is required in the permit.

The major CSO Control Facilities are authorized by this NPDES permit to discharge from point source outfall nos. 002 and 012 partially treated domestic sanitary wastewater containing fecal coliform bacteria. In addition to the TMDL requiring fecal coliform effluent limits, EPD reviewed and analyzed effluent discharge data

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	from both of the outfalls and determined that those discharges have the reasonable potential for fecal coliform bacteria to be present at levels that may cause or contribute to instream water quality standard violations, hence numeric effluent limits are appropriate and included in this permit. The effluent data evaluated is included in the permit file. On September 29, 2017, a draft permit was placed on public notice. The effluent limits in the draft permit were expressed as a cumulative count of fecal coliform over a period of 30 days (monthly loading) and were calculated assuming a continuous discharge from Outfall nos. 002 and 012. Since the facility is designed to discharge intermittently under specific wet weather conditions, it has been determined that the fecal coliform limits in the draft permit were inappropriate and did not meet the requirements of the TMDL. EPD has updated the proposed permit to include the required fecal coliform bacteria limit allocated in the TMDL. Per the TMDL, the allowable loading is “flow (Q) times fecal coliform concentration of 200/100mL (30-day geometric mean).” The CSO facilities are engineered and designed to treat a specific volume of water based on historical and modeled data. As determined by the permittee and approved by EPD, the design storm event is defined as a rainfall event of 0.23 inches per hour with a one-hour duration. Discharges from any CSO facility are intermittent and variable in nature, again dependent on wet weather, hence a numeric permitted flow limit in the permit is inappropriate for the CSO facilities. Since the flow (Q) referenced in the TMDL is variable, it cannot be used in the calculation prescribed in the TMDL to determine the wasteload allocation for fecal coliform bacteria. Therefore, to implement the requirements of the TMDL a conservative limit of 200 #/100mL (30-day geometric mean) is required in the permit. This limit is also protective of the designated use of the receiving water body and of human health. Based upon the reasonable potential analysis and wasteload allocation in the TMDL, the permit has been revised to include a fecal coliform bacteria limit of 200 #/100mL for Outfall nos. 002 and 012. EPD’s implementation of the TMDL and corresponding numeric effluent limits of 200 #/100 mL has been reviewed and approved by U.S. EPA in a letter dated September 12, 2019. Refer to Appendix C of the Fact Sheet.
Section 4.10	Included Total Phosphorus monitoring requirements.

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Section 5.1	Added a new section for instream monitoring: The permittee has noted access and safety concerns with sampling each individual minor outfall. Therefore, instream sampling to provide water quality data and characterize the impact of the minor outfall discharges on the receiving stream have been included. Permanent automatic samplers are to be installed at Whitewater Launch (below North Highlands Dam), 14th Street Bridge, Trade Center, and Rotary Park. Stream flow and the amount of rainfall every 15 minutes will be reported from USGS gauge at the 14th Street Bridge. Samples shall be collected during discharge sampling events. The permittee will continue ambient monitoring at Lake Oliver and the Chattahoochee River just above Upatoi Creek.
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