State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER QUALITY
BUREAU OF SURFACE WATER AND PRETREATMENT PERMITTING
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PHILIP D. MURPHY
Governor

TAHESHA L. WAY
Lt. Governor

SHAWN M. LATOURETTE
Commissioner

Via Email Only
November 9, 2023

Scott Schreiber, Executive Director
Camden County Municipal Utilities Authority
1645 Ferry Avenue
Camden, NJ 08104

Re: Draft Surface Water Renewal Permit Action
Categories: A - Sanitary Wastewater
CSM - Combined Sewer Management
NJPDES Permit No. NJ0026182
Delaware #1 Water Pollution Control Facility
Camden City, Camden County

Dear Scott Schreiber:

Enclosed is a **draft** NJPDES permit action identified above which has been issued in accordance with N.J.A.C. 7:14A. The Camden County Municipal Utilities Authority (CCMUA) owns and operates the Delaware #1 Water Pollution Control Facility (WPCF) located in the City of Camden, which provides wastewater treatment and transportation services for wastewater collected in a 226 square mile service area which serves about 500,000 people in 36 municipalities. Two of these municipalities, the City of Camden and Gloucester City, are served by Combined Sewer Systems (CSSs) which are hydraulically connected to the CCMUA WPCF. The three permittees own and operate separate portions of one hydraulically connected CSS.

This subject renewal permit action is issued to CCMUA and authorizes the discharge of treated and disinfected domestic wastewater with industrial contribution into Zone 3 of the Delaware River via the WPCF outfall DSN 001A. The existing facility has a NJPDES permitted flow value of 80 million gallons per day (MGD). This permit action also authorizes discharges from the Combined Sewer Overflow (CSO) outfall DSN 040A located in the City of Camden that is owned and operated by CCMUA. The Department is concurrently proposing to issue NJPDES DSW permits to the City of Camden (NJ0108812) and Gloucester City (NJ0108847) to authorize discharges from their CSO outfalls within the hydraulically connected CSS.

This renewal permit serves to assess the permittee's compliance with the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C. This renewal permit also serves to implement the requirements of the coordinated Long Term Control Plan (LTCP) dated September 2020.

Notice of this draft permit action will appear on the Division of Water Quality's website at www.nj.gov/dep/dwq, in the *Courier Post* and in the November 15, 2023 *DEP Bulletin*. The *DEP Bulletin* is available on the internet at http://www.state.nj.us/dep/bulletin. In accordance with N.J.A.C. 7:14A-15.10(c)1i, the public comment period will

close on January 15, 2024. As detailed in the *DEP Bulletin* and aforementioned newspaper, written comments on the draft document must be submitted in writing to Susan Rosenwinkel, Assistant Director, Mail Code 401-02B, Division of Water Quality, Water Pollution Management Element, P.O. Box 420, Trenton, NJ 08625- 0420 by the close of the public comment period. Comments via e-mail are also acceptable and can be sent to dwq_bswp@dep.nj.gov.

All persons, including the applicant, who believe that any condition of this draft document is inappropriate or that the Department's decision to issue this draft document is inappropriate, must raise all reasonable arguments and factual grounds supporting their position, including all supporting materials, during the public comment period. Specific information regarding the draft document may be obtained from Molly Jacoby of the Bureau of Surface Water & Pretreatment Permitting at (609) 292-4860. Take notice that the Department will be holding a non-adversarial virtual public hearing to afford the public an opportunity to be heard on this proposed action consistent with N.J.A.C. 7:14A-15.12. Details are provided within the public notice as attached. The Department will respond to all significant and timely comments upon issuance of the final document. The permittee and each person who has submitted written comments will receive notice of the Department's final decision to issue, revoke, or redraft the document.

If you have questions or comments regarding the draft action, please contact Molly Jacoby either by phone at (609) 292-4860 or email at Molly.Jacoby@dep.nj.gov.

Sincerely,

Robert D. Hall

Robert Hall
Environmental Specialist 3
Bureau of Surface Water & Pretreatment Permitting

Enclosures

c: Permit Distribution List
Masterfile #: 14667; PI #: 46168

EXECUTIVE SUMMARY

Camden County Municipal Utilities Authority
Delaware #1 Water Pollution Control Facility
CSO Permit

In 2015, the NJDEP issued an individual NJPDES CSO permit to Camden County Municipal Utilities Authority (CCMUA) for the Delaware #1 Water Pollution Control Facility (WPCF). The permit required creation of a single, coordinated Long Term Control Plan with the City of Camden and Gloucester City. The LTCP has been reviewed by the NJDEP and is being incorporated into this permit.

CCMUA will be required to comply with the CSO Policy through the Presumption Approach of elimination or capture of a minimum 85% of the annual average combined sewage collected in the system during wet weather. CCMUA has recently completed wet weather improvements to increase acceptance of wet weather flow from the City of Camden and Gloucester City. Subsequent CSO permits, issued every five years, will include requirements to implement the next five years of CSO projects as detailed in the LTCP.

This permit builds upon the Public Participation requirements in the 2015 permit through inclusion of Public Engagement. Specifically, this section includes robust requirements pertaining to Environmental Justice through solicitation of input by overburdened communities, notably in the siting of green infrastructure projects.

This permit also includes specific requirements pertaining to climate change such as the required preparation of a Vulnerability Analysis as part of an Emergency Plan to ensure the effective operation of the treatment works and facilities under emergency conditions. Floodproofing, climate change, and resiliency are incorporated in the design of CSO projects. Finally, upon completion of the projects, the permittee will evaluate compliance with the minimum 85% of the system-wide annual average capture.

Table of Contents

This permit package contains the items below:

List of Acronyms

ACR	Acute to Chronic Ratio
AL	Action Level
AML	Average Monthly Limitation
BMP	Best Management Practices
BPJ	Best Professional Judgement
CAP	Capacity Assurance Program
CFR	Code of Federal Regulations
CV	Coefficient of Variation
CWEA/CWA	Clean Water Enforcement Act/Clean Water Act
Department	New Jersey Department of Environmental Protection
DGW	Discharge to Groundwater
DMR	Discharge Monitoring Report
DRBC	Delaware River Basin Commission
DSN	Discharge Serial Number
DSW	Discharge to Surface Water
EDP/M	Effective Date of the Permit/Permit Modification
EEQ	Existing Effluent Quality
ELG	Effluent Limitation Guideline
g/d or g/day	Grams per Day
IEC	Interstate Environmental Commission
IPP	Industrial Pretreatment Program
kg/d or kg/day	Kilograms per Day
LTA	Long Term Average
MA1CD10 or 1Q10	Minimum average one day flow with a statistical recurrence interval of ten years
MA7CD10 or 7Q10	Minimum average seven consecutive day flow with a statistical recurrence interval of ten years
MA30CD5 or 30Q5	Minimum average 30 consecutive day flow with a statistical recurrence interval of five years
mg/L	Milligrams per Liter
MDL	Maximum Daily Limitation
MGD	Million Gallons per Day
MRF	Monitoring Report Form
NAICS	North American Industry Classification System
NPDES/NJPDES	National/New Jersey Pollutant Discharge Elimination System
NJR	New Jersey Register
PCB	Polychlorinated Biphenyls
PMP	Pollutant Minimization Plan
POTW	Publicly Owned Treatment Works
RPMF	Reasonable Potential Multiplying Factor
RTR	Residuals Transfer Report
RQL	Recommended Quantification Levels
RWBR	Reclaimed Water for Beneficial Reuse
SIC	Standard Industrial Classification
SIU	Significant Indirect User
SQAR	Sludge Quality Assurance Regulations
SWQS	Surface Water Quality Standards
TMDL	Total Maximum Daily Load
TR	Total Recoverable
TRIR	Toxicity Reduction Implementation Requirements
USEPA TSD	USEPA Technical Support Document for Water Quality Based Toxics Control (EPA/505/2-90-001, March 1991)
µg/L	Micrograms per Liter
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UV	Ultraviolet
WCR	Wastewater Characterization Report
WER	Water Effects Ratio
WLA	Wasteload Allocation
WWTP	Wastewater Treatment Plant
WQBEL	Water Quality Based Effluent Limitation

List of CSO Acronyms

CMP	Compliance Monitoring Program
CSM	Combined Sewer Management
CSO	Combined Sewer Overflow
CSS	Combined Sewer System
DEAR	Development and Evaluation of Alternatives Report
DWO	Dry Weather Overflow
FCA	Financial Capability Analysis
I/I	Infiltration/Inflow
H&H	Hydrologic and Hydraulic
LTCP	Long Term Control Plan
MHI	Median Household Income
NJIB	New Jersey Infrastructure Bank
NJHDG	New Jersey Harbor Dischargers Group
NMC	Nine Minimum Controls
O&M	Operation and Maintenance
PCCMP	Post Construction Compliance Monitoring Program
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RI	Residential Indicator
S/F	Solids/Floatables
SOPs	Standard Operating Procedures
SRF	State Revolving Fund
TWA	Treatment Works Approval

New Jersey Department of Environmental Protection
Division of Water Quality
Bureau of Surface Water and Pretreatment Permitting

PUBLIC NOTICE

Notice is hereby given that the New Jersey Department of Environmental Protection (Department) proposes to renew the New Jersey Pollutant Discharge Elimination System (NJPDES) Discharge to Surface Water (DSW) Permits identified below in accordance with N.J.A.C. 7:14A-1 et seq., and by authority of the Water Pollution Control Act at N.J.S.A. 58:10A-1 et seq., for the following discharges:

Permittees

Camden County Municipal Utilities Authority (CCMUA)
Delaware #1 Water Pollution Control Facility (WPCF)
1645 Ferry Avenue
Camden, NJ 08104
NJ0026182

City of Camden
520 Market Street – Suite 325
Camden, NJ 08101
NJ0108812

Gloucester City
100 North Johnson Boulevard
Gloucester City, NJ 08030
NJ0108847

Combined Sewer Overflows (CSOs) are discharges from Combined Sewer Systems (CSSs). CSSs are sewers that were designed many decades ago to collect rainwater and snowmelt runoff, domestic sewage, and industrial wastewater in the same pipe. CSSs are no longer permitted in New Jersey for new communities, but many older cities in the State continue to operate existing CSSs. These subject NJPDES permit renewals are issued to the above referenced permittees and serve to assess compliance with the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C.

The CCMUA WPCF provides wastewater treatment and transportation services for wastewater collected in a 226 square mile service area which serves about 500,000 people in 36 municipalities. Two of these municipalities, the City of Camden and Gloucester City, are served by CSSs, which are hydraulically connected to the CCMUA WPCF. The three permittees own and operate separate portions of one hydraulically connected CSS. CCMUA owns and operates Delaware #1 Water Pollution Control Facility (WPCF) located in the City of Camden.

Separate NJPDES permits are being issued to the WPCF and the two CSS municipalities. The CSO Long Term Control Plan (LTCP) as submitted cooperatively by the City of Camden, Gloucester City and CCMUA, includes a list of projects and timelines that will reduce discharges from the CSO outfalls in these municipalities based upon the Presumption Approach consistent with the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C.

CCMUA owns one (1) CSO outfall in the City of Camden that discharges to Zone 3 of the Delaware River. The City of Camden owns twenty-two (22) CSO outfalls; eleven (11) discharge to Zone 3 of the Delaware River, nine (9) discharge into the Cooper River (classified FW2-NT), and two (2) discharge into the Newton Creek (classified FW2-NT). Gloucester City owns seven (7) CSO outfalls; six (6) discharge to Zone 3 of the Delaware River and one (1) discharges to Newton Creek (classified FW2-NT). When the conveyance capacity of the collection system and/or the CCMUA WPCF is exceeded, excess combined sewage flows pass through these outfalls.

The CCMUA WPCF discharges treated and disinfected domestic wastewater with industrial contribution into Zone 3 of the Delaware River. The existing facility has a NJPDES permitted flow value of 80 million gallons per day (MGD) which discharges through outfall DSN 001A.

Modification provisions as cited in the permit may be initiated in accordance with the provisions set forth in Part IV and upon written notification from the Department.

A draft NJPDES permit renewal has been prepared for this facility based on the administrative record which is on file at the offices of the Department, located at 401 East State Street, Trenton, New Jersey. It is available for inspection, by appointment, Monday through Friday, between 8:30 A.M. and 4:00 P.M. Appointment for inspection may be requested through the Office of Records Access. Details are available online at www.nj.gov/dep/opra, or by calling (609) 341-3121. A copy of the draft permit is available on the Department's Division of Water Quality website at www.nj.gov/dep/dwq.

Comments may be submitted in writing to Susan Rosenwinkel, Assistant Director, Water Pollution Management Element, Attention: Comments on Public Notice NJ0026182, NJ0108812, and NJ0108847 at Mail Code 401-02B, Division of Water Quality, Bureau of Surface Water & Pretreatment Permitting, P.O. Box 420, Trenton, NJ 08625-0420 by the close of the public comment period. Comments via email are also acceptable and can be sent to dwq_bswp@dep.nj.gov. All persons, including the applicant, who believe that any condition of this draft document is inappropriate or that the Department's decision to issue this draft document is inappropriate, must raise all reasonable arguments and factual grounds supporting their position, including all supporting materials, during the public comment period. Specific information regarding the draft document may be obtained from Molly Jacoby of the Bureau of Surface Water & Pretreatment Permitting at (609) 292-4860 or via e-mail at Molly.Jacoby@dep.nj.gov.

Take notice that the Department will be holding a non-adversarial virtual public hearing to solicit public comment on the draft permits identified above on December 15, 2023, from 10:00 am to 12:00 pm then again from 6:00 pm to 8:00 pm (or end of testimony, whichever comes first). This hearing will be conducted virtually via the Department's video conferencing software (i.e., Microsoft Teams). A link as well as a telephone number to the virtual public hearing will be provided on the Department's NJPDES Division of Water Quality website (https://www.nj.gov/dep/dwq). The hearing shall be held before a Hearing Officer designated by the Department. The applicant and other interested persons will have the opportunity to present and submit information on the proposed action. The purpose of this hearing is to provide the public with an opportunity to be heard on this proposed draft permit action where both verbal and written statements will be given equal weight.

The comment period will close on January 15, 2024, at 11:59 pm.

The Department will respond to all significant and timely comments upon issuance of the final document. The permittee and each person who has submitted written comments will receive notice of the Department's permit decision.

New Jersey Department of Environmental Protection
Division of Water Quality
Bureau of Surface Water & Pretreatment Permitting

FACT SHEET

Masterfile #: 14667 **PI #:** 46168

This fact sheet sets forth the principal facts and the significant factual, legal, and policy considerations examined during preparation of the draft permit. This action has been prepared in accordance with the New Jersey Water Pollution Control Act and its implementing regulations at N.J.A.C. 7:14A-1 et seq. - The New Jersey Pollutant Discharge Elimination System.

PERMIT ACTION: Surface Water Renewal Permit Action

The permittee has applied for a NJPDES Surface Water Renewal Permit Action through an application received January 2, 2020.

1 Name and Address of the Applicant:

Camden County Municipal Utilities Authority (MUA)
1645 Ferry Avenue
Camden, NJ 08104

2 Name and Address of the Facility/Site:

Delaware #1 Water Pollution Control Facility (WPCF)
2nd & Jackson Streets
Camden City, NJ08104
Camden County

3 NJPDES CSO Permit and Policy Background:

The Camden County Municipal Utilities Authority (CCMUA) owns and operates the Delaware Water Pollution Control Facility #1 (WPCF) located in the City of Camden which provides wastewater treatment and transportation services collected in a 226 square mile service area serving 500,000 people in 36 municipalities. Two of these municipalities, the City of Camden and Gloucester City, are served by a combined sewer collection system (CSS) which is hydraulically connected to the CCMUA WPCF. The two municipalities and CCMUA each own Combined Sewer Overflow (CSO) outfalls. This subject renewal permit action is issued to the CCMUA that owns/operates 1 CSO outfall. Separate NJPDES permits are issued to Gloucester City and the City of Camden, which share the hydraulically connected system with the CCMUA.

CSSs are sewers that were designed many decades ago to collect rainwater and snowmelt runoff, domestic sewage, and industrial wastewater in the same pipe. New CSSs are no longer permitted in New Jersey for new communities, but many older cities in the State continue to operate existing CSSs. Most of the time, the CSSs transport all wastewater to a sewage treatment plant, where it is treated and then discharged to a waterbody. However, during periods of rainfall or rainfall with snowmelt, the wastewater volume in a CSS can exceed the hydraulic capacity of the sewer system or treatment plant. For this reason, CSSs were designed to overflow during these periods and discharge excess wastewater directly from CSO outfalls to nearby streams, rivers, or other water bodies.

Historically, the control of CSOs has proven to be extremely complex. To address these challenges, EPA's Office of Water issued a National Combined Sewer Overflow Control Strategy ("CSO Strategy") on August 10, 1989 (54 Federal Register 37370). Five years later, EPA issued the National CSO Control Policy (Federal CSO Control Policy) on April 9, 1994, which remains the current national framework for control of CSOs. The Department incorporated the Federal CSO Control Policy verbatim into its regulations at N.J.A.C. 7:14A-11 – Appendix C. As such, CSO controls are also required by the NJPDES Regulations. The Federal CSO Control Policy and NJPDES Regulations establish procedures for permittees and state authorities on coordinating the planning, selection and implementation of CSO controls. It promotes a phased approach to the control of CSOs through a series of permits that include progressively more stringent

requirements. In the Wet Weather Quality Act of 2000, Congress amended the Clean Water Act to incorporate the Federal CSO Control Policy. As amended, the Clean Water Act requires that all permits, orders and decrees issued to regulate combined system overflows must comply with the Federal CSO Control Policy. 33 U.S.C. 1342(q)(1). The Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C include Nine Minimum Controls (NMC) and Long Term Control Plan (LTCP) conditions.

CSOs can contain suspended solids, pathogenic microorganisms, toxic pollutants, floatables, nutrients, oxygen-demanding organic compounds, oil and grease, and other pollutants. CSOs can cause exceedances of water quality standards (WQS) which may pose risks to human health, threaten aquatic life and its habitat, and impair the use and enjoyment of the State's waterways.

Combined sewage that drains to the collection system can cause large spikes in influent flow levels to the sewage treatment plant when certain precipitation conditions (e.g. heavy rain) occur. The CCMUA WPCF collection system is served by both separate and combined sewer systems in the two aforementioned municipalities, whereas the remaining municipalities are served by separate sewers (i.e., a separate pipe for stormwater and a separate pipe for sewage).

The NJPDES permit issued to the CCMUA on March 12, 2015 (2015 NJPDES CSO permit) and effective on July 1, 2015 required submission of a LTCP consistent with the Federal CSO Control Policy and NJPDES Regulations. This permit was subsequently modified for certain conditions as identified within this fact sheet. The City of Camden, Gloucester City and CCMUA submitted a single, coordinated LTCP dated September 2020. This subject permit action serves to incorporate CSO control strategies to achieve a minimum wet weather percent capture value as outlined in the CSO LTCP.

CCMUA owns and operates the CCMUA WPCF which is designed to treat 80 million gallons per day (MGD) with a wet weather capacity of 185 MGD.

4 Facility Description:

A. WPCF Overview:

The facility is classified as a major discharger by the Department in accordance with the USEPA rating criteria. The facility's NJPDES permitted flow value is 80 MGD. The facility is authorized to accept wet weather flows up to the hydraulic capacity of the treatment plant (185 MGD) in order to maximum the treatment of wet weather flows and to reduce the frequency, duration, and volume of combined sewer overflow discharges in the hydraulically connected combined sewer collection system. This POTW has a delegated pretreatment program. Sanitary wastewater conditions are covered under Category A of this permit.

Sanitary wastewater with industrial contribution is processed through the following units:

1. Junction chamber with inverted siphons
2. Mechanical bar screens
3. Raw sewage pumps
4. Grit removal units and washers
5. Primary sedimentation tanks (10)
6. Pure oxygen aeration units (8)
7. Secondary sedimentation tanks (8)
8. Sodium hypochlorite disinfection

A schematic of the facility's treatment is included at the end of the fact sheet.

Sludge is managed at an approved residuals management site.

All treatment works with a discharge regulated under N.J.A.C. 7:14A must have permits that implement applicable technical standards for residual management. All applicable conditions for residual management are included in NJPDES Residual General Permit Authorization No. NJG0198421. If there are any questions regarding the NJPDES Residual General Permit, contact the Bureau of Groundwater, Residuals, and Permit Administration at (609) 984-4428.

Stormwater discharges are covered by the individual authorization NJG0158101 under the Basic Industrial Stormwater General Permit (5G2). If there are any questions regarding the NJPDES DST permit, contact the Bureau of NJPDES Stormwater Permitting and Water Quality Management at (609) 633-7021.

B. Overview of Hydraulically Connected System:

CCMUA is the regional wastewater treatment authority of Camden County, New Jersey, providing wastewater treatment to a service area of 226 square miles and a population of about 500,000 people. CCMUA serves 36 municipalities in Camden County. CCMUA provides regional wastewater conveyance and treatment services through 135 miles of interceptor sewers, 27 pump stations and the WPCF, which is designed to treat 80 million gallons per day (MGD) with a wet weather capacity of 185 MGD. There is one permitted combined sewer overflow discharge within the CCMUA regional conveyance system that is owned and operated by CCMUA namely the C-32 outfall (DSN 040A) that discharges to the Delaware River in the northeast corner of the City of Camden.

The municipal collection sewer systems are owned and operated by their respective municipalities or municipal authorities. Of the 36 municipalities within the service area only the Cities of Camden and Gloucester have combined sewer systems. The collection and conveyance of wastewater (both dry and wet weather) from these municipal combined sewer systems is routed to either the CCMUA WPCF or the CSO outfalls depending on weather conditions. Refer to Figure 2-1 below from the LTCP which shows the communities served by the CCMUA WPCF:

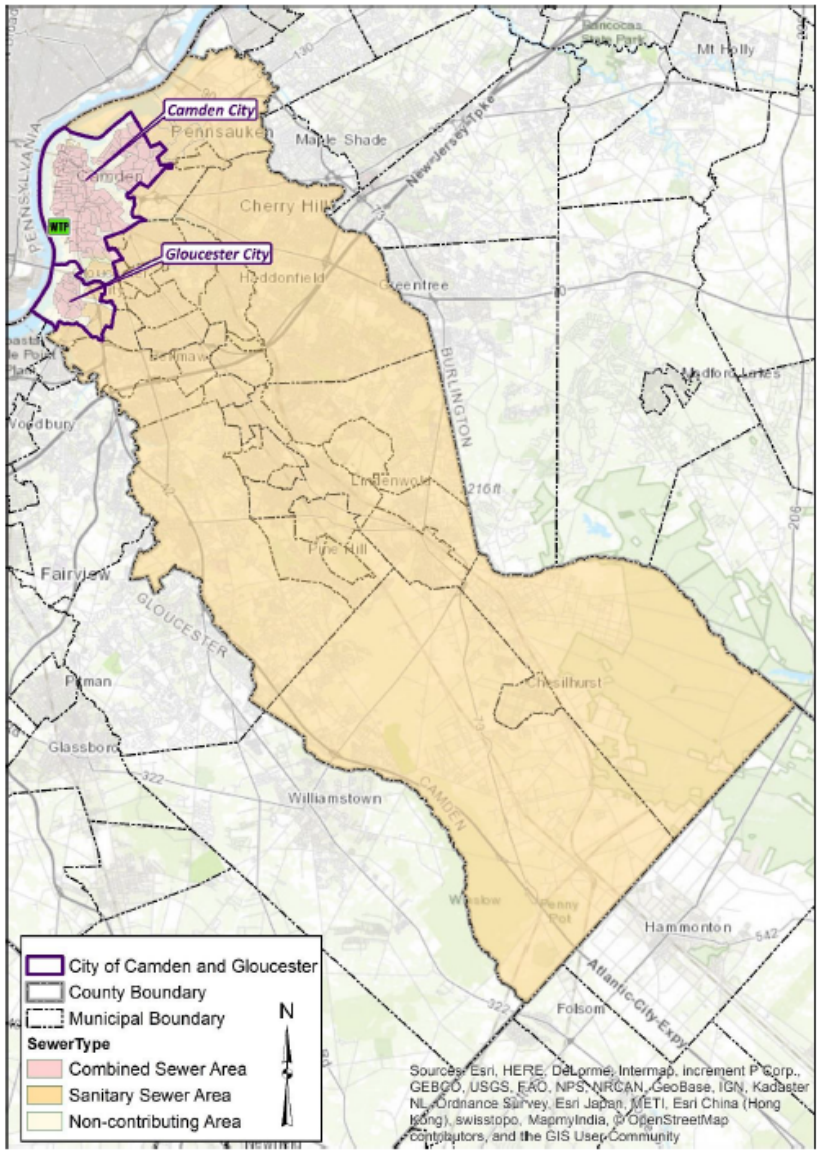


Figure 1-1
CCMUA Service Area

The City of Camden has a total area of approximately ten square miles. There are 27 sewersheds (catchment areas) within the City of Camden combined sewer system. The average daily wastewater flow generated within the City of Camden is estimated to be approximately 20 MGD. The wastewater collection system consists primarily of combined sewers. According to the City of Camden records, there presently exists approximately 170 miles of combined sewers containing nearly 4,000 storm inlets. In addition to a population of about 77,344 (2010 Census), the City of Camden's wastewater collection area also includes approximately 250 customers located in Pennsauken Township and stormwater flow from a larger part of Pennsauken Township.

Gloucester City is located south of Newton Creek, which delineates the municipal boundary with the City of Camden to the north. There are seven sewersheds within Gloucester City which discharge into an interceptor sewer which is aligned along King Street. The average daily wastewater flow generated within Gloucester City is estimated to be approximately 2 MGD. The collection system serves an area of approximately 1.6 square miles, of which 1.0 square miles is served by combined sewers. There are about 40 miles of collection sewers within Gloucester City of combined and sanitary sewers. The combined sewer system flows into the Gloucester pump station, which is owned

and operated by CCMUA. The Gloucester Pump Station conveys flows from the Big Timber Creek Interceptor and the flows from Gloucester to the WPCF. As of the 2010 Census, Gloucester had a population of about 11,500.

C. Collection System Description

The general characteristics of the CSS are summarized in Table 1.2 of the September 2020 LTCP:

Table 1-2– Collection System Overview

Permittee	# Sewer-sheds	Collection System Pipe in Miles[1-1]	Appurtenances				Contributing Area (square miles)
			Active Regulators	Active Outfalls	Pump Stations	Overflow Netting Facilities	
Camden	27[1-2]	173	24	22	8	22	6.6
Gloucester	7	39	7	7	7	7	1.6
CCMUA			1	1	2	1	
Totals	34	212	32	30	17	30	8.2

The CSS for the CCMUA includes one (1) CSO outfall designated as discharge serial number (DSN) 040A. When the conveyance capacity of the collection system and/or CCMUA is exceeded depending on the rainfall event, excess combined sewage flows pass through the following structure prior to discharge through the CSO outfall.

Regulator	Outfall Number	Outfall Name	Latitude N	Longitude W	Solids/Floatables Status
C32	040A	32nd & Farragut Street	39° 57’ 54”	75° 05’ 28”	Completed

D. Expansion of CCMUA Wet Weather Capacity

CSOs have been reduced by increasing the capture and conveyance of wet weather combined sewer flow that is directed to the WPCF instead of flowing to CSO outfalls. CCMUA determined that addressing the hydraulic bottlenecks identified within the treatment plant could increase the plant’s capacity to treat flows up to 185 MGD during significant wet weather events with river storm tide elevations of 10.0-feet and 11.5-feet.

CCMUA has completed major capital improvements to expand the wet weather treatment capacity of the WPCF. The CCMUA WPCF receives wastewater influent from three (3) sources, the City of Camden’s 72” Combined Sewage system main, the Camden County’s 96” Sanitary Sewer main, and the 36” Baldwin Run force main. Prior to the improvement/expansion, these pipes merged at an existing junction structure near the northeasterly side of the plant. The actual range of flows to the plant depended on how the wastewater collection system is operated. These wet weather improvements are described in Section 2.5 of the 2018 System Characterization Report and can be summarized as follows:

Influent Chamber Reconfiguration – This project allowed approximately 190 MGD of wastewater flow to enter the plant. Under the previous configuration of the influent chamber, a flow control gate in the City of Camden’s interceptor system was used to limit the flow into the junction chamber in response to wet weather events. This resulted in the need to throttle back the Camden Arch Street Pump Station to reduce flows to the WPCF during wet weather thereby resulting in less flows being treated at the WPCF. In conjunction with the expansion of wet weather treatment capacities at WPCF, the need to throttle back pumping at the Arch Street pump station during wet weather has been significantly reduced.

Influent Pump Upgrades – A related project will increase the capacity (largest pump out of service) of the raw sewage pumps to 180 MGD to provide for operating efficiencies and to better match the hydraulic capacity of the reconfigured influent chamber and expanded primary treatment capacity. Under the scope of the pump upgrade project, raw sewage pump upgrades include new premium efficiency motors, variable speed drives, a new resilient power distribution system and related HVAC work. In addition, two of the existing four pumps

will be upgraded from 45 MGD to 60 MGD each. The other two existing pumps will remain at 60 MGD each. The existing piping and valves will remain in place.

The wet weather expansion of the WPCF from 150 MGD to 185 MGD was completed on May 1, 2020. This project included improvements to the influent flow control, influent pumping, as well as improvements to primary treatment equipment. These changes to wet weather flow capacity were authorized in a NJPDES permit modification dated July 18, 2019.

The Department issued a letter to the three permittees on July 9, 2023 requesting flow data at the headworks to document increases in diversion of combined sewage flows for treatment at CCMUA. The permittees responded on August 9, 2023 with certain tables which were then included in the September 2023 revised LTCP as Tables 2-2 through 2-4. The wet weather benefits of the plant expansions are shown below in Tables 2-2 through 2-4 as per the revised LTCP:

Table 2-2 – Overall Comparison of Flow Rates

Time Period	Average		Peak Flow Rate (MGD)
	Total Daily Flow (MGD)	Peak Daily Flow Rate (MGD)	
Jan 2016 - April 2020	54.9	75.7	157.4
Plant Expansion (May 2020 forward)	51.8	84.6	237.8

Table 2-4 – Peak Daily Flow Rate by Month

Month	2016	2017	2018	2019	2020	2021	2022	2023	Average 2016-2019	2022	% Change (2016 - 2019 .v. 2022)
January	112.2	120.6	109.6	141.1	124.7	166.3	186.3	123.5	120.9	186.3	54%
February	139.8	122.7	154.7	131.1		181.5	177.7	180.3	137.1	177.7	30%
March	146.1	136.1	140.0	140.0		173.6	130.0	166.9	140.6	130.0	-8%
April	113.3	141.0	152.8	134.7	125.4	187.1	177.6	178.2	135.5	177.6	31%
May	145.7	131.4	90.7	155.3	158.2	138.0	237.8	127.1	130.8	237.8	82%
June	115.1	105.6	140.9	157.4		200.1	177.9	179.2	129.8	177.9	37%
July	144.1	130.7	101.3	136.6	176.0	175.3	176.1	160.2	128.2	176.1	37%
August	101.5	127.6	123.9	132.0	174.9	140.1	120.3	168.9	121.3	120.3	-1%
September	110.1	101.4	130.3	104.2	183.0	179.8	174.7		111.5	174.7	57%
October	125.0	151.0	123.0	131.7	176.0	214.0	203.4		132.7	203.4	53%
November	136.8	103.7	156.4	57.2	181.2	156.6	107.5		113.5	107.5	-5%
December	151.8	120.0	154.1	127.9	181.7	126.6	201.8		138.5	201.8	46%
Average	**128.5**	**124.3**	**131.5**	**129.1**	**164.6**	**169.9**	**172.6**	**160.5**	**128.3**	**172.6**	**34%**
Maximum	**151.8**	**151.0**	**156.4**	**157.4**	**183.0**	**214.0**	**237.8**	**180.3**	**140.6**	**237.8**	

Plant Expansion (May 2020 forward)

E. Upgrades to the City of Camden Collection System

The City of Camden in cooperation with CCMUA has taken steps toward the reduction of CSOs. This includes:

- The City of Camden's Arch Street pump station conveys flows from Camden sewersheds C-10 through C-13A via the Camden Interceptor to the WPCF. The City of Camden completed upgrades to the Arch Street pump station in 2020 which included increasing the motor horse-power on the three pumps from 75 to 100 each and increasing the size of the pump impellers from 22.25" to 24.25". Prior to the expansion of CCMUA's treatment capacity, the City of Camden needed to throttle back the pumping rates at Arch Street during significant storm events to protect the interceptor downstream and the treatment plant. With the expanded treatment plant capacity of 185 MGD and increased pumping capacity at Arch Street, the

frequency of the need to temporarily shut down Arch Street pump station has been greatly reduced since 2020 thereby resulting in a reduced number of CSO events as shown on Table 2-5:

Table 2-5 – Frequency Arch Street Pump Station Shut-Downs During Wet Weather

Year	Rainfall	Arch St. Shut-Downs	C10 CSO Events
2018	69.12	22	112
2019	54.02	28	73
2020	46.60	14	59
2021	43.04	3	54
2022	43.70	2	71
2023 (through July)	19.21	0	29

- The reconstruction of the collapsed C10 outfall located upstream of the Arch Street PS which has reduced street flooding.

- The rehabilitation of 28 Camden City regulator structures, with new mechanical equipment installed or removed to allow for the maximization of flows to the CCMUA WPCF.

F. Reduction of Wet Weather Flow from Pennsauken

Pennsauken Township contributes combined sewer flows to the City of Camden's CSS located in the northeast portion of Camden. CCMUA, the City of Camden and Pennsauken Township are designing and implementing the separation of combined sewer neighborhoods in Pennsauken as well as other improvements that will reduce street flooding in the neighboring Cramer Hill section of Camden.

This project will result in the reduction of wet weather flows from Pennsauken Township into the Camden combined sewer system area tributary to the CCMUA C32 regulator, thereby reducing combined sewer overflows. By reducing wet weather flows currently transported through the two Pennsauken connections other than the Pennsauken interceptor sewer it will also increase the wet weather flow capacity for Camden combined sewage at the Baldwins Run pump station.

As described in the September 2023 revised LTCP, design work for the separation of combined sewered areas of Pennsauken Township is complete and pending construction permit approval. CCMUA is currently evaluating options for the conveyance of the separated Pennsauken stormwater for discharge to Delaware River back channel through or adjacent to CCMUA's C-32 outfall structure. This conveyance strategy may involve targeted sewer separation in Camden neighborhoods adjacent to Pennsauken or a dedicated stormwater line for the removed Pennsauken stormwater. In either case, CCMUA is studying the optimization of stormwater inlet placement and configuration to mitigate street flooding in East Camden.

G. Green Infrastructure

Green infrastructure is a foundational component of CCMUA's and the Cities of Camden and Gloucester's control strategy due to the many environmental, community, aesthetic, economic and community health benefits intrinsic in green stormwater infrastructure (GSI). By its nature, the ability to implement and the responsibility for the implementation of green stormwater infrastructure is diffuse. The directly connected impervious areas to be addressed using GSI are owned and controlled by all levels of government and private entities ranging from interstate highways and commercial redevelopment to church parking lots. CCMUA and the Cities have limited control over the location, timing and scale of green stormwater projects on private properties or on properties owned by county, state or federal agencies.

Given these institutional constraints, CCMUA and the Cities are proposing the establishment of a framework for the implementation of GSI that would formalize, expand upon and support the current efforts of groups such as the Camden SMART (Stormwater Management and Resource Training) initiative. The intent is to maximize the implementation of GSI whenever feasible in coordination with: development and redevelopment projects; transportation and related public works (e.g. road work); renewal and replacement projects (collection system or other work requiring street openings); and opportunities for neighborhood enhancements (e.g. new or improved neighborhood parks or playgrounds).

5 Receiving Water Discharge Location Information:

A copy of the appropriate section of a USGS quadrangle map indicating the location of the facility and discharge points is included towards the end of this Fact Sheet.

WPCF Outfall Designator: 001A

General Information		Watershed Information	
Receiving Water:	Delaware River Zone 3	Downstream Confluences:	Delaware River Basin
Via:	Multiport diffuser outfall	Receiving River Basin:	Delaware Estuary
Classification (a):	pipe	WMA (b):	18
Latitude:	Delaware River Zone 3	Watershed:	Delaware River
Longitude:	39° 55’ 21.8”	Subwatershed:	Delaware River 3
County:	75° 07’ 42.5”	HUC 14 (c):	Delaware River 16
Municipality:	Camden	Water Quality Impairments (d):	Chlordane (fish tissue), DDT (fish tissue), Dieldrin (fish tissue), Mercury (fish tissue), Temperature
	Camden		

Outfall Description			
Outfall Configuration:	Submerged pipe	Submerged Pipe Characteristics:	2.0 ft below mean low tide

Applicable Receiving Water Dilution Factors (e)	
Acute:	3.5

CSO Outfall Designator: 040A

General Information		Watershed Information	
Receiving Water:	Delaware River Zone 3	Downstream Confluences:	Delaware River Basin
Via:	Outfall pipe	Receiving River Basin:	Delaware Estuary
Classification (a):	Delaware River Zone 3	WMA (b):	18
County:	Camden	Watershed:	Delaware River
Municipality:	Camden	Subwatershed:	Delaware River 3
		HUC 14 (c):	Delaware River 16
		Water Quality Impairments (d):	Chlordane (fish tissue), DDT (fish tissue), Dieldrin (fish tissue), Mercury (fish tissue), Temperature

Outfall Description	
Outfall Configuration:	Tidally submerged pipe

Footnotes:

(a) The designated uses for this waterbody classification can be found at N.J.A.C. 7:9B-1.13.
(b) WMA = Watershed Management Area
(c) HUC 14 = 14 digit Hydrologic Unit Code
(d) These parameters are listed on Sublist 5 as impaired for this waterbody as per New Jersey’s 2018/2020 Integrated Water Quality Monitoring and Assessment Report (includes 305(b) Report and 303(d) List).
(e) The dilution factor is from the water quality study dated September 1998 and titled “Draft Phase I and Phase II Outfall Improvements and Modeling for Delaware No. 1 WPCF” prepared by S.T. Hudson Engineers, Inc.

As per the SWQS at N.J.A.C. 7:9B, the designated uses for the receiving waters are:

Zone 3 is that part of the Delaware River extending from R.M. 108.4 to R.M. 95.0 below the mouth of Big Timber Creek, including the tidal portions of the tributaries thereof.

The quality of Zone 3 waters shall be maintained in a safe and satisfactory condition for the following uses:

1. a. public water supplies after reasonable treatment,
   b. industrial water supplies after reasonable treatment,
   c. agricultural water supplies;
2. a. maintenance of resident fish and other aquatic life,
   b. passage of anadromous fish,
   c. wildlife;
3. recreation - secondary contact;
4. navigation.

As noted above, this segment of the Delaware River is impaired for temperature, Chlordane in fish tissue, DDT in fish tissue, Dieldrin in fish tissue, and Mercury in fish tissue. This permit action contains monitoring requirements for these parameters.

6 Type and Quantity of the Wastes or Pollutants:

The Permit Summary Table near the end of this fact sheet contains a summary of the quantity and quality of pollutants treated and discharged from the facility and the proposed effluent limitations.

7 Summary of Permit Conditions (Category A – Sanitary Wastewater):

The proposed effluent limitations and other pertinent information regarding the draft permit are described below:

A. Basis for Effluent Limitations and Permit Conditions - General:

The effluent limitations and permit conditions in this permit have been developed to ensure compliance with the following, as applicable:

1. NJPDES Regulations (N.J.A.C. 7:14A)
2. New Jersey SWQS (N.J.A.C. 7:9B)
3. New Jersey's 2018/2020 Integrated Water Quality Monitoring and Assessment Report (includes 305(b) Report and 303(d) List)
4. Requirements of the DRBC (N.J.A.C. 7:9B-1.5(b)1)
5. Secondary Treatment Standards (40 CFR Part 133, N.J.A.C. 7:14A-12.2 and -12.3)
6. Existing permit limitations in accordance with N.J.A.C. 7:14A-13.19 and 40 CFR 122.44 (antibacksliding requirements)
7. Permit limitations in accordance with N.J.A.C. 7:9B-1.5(d) (antidegradation requirements)
8. Statewide Water Quality Management Planning Rules (N.J.A.C. 7:15)
9. EEQ limitations in accordance with N.J.A.C. 7:14A-13.8
10. Pretreatment Program Requirements for Local Agencies (N.J.A.C. 7:14A-19)

When EEQ limitations are appropriate in accordance with N.J.A.C. 7:14A-13.3(e), the maximum daily limit shall be set equal to the maximum projected effluent concentration, which shall be calculated using an approved statistical method, a 95% confidence interval, a 95% probability basis, and at least 10 data points. The AML shall be calculated from the MDL if deemed necessary. Specific procedures concerning the calculation of EEQ limitations are contained in the USEPA's TSD.

In accordance with N.J.A.C. 7:14A-13.5, WQBELs are imposed when it has been determined that the discharge of a pollutant causes an excursion of criteria specified in the New Jersey SWQS, N.J.A.C. 7:9B-1.1 et seq., and the Federal Water Quality Standards, 40 CFR Part 131. WQBELs are authorized by Section 301 of the CWA, 40 CFR

122, N.J.S.A. 58:10A-4, and N.J.A.C. 7:14A-13.2 and 13.3. The procedures used to develop WQBELs are contained in the State and Federal Standards. Specific procedures, methodologies, and equations are contained in the current USEPA TSD and are referenced in N.J.A.C. 7:14A-13.5 and 13.6.

Expression of all effluent limitations is in accordance with N.J.A.C. 7:14A-13.14 and 13.15.

WET is expressed as a minimum as percent effluent.

Loading limitations (kg/day or g/day) are calculated by multiplying the NJPDES permitted flow value of 80 MGD by the conversion factor of 3.785 (L/gal) and the appropriate concentration limitation (mg/L or µg/L).

B. Basis and Derivation for Effluent Limitations and Monitoring Requirements- Specific:

All permit limitations and conditions in this permit action, are equal to or more stringent than those contained in the existing permit action. As a result, this permit action satisfies the federal and state anti-degradation regulations at 40 CFR 131.12 and N.J.A.C. 7:9B-1.5(d), and no further anti-degradation analysis is necessary.

Monitoring frequencies and sample types are in accordance with N.J.A.C. 7:14A-14, unless specified otherwise in the permit. In accordance with N.J.A.C. 7:14A-14.2, the permittee may submit a written request for a modification of the permit to decrease monitoring frequencies for parameters listed in Part III if site specific conditions indicate the applicability of such a modification.

1. Flow:

   This permit action does not include a numerical limitation for flow. Monitoring conditions are applied pursuant to N.J.A.C. 7:14A-13.13.

   Amendments to the Capacity Assurance Program (CAP) at N.J.A.C. 7:14A-22.16 were adopted in the May 15, 2017 issue of the New Jersey Register (49 NJR 1191(a)). A requirement to report the "12-month rolling average" on the DMR will be required on a monthly basis.

   The monitoring frequency of **continuous** with a **metered** sample type is carried forward from the existing permit.

   As part of the "3-Final" phase, this permit action includes required reporting for influent flow to the WPCF under "Flow, In Conduit or Thru Treatment Plant" as "Raw Sew/Influent" in order to implement CSO related bypass provisions as an LTCP CSO control measure. The number of bypass events is also required to be reported as "Duration of Discharge" namely the number of calendar days per month that a bypass event occurs. These reporting requirements are included in the final phase for this renewal permit and will serve as a means to track increased flows to the plant, the number of bypass events, and could serve as an indication of any reduction in CSOs. This phase may be activated when a Treatment Works Approval is obtained for a bypass line.

2. 5-Day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$):

   The concentration limitations of 25 mg/L as a monthly average and 40 mg/L as a weekly average are carried forward from the existing permit in accordance with N.J.A.C. 7:14A-13.19 and are based on the minimum effluent standards for the Delaware River Basin at N.J.A.C. 7:14A-12.4(c)2.ii.

   The monthly average loading limitation for $CBOD_5$ was based on the DRBC 20 day carbonaceous biochemical (first stage) oxygen demand ($CBOD_{20}$) WLA of 24,200 lbs/d (10,975 kg/d). As per the existing permit, this is based on a limit that is equivalent to 17,900 lbs/d (8,118 kg/d) $CBOD_5$ as a thirty (30) day average using a ratio of 1.35. The monthly average loading limitation was established by DRBC's allocation in 1968. The monthly average loading is summarized in DRBC's Status of $CBOD_{20}$ WLA Report. The loading limitation of 12,112

kg/day as a weekly average was also based on the ratio of 1.35 and was calculated by multiplying the weekly average concentration limitation by the permitted flow and the conversion factor of 3.785 L/gal.

Based on correspondence with DRBC dated October 13, 2023, the ratio is being revised to the default value of 1.7. The new monthly average loading limitation is 6,457 kg/day. The new weekly average loading limitation is 9,686 kg/day and was calculated by multiplying the monthly average by 1.5. Existing effluent data demonstrates compliance with these new limitations and a compliance schedule has not been included for this parameter.

The percent removal limitation is being revised to 87% in order to be consistent with the facility's DRBC Docket No. 1971-009 CP-10. The previous renewal permit included a percent removal limitation of 86% based on the zone percent reduction for Zone 3 of the Delaware River as per the DRBC's Water Quality Regulations, Section 4.30.7. However, the facility's DRBC Docket states that the percent removal limitation shall be 87% in order to account for 100% $CBOD_5$ removal of out-of-basin wastewater accepted by the facility (6.5 MGD).

The monitoring frequency of **once per day** with a **24-hour composite** sample type is carried forward from the existing permit and is consistent with N.J.A.C. 7:14A-14.2.

3. pH:

The effluent limitations of 6.0 s.u. as a minimum and 9.0 s.u. as a maximum are being revised to instantaneous minimum and instantaneous maximum, respectively. These limitations are based on the definition of secondary treatment at 40 CFR 133.102(c) and N.J.A.C. 7:14A-12.2 (f) and are consistent with the facility's DRBC Docket No. 1971-009 CP-10 and N.J.A.C. 7:14A-13.19.

The monitoring frequency of **six per day** with a **grab** sample type is carried forward from the existing permit and is consistent with N.J.A.C. 7:14A-14.2.

4. Total Suspended Solids (TSS):

The concentration and equivalent loadings limitations of 30 mg/L (9,084 kg/day) as a monthly average and 45 mg/L (13,626 kg/day) as a weekly average are carried forward in accordance with N.J.A.C. 7:14A-13.19 and are based on the definition of secondary treatment at 40 CFR 133.102 (b) (1) and (2). and N.J.A.C. 7:14A-12.2(e) 1. and 2. The monthly average concentration limitation is consistent with the facility's DRBC Docket No. 1971-009 CP-10.

The percent removal limitation of 85% is based on the definition of secondary treatment at 40 CFR 133.102(b)(3) and N.J.A.C. 7:14A-12.2(e) 3 and is consistent with the facility's DRBC Docket No. 1971-009 CP-10.

The monitoring frequency of **once per day** with a **24-hour composite** sample type is carried forward from the existing permit and is consistent with N.J.A.C. 7:14A-14.2.

5. Oil and Grease:

The effluent limitations of 10 mg/L as a monthly average and 15 mg/L as a daily maximum are carried forward from the existing permit and are based on N.J.A.C. 7:14A-12.8(c).

The monitoring frequency of **twice per month** with a **grab** sample type is carried forward from the existing permit.

6. Ammonia (Total as N):

The DRBC effluent standard of 35 mg/L as a monthly average was included in the existing permit and is retained in this permit pursuant to N.J.A.C. 7:14A-13.19 until such time that a determination is completed on whether a

toxicity-based or dissolved oxygen-based ammonia nitrogen limitation will be imposed for discharges to mainstem of the Delaware River or the permittee proposes an expansion beyond the current permitted flow. If such limitations are deemed necessary, those limitations will be established through a permit action, in accordance with public notice and comment procedures, pursuant to N.J.A.C. 7:14A-16.3 and 16.4(b)7.iii. This concentration limitation is also consistent with the facility's DRBC Docket No. 1971-009 CP-10.

The permittee shall continue monitoring for monthly average loading and daily maximum concentration and loading.

The monitoring frequency of **once per day** with a **24-hour composite** sample type is carried forward from the existing permit and is consistent with N.J.A.C. 7:14A-14.2.

7. Total Dissolved Solids (TDS):

Monitoring requirements for effluent TDS are imposed in this permit action as monthly average and daily maximum concentration and loading in accordance with N.J.A.C. 7:14A-6.2(a)14 and the facility's DRBC Docket No. 1971-009 CP-10. These monitoring conditions are required by DRBC to evaluate the TDS concentration level in the effluent and ensure that it will not exceed the basin wide limitation of 1000 mg/L in accordance with the Effluent Quality Requirements of the DRBC Water Quality Regulations at section 3.10.4.D.2.

The monitoring frequency shall be **once per month** in accordance with the facility's DRBC Docket No. 1971-009 CP-10. The sample type shall be **24-hour composite**.

8. Bacterial Indicator - Fecal Coliform and E. coli:

Since E. Coli criteria was adopted for freshwater in the October 2006 SWQS at N.J.A.C. 7:9B-1.14(d)1(ii), a monitoring requirement was included in the existing permit to determine the applicability of an effluent limitation. However, the Department has determined that the criteria specified in the SWQS for E. Coli apply to fresh waters within the State; whereas for discharges to interstate waters like the mainstem Delaware River and its tributaries thereof, it is appropriate to retain the original Fecal Coliform limitations based on the Effluent Quality Requirements of DRBC's Administrative Manual –Part III Water Quality Regulations, Section 4.30.4. This practice ensures that all discharges to the Delaware River from facilities located in different states are regulated uniformly. Additionally, this facility is regulated through an individual docket issued by the DRBC. This DRBC issued docket also specifies limitations for Fecal Coliform rather than any other bacterial indicator.

Therefore, the monitoring requirements for E. Coli have been removed from this permit renewal. A monthly geometric average of 200 colonies per 100 milliliters is carried forward in accordance with the Effluent Quality Requirements of DRBC's Water Quality Regulations, Section 4.30.4. A weekly geometric average of 400 colonies per 100 milliliters is also carried forward in accordance with N.J.A.C. 7:14A-12.5(b)2.

The monitoring frequency of **once per day** with a **grab** sample type is carried forward from the existing permit and is consistent with N.J.A.C. 7:14A-14.2.

9. Nitrate (Total as N):

Nitrate may be a pollutant of concern for this watershed. Since the discharge is to interstate waters and the Department defers to the DRBC for the implementation of nitrate in the mainstem Delaware River, no new limitations are proposed. The DRBC Water Quality Regulations do not contain an acute water quality criterion or an effluent standard for nitrate at this time. However, the Department is including a monitoring requirement as a monthly average and daily maximum concentration and loading so that current data is available in the event that the DRBC develops criteria for nitrate in the future.

If nitrate is found to be a pollutant of concern in these interstate waters, the Department in conjunction with the DRBC, may determine a TMDL for nitrate for the Delaware River and decide how that load should be divided among its sources. If a TMDL is determined to be necessary, the appropriate limitations will be incorporated into the permit at the time the TMDL is adopted.

The monitoring frequency shall be **once per month** with a **24-hour composite** sample type.

10. Whole Effluent Toxicity (WET):

Section 101(a) of the CWA establishes a national policy of restoring and maintaining the chemical, physical and biological integrity of the Nation's waters. In addition, section 101(a)(3) of the CWA and the State's SWQS at N.J.A.C. 7:9B-1.5(a)4 state that the discharge of toxic pollutants in toxic amounts is prohibited. Further, 40 CFR 122.44(d) and N.J.A.C. 7:14A-13.6(a) require that where the Department determines using site-specific WET data that a discharge causes, shows a reasonable potential to cause, or contributes to an excursion above the SWQS, the permitting authority must establish effluent limits for WET. In order to satisfy the requirements of the CWA, the State's SWQS and the NJPDES Regulations, the need for a WQBEL for WET was evaluated for this discharge.

In order to determine the need for a WET WQBEL, the Department has analyzed all available WET effluent data. For this facility, the data set consists of 18 data points dated October 2019 to April 2023. Based on the review of the applicable data set, the Department has concluded the following that WET was found in quantifiable amounts in the effluent.

In the renewal permit action issued on October 23, 2011 and effective on January 1, 2012, the Department imposed an Acute WET limitation of LC50 $\geq$ 100%. As part of the cause analysis performed during that renewal process, the long-term average (LTA) for Chronic WET was found to be more stringent than the LTA for Acute WET. However, the equivalent calculated acute limitation of 262% was applied but was changed to 100% since a limitation greater than 100% is inappropriate. In the revoke and reissue permit action issued on March 12, 2015, and effective on July 1, 2015, the Department reevaluated the issue and determined an IC25 > 26% is appropriate for this facility. This limit is more stringent than the Acute WET limitation of LC50 $\geq$ 100%. This limitation remains appropriate for this facility and is carried forward in accordance with N.J.A.C. 7:14A-13.19.

The test species method to be used for chronic testing shall continue to be the *Ceriodaphnia dubia*, Survival and Reproduction Test, 40 CFR 136.3, method 1002.0. Such selection is based on the freshwater characteristics of the receiving stream, the existing permit, N.J.A.C. 7:9B-1.5 and the Department's "Chronic Toxicity Testing Specifications for Use in the NJPDES Permit Program" document. This document is included as Appendix A of this permit, in accordance with N.J.A.C. 7:14A-6.5, 11.2(a)2.iv and 40 CFR Part 136.

The TRIR are included in accordance with N.J.A.C. 7:14A-13.17(a), 7:14A-6.2(a)5 and recommendations in Section 5.8 of the USEPA TSD. The requirements are necessary to ensure compliance with the applicable WET limitation and to expedite compliance with the WET limitation should exceedances of the WET limitation occur. As included in section B.1 of the TRIR requirements, the initial step of the TRIR is to identify the variability of the effluent toxicity and to verify that a consistent toxicity problem does in fact exist.

Sampling for WET is to be performed prior to chlorination in accordance with N.J.A.C. 7:14A-13.16(a)6.

The monitoring frequency of **once per six months** with a **composite** sample type is carried forward from the existing permit.

11. Chlorine Produced Oxidants (CPO):

The WQBELs were calculated by the procedures set forth in the USEPA TSD. Consistent with the recommendations set forth in Appendix E of the USEPA TSD, the Department utilized a site-specific CV based on the lognormal distribution statistics.

Using the steady state mass balance equation, WLAs were developed utilizing the applicable criteria specified in the New Jersey SWQS at N.J.A.C. 7:9B, pollutant specific upstream concentrations (when available), the permittee's NJPDES flow value of 80 MGD, and dilution factor from the water quality study dated September 1998 and titled "Draft Phase I and Phase II Outfall Improvements and Modeling for Delaware No. 1 WPCF" as prepared by S.T. Hudson Engineers, Inc.

For acute and chronic calculations, LTA values were developed using the 99th percentile multiplier and the more stringent results were utilized in calculating the MDL and AMLs. As per N.J.A.C. 7:14-A-13.14(a)2, limitations shall be expressed as concentration and mass loading. Refer to the table below for the input data and calculation results, and the Calculation Equations section of the fact sheet for additional reference.

Data Input and Calculation Results:

All concentration units in mg/L	**Acute**
Upstream concentration, (Cup)	0.0
Effluent flow (cfs)	123.76
Predetermined Dilution Factors (Df)	3.5
Surface Water Quality Criteria, (Ci)	0.019
Wasteload Allocation, (WLA)	0.0665
Coefficient of Variation (CV)	0.24
WLA multiplier for LTA	0.596
Long Term Average, (LTA)	0.0396
More stringent LTA	Acute
LTA multiplier for MDL	1.678
LTA multiplier for AML	1.105
Maximum Daily Limitation, (MDL)	**0.07**
Average Monthly Limitation, (AML)	**0.04**

In accordance with N.J.A.C. 7:14A-6.4(a) and 13.21(b), a schedule to achieve compliance with the new CPO WQBEL has been included in this permit. Refer to the Compliance Schedule section of this fact sheet for further clarification. The Department has not included loading limits at this time given the facility's acceptance of wet weather flows to minimize combined sewer overflows.

The monitoring frequency of **six per day** with a **grab** sample type is carried forward from the existing permit and is consistent with N.J.A.C. 7:14A-14.2.

12. Temperature:

As authorized by N.J.A.C. 7:14A-6.2(a)14, monitoring and reporting requirements for temperature are included in the permit. The permittee shall monitor for instantaneous minimum, monthly average, and instantaneous maximum influent and effluent temperature.

The monitoring frequency of **once per week** with a **grab** sample type is carried forward from the existing permit.

13. Dissolved Oxygen (DO):

Monitoring for DO as a daily average minimum is imposed in this permit action to ensure compliance with the Stream Quality Objectives of Zone 3 of the Delaware River as specified in the DRBC Water Quality Regulations.

The monitoring frequency shall be **once per day** with a **grab** sample type in accordance with N.J.A.C. 7:14A-14.2.

14. Total Phosphorus (TP):

TP may be a pollutant of concern for this watershed. Since the discharge is to interstate waters and the Department defers to the DRBC for the implementation of TP in the mainstem Delaware River and tidal tributaries, no new limitations are proposed. The DRBC Water Quality Regulations do not contain an acute water quality criterion or an effluent standard for TP at this time. However, the Department is retaining the monitoring requirement as a monthly and weekly average concentration and loading so that current data is available in the event that the DRBC develops criteria for TP in the future.

If TP is found to be a pollutant of concern in these interstate waters, the Department in conjunction with the DRBC, may determine a TMDL for TP for the Delaware River and decide how that load should be divided among its sources. If a TMDL is determined to be necessary, the appropriate limitations will be incorporated into the permit at the time the TMDL is adopted.

The monitoring frequency of once per quarter is being increased to **once per month** with a **24-hour composite** sample type.

15. Color:

In accordance with the facility's DRBC Docket No. 1971-009 CP-10, the permittee shall perform monthly sampling for color using a grab sample type to ensure that the effluent color meets the DRBC's basin-wide limit of 100 units on the platinum scale as specified in the DRBC's Water Quality Regulations under section 4.30.5.A.2.a.

The monitoring frequency shall be **once per month** with a **grab** sample type in accordance with the facility's DRBC Docket No. 1971-009 CP-10.

16. Toxic Pollutants:

The SWQS at N.J.A.C. 7:9B specify pollutant specific acute and chronic criteria for the protection of aquatic life and human health criteria for various toxic pollutants including Asbestos, and several Acids, Base/Neutrals, Metals, Pesticides, and Volatiles.

In accordance with N.J.A.C. 7:14A-13.6(a), a WQBEL shall be imposed when the Department determines pursuant to N.J.A.C. 7:14A-13.5 that the discharge of a pollutant causes an excursion above a SWQS.

The New Jersey Water Pollution Control Act as amended (N.J.S.A. 58:10A-7b(3)), commonly called the CWEA and N.J.A.C. 7:14A-6.16(a) directs the Department to include in NJPDES permits issued to delegated POTWs with an approved pretreatment program, effluent limitations for all regulated pollutants listed under the USEPA's Categorical Pretreatment Standards, adopted pursuant to 33 U.S.C., Section 1317, and such other pollutants for which local discharge limitations have been established for a permittee discharging into the CCMUA Wastewater Treatment Plant that are discharged from the facility above detectable levels. CCMUA has an approved pretreatment program and is a delegated Publicly Owned Treatment Works. The following pollutants are regulated by the permittee on its users: Total Arsenic, Total Cadmium, Total Chromium, Total Copper, Total Cyanide, Total Lead, Total Mercury, Total Nickel, and Total Zinc.

In order to determine the need for toxic pollutant specific WQBELs, the Department has analyzed all effluent data sets made available to the Department. For this facility, this data set consists of data values reported on the DMRs, quarterly WCRs, and semi-annual WCRs during the time period of June 2018 to June 2023. A pollutant is considered discharged in "quantifiable amounts" when an exact amount of that pollutant is measured equal to or above the detection level reported by a laboratory analysis in accordance with the sufficiently sensitive testing methods as detailed in Section D of this Fact Sheet and Part IV Section A of this permit. Based on the review of the data sets, the Department has concluded the following:

- All priority pollutants (except those noted below) were not found to be discharged in the effluent. These toxic pollutants do not have effluent limitations proposed in the draft permit at this time. However, monitoring and reporting requirements have been retained in this permit action based on N.J.A.C. 7:14A-13.5(k)3 and the need to re-evaluate the necessity for WQBELs upon renewal of the permit (based on the recommendations of section 3.1 of the USEPA TSD). The monitoring frequencies for these parameters are carried forward from the existing permit. The monitoring frequency for all priority pollutants (except those noted below) is semi-annual, except for 1,4 Dichlorobenzene and Bis(2-ethyhexyl) phthalate which are quarterly.

- Total Barium, Chloroform, and Methylene Chloride were discharged in quantifiable amounts in the effluent. However, the SWQS and the DRBC Water Quality Regulations do not specify acute criteria for these parameters at this time. Therefore, monitoring and reporting requirements have been retained in this permit action based on N.J.A.C. 7:14A-13.5(k)3 and the need to re-evaluate the necessity for WQBELs upon renewal of the permit (based on the recommendations of section 3.1 of the USEPA TSD).

  Consistent with 40 CFR 122.45(c) and N.J.A.C. 7:14A-13.14(b), monitoring data for toxic metals (excluding Hexavalent Chromium) shall be expressed as total recoverable. Therefore, Total Barium is being revised to Total Recoverable Barium.

  The monitoring frequency for Total Recoverable Barium is quarterly with a 24-hour composite sample type.

  The monitoring frequency for Chloroform and Methylene Chloride is quarterly with a grab sample type.

- Total Cyanide was discharged in quantifiable amounts in the effluent and is limited on the permittee's industrial users. However, since the SWQS and the DRBC Water Quality Regulations do not specify acute criteria for this parameter, the existing CWEA limitations (expressed as EEQ) are carried forward in this permit action.

  - For Total Cyanide, the CWEA concentration and loading limitations are 20 ug/L (5,996 g/day) as a monthly average and 32 ug/L (9,601 g/day) as a daily maximum.

  The monitoring frequency for Total Cyanide is once per month with a 24-hour composite sample type.

- Total Recoverable Copper, Free Cyanide, Total Recoverable Nickel, Phenols, and Total Recoverable Zinc were found to be discharged in quantifiable amounts in the effluent. Therefore, further analyses have been conducted on these pollutants.

Quantified Pollutant Analysis Methodology:

For each pollutant discharged in quantifiable amounts in the effluent, a cause analysis was conducted using the procedures specified in the USEPA TSD in accordance with N.J.A.C. 7:14A-13.5. The cause analysis consists of a comparison between the pollutant's maximum effluent concentration value (or average value of a long-term data set in the case of criteria with an averaging period longer than one year) and the pollutant's applicable site specific WLA.

Using the steady state mass balance equation, WLAs were developed utilizing the applicable criteria, pollutant specific upstream concentrations (when available), and dilution factor from the water quality study dated September 1998 and titled "Draft Phase I and Phase II Outfall Improvements and Modeling for Delaware No. 1 WPCF" as prepared by S.T. Hudson Engineers, Inc.

For the applicable pollutants (Copper, Nickel, and Zinc), the applied criteria is based on a default hardness value of 74 mg/L of CaCO3 used for Zones 2 through 5 of the Delaware River and a default WER of 1.0.

For the applicable metals, default translators were utilized to convert total recoverable data to its dissolved equivalent for the cause analyses for aquatic criteria, and, if applicable, to convert the dissolved long-term averages to total recoverable values for determining WQBELs. Translator values for the parameters listed below, if not site specific, are based on the conversion factors for dissolved metals at 40 CFR Part 131 and N.J.A.C. 7:14A-13.6(c). The default metal translators used in the analyses are as follows:

Metal	Fresh Water	
	Translator (acute)	Translator (chronic)
Copper	0.908	0.908
Nickel	0.846	0.846
Zinc	0.950	0.950

WQBEL Derivation Procedures (non 303(d) listed pollutants):

Consistent with N.J.A.C. 7:14A-13.6(a), the WQBELs were calculated using the procedures set forth in the USEPA TSD. Consistent with the recommendations set forth in the USEPA TSD (Section 5.5.2), the Department utilized a default CV of 0.6 for the analysis for Total Recoverable Nickel, a site specific CV of 0.64 for the analysis for Total Recoverable Copper, and a site specific CV of 0.27 for the analysis for Total Recoverable Zinc.

For aquatic criteria based calculations (i.e. acute and chronic), LTA values are developed from the WLAs using the 99th percentile multipliers calculated using the equations set forth in Table 5-1 of the USEPA TSD. The more stringent LTA value was then utilized in calculating the MDL(s) and AML(s). For human health criteria based calculations (carcinogenic and non-carcinogenic), the AML is set equal to the WLA consistent with the recommendations of Section 5.4.4 of the USEPA TSD. The MDL is developed from the AML utilizing a MDL-to-AML multiplier calculated in accordance with the equations set forth in Table 5-3 of the USEPA TSD based on a 99th percentile exceedance probability for the MDL and AML. The more stringent MDL/AML combination resulting from a comparison between the aquatic and human health results is established as the applicable WQBEL. In accordance with N.J.A.C. 7:14-A-13.14(a)2, effluent limitations are expressed as concentration and mass loading. The limitations for the metal parameters are expressed in the total recoverable form in accordance with 40 CFR 122.45(c).

For continuous discharges, N.J.A.C. 7:14A-13.15(a)3 states, "limitations on any pollutant or pollutant parameter where the monitoring frequency is once per month or less may be stated as a maximum daily limitation". The USEPA commented on this NJPDES regulation via a memo dated September 16, 2010 from Barbara A. Finazzo, Director, Division of Environmental Planning and Protection, USEPA-Region 2 to John Plonski, Assistant Commissioner for Water Resources Management, NJDEP.

USEPA noted in the memo that to ensure consistency with the federal regulations, New Jersey must establish permit limitations to provide both short-term and long-term controls to ensure SWQS are met.

Therefore, in situations where the monitoring frequency is once per month or less, as required by USEPA and consistent with Section 5.5.3 of the USEPA TSD, the statistical procedure is employed using n (number of samples) = 4 to derive the AML for acute, chronic and human health WQBEL calculations.

Quantified Pollutant Analysis Results:

Cause analyses were conducted on Total Recoverable Copper, Free Cyanide, Total Recoverable Nickel, Phenols, and Total Recoverable Zinc. As a result of the cause analyses, these parameters were not found to

cause or show reasonable potential to cause an excursion of the SWQS. The Department's conclusions and results are listed below:

Table A: Effluent limitation cause analysis for toxic pollutants; effluent flow of 80 MGD and stream hardness of 74 mg/L CaCO3 used for Zones 2 through 5 of the Delaware River.

Parameter	Data set time period	Number of data points	Coefficient of variation (CV)	Maximum reported data value (µg/L) (1) **A**	Calculated instream WLA (µg/L) **B**	"Cause" Y = yes N = no **A > B ?**	Aquatic criteria LTA (µg/L)	Water Quality Based Limit, if applicable (µg/L)
Copper**	6/2018 to 6/2023	(dt) = 59 (nd) = 2	0.64 (ca)	19.07 (max)	(a) = 33.50*	(a) = N	(a) = 11.17**	MDL = 36.89 (a) AML = 22.05 (a) (NOT APPLICABLE)
Cyanide, free	6/2018 to 6/2023	(dt) = 15 (nd) = 6	0.44 (ca)	19 (max)	(a) = 77	(a) = N	(a) = 31.53	MDL = 77 (a) AML = 51.15 (a) (NOT APPLICABLE)
Nickel**	6/2018 to 6/2023	(dt) = 4 (nd) = 17	0.60 (d)	65 (max)	(a) = 1,076.81*	(a) = N	(a) = 408.68**	MDL = 1,272 (a) AML = 774 (a) **(IMPOSED)**
Phenols	6/2018 to 6/2023	(dt) = 4 (nd) = 15	0.33 (ca)	11 (max)	(a) = 17.5	(a) = N	(a) = 8.73	MDL = 17.5 (a) AML = 12.60 (a) (NOT APPLICABLE)
Zinc**	6/2018 to 6/2023	(dt) = 61 (nd) = 0	0.27 (ca)	53.2 (max)	(a) = 308.67*	(a) = N	(a) = 182.97**	MDL = 324.91 (a) AML = 246.82 (a) (NOT APPLICABLE)

Table B: Effluent limitation reasonable potential analysis for toxic pollutants; effluent flow of 80 MGD and stream hardness of 74 mg/L CaCO3 used for Zones 2 through 5 of the Delaware River.

Parameter	Data set time period	Number of data points	Coefficient of variation (CV)	Projected Data Value (mg/L) **C**	Calculated instream WLA (mg/L) **B**	"Reasonable Potential to Cause" Y = yes N = no **C > B ?**	Aquatic criteria LTA (µg/L)	Water Quality Based Limit, if applicable (µg/L)
Copper**	6/2018 to 6/2023	(dt) = 59 (nd) = 2	0.64 (ca)	19.07 (projected max)	(a) = 33.50*	(a) = N	(a) =11.17**	MDL = 36.89 (a) AML = 22.05 (a) (NOT APPLICABLE)
Cyanide, free	6/2018 to 6/2023	(dt) = 15 (nd) = 6	0.44 (ca)	23.80 (projected max)	(a) = 77	(a) = N	(a) = 31.53	MDL = 77 (a) AML = 51.15 (a) (NOT APPLICABLE)
Nickel**	6/2018 to 6/2023	(dt) = 4 (nd) = 17	0.60 (d)	73.93 (projected max)	(a) = 1,076.81*	(a) = N	(a) = 408.68**	MDL = 1,272 (a) AML = 774 (a) **(IMPOSED)**
Phenols	6/2018 to 6/2023	(dt) = 4 (nd) = 15	0.33 (ca)	13.18 (projected max)	(a) = 17.5	(a) = N	(a) = 8.73	MDL = 17.5 (a) AML = 12.60 (a) (NOT APPLICABLE)
Zinc**	6/2018 to 6/2023	(dt) = 61 (nd) = 0	0.27 (ca)	53.2 (projected max)	(a) = 308.67*	(a) = N	(a) = 182.97**	MDL = 324.91 (a) AML = 246.82 (a) (NOT APPLICABLE)

Footnotes and Abbreviations:

(dt) = data values detected.
(nd) = data values non-detected
(d) = Default CV
(ca) = Calculated from data set

N/A = Not applicable
(a) = acute aquatic
(*) = Dissolved
(**) = Total Recoverable

LTA = Long Term Average
WLA = Waste Load Allocation
MDL = Maximum Daily Limit
AML = Average Monthly Limit

- Since the discharge of Free Cyanide and Phenols in the permittee's effluent were not found to cause or have reasonable potential to cause an excursion of the SWQS, new WQBELs are not proposed in the draft permit for these parameters at this time. However, monitoring and reporting requirements have been included in this permit action based on N.J.A.C. 7:14A-13.5(k)3 and the need to re-evaluate the necessity for WQBELs upon renewal of the permit (based on the recommendations of section 3.1 of the USEPA TSD). The monitoring frequencies for these parameters are carried forward from the existing permit.

  The monitoring frequency for Free Cyanide and Phenols is quarterly with a 24-hour composite sample type.

- Since the discharge of Total Recoverable Copper and Total Recoverable Zinc in the permittee's effluent was not found to cause or have reasonable potential to cause an excursion of the SWQS, new WQBELs are not proposed in the draft permit for this parameter at this time. However, since these parameters are regulated by the permittee on its users, the existing CWEA limitations are retained in this permit action. The limitations are as follows:

  - For Total Recoverable Copper, the CWEA concentration and loading limitations are 100 ug/L (30,000 g/day) as a daily maximum.

  - For Total Recoverable Zinc, the CWEA concentration and loading limitations are 226 ug/L (68,450 g/day) as a daily maximum.

  The monitoring frequency for Total Recoverable Copper and Total Recoverable Zinc is once per month with a 24-hour composite sample type.

- Since the discharge of Total Recoverable Nickel in the permittee's effluent was not found to cause an excursion of the SWQS, new WQBELs based on showing cause to violate the SWQS are not proposed in the draft permit for this parameter at this time. However, because of the delegated status of this facility and the fact that this pollutant is discharged in quantifiable amounts and is also limited on its users, an effluent limitation is required. Therefore, the new limitations are as follows:

  - For Total Recoverable Nickel, the CWEA concentration and loading limitations are 774 ug/L (234,635 g/day) as a monthly average and 1,272 ug/L (385,411 g/day) as a daily maximum.

  The monitoring frequency for Total Recoverable Nickel shall be once per month with a 24-hour composite sample type. This parameter is being moved to the monthly DMR.

Consistent with 40 CFR 122.45(c) and N.J.A.C. 7:14A-13.14(b), monitoring data for toxic metals (excluding Hexavalent Chromium) shall be expressed as total recoverable. As authorized by N.J.A.C. 7:14A-13.14(b)3, the monitoring data for Hexavalent Chromium shall be expressed as dissolved.

The DRBC is developing WLAs for 1,2 dichloroethane, tetrachloroethylene, and trichloroethylene. Monitoring only on a semi-annual basis for these three volatile organic compounds, 1,2 dichloroethane, tetrachloroethylene, and trichloroethylene is retained in the permit.

Because of the delegated status of the facility, effluent monitoring of at least annually for the priority pollutants as noted under N.J.A.C. 7:14A-4 et seq, Appendix A, Table II and III, molybdenum (Mo), ammonia (NH_3), and phosphorous (P), is required in accordance with N.J.S.A. 58:10A-6(n) and N.J.A.C. 7:14A-19.3(c)7. The effluent characterization monitoring data will be used at the time of the next permit action to evaluate whether effluent limitations need to be incorporated into the permit based on the CWEA.

Please refer to the "NJPDES Monitoring Report Form Reference Manual, available on the Department's website at http://www.state.nj.us/dep/dwq/pdf/MRF_Manual.pdf for further information regarding reporting.

C. Influent and Effluent Monitoring Requirements:

In order to calculate percent removals, influent monitoring is required for $CBOD_5$ and TSS in accordance with N.J.A.C. 7:14A-6.5(b) and -11.2(a) 2. As authorized by the provisions of N.J.A.C. 7:14A-6.3(a), the monitoring requirements for influent pH and temperature are included in the permit.

The annual influent monitoring requirement of the priority pollutants as noted under N.J.A.C. 7:14A-4 et seq, Appendix A, Table II and III, molybdenum (Mo), ammonia (NH_3), and phosphorous (P), is required in accordance with N.J.S.A. 58:10A-6(n) and N.J.A.C. 7:14A-19.3(c)7. The influent monitoring is required to evaluate the loading to the treatment plant to generate the percent removal data.

D. CSO Related Bypass Conditions:

The federal regulations at 40 CFR 122.41(m)(4)(i) and the Department's regulations at N.J.A.C. 7:14A-23.13(m) address bypass provisions. Specifically, EPA bypass regulations at 40 CFR 122.41(m) and the National CSO Policy allow for a facility to bypass some or all of the flow from its treatment process under specified limited circumstances. All applicable effluent limitations and monitoring conditions as included in this permit for DSN 001A are required to be met at all times during wet-weather bypassing events. These permit provisions provide the option for CCMUA to pursue the expansion of wet weather treatment capacity up to 220 MGD if future conditions warrant and subject to a Treatment Works Approval permit. An analysis against the bypass regulations at 40 CFR 122.41(m)(4)(i) is as follows:

1. Criteria: A bypass is unavoidable to prevent loss of life, personal injury or severe property damage.

   An additional flow of 40 MGD cannot be conveyed through the WPCF without risking severe damage to the treatment equipment and processes including physical damage, hydraulic overload and possible deterioration of the secondary treatment system performance.

2. Criteria: A justification for the cut-off at which the plant flow will be diverted from the secondary treatment units.

   The capacity of the CCMUA facility is limited to a peak hourly flow of 185 MGD. When flows reach 185 MGD, any additional flow in the City of Camden gravity interceptor would still be diverted through the regulator and discharged through CSO-003. Under the proposed bypass scenario, flows in excess of 185 MGD would now receive screening, primary clarification, solids and floatables removal, and disinfection.

   As part of the NJPDES permit, any CSO related bypass flows shall be monitored and reported on DMRs for outfall 001A as "Duration of Discharge." At any time that this occurs during a calendar day, whether for the entire day or a portion of that day, the Duration of Discharge shall be reported as one day for outfall 001A. In the event that the line is utilized sporadically throughout a 24-hour period, that shall also be reported as one day for outfall 001A. Additionally, the Department is requiring continuous flow metering for any flows into the plant through inclusion of the parameter "Flow, In Conduit or Thru Treatment Plant" as "Raw Sew/Influent" location. This parameter is included in Part III for the Final phase only where activation of this Final phase is conditional on a TWA.

3. Criteria: Providing a cost benefit analysis that determines wet weather treatment is more beneficial than other alternatives.

   The CCMUA provided Development and Evaluation of Alternatives (DEAR) Report prepared by CDM and "Wet Weather Upgrades at Delaware No.1 WPCF Study of Alternatives" Report prepared by G&H that list construction cost estimates for sewer separation, conventional storage, deep tunnel storage and bypass. The Department reviewed and approved the report entitled DEAR report dated June 2019 on January 30, 2020.

Submission of this report was required under the NJPDES permits for CCMUA, Camden City, and Gloucester City and provides a detailed alternatives evaluation.

4. Criteria: Demonstrate that all flows passing through the plant will receive at least primary treatment, solids floatable removal, and disinfection.

   All flows above 185 MGD will receive screenings and grit removal. Primary treatment and disinfection will be accomplished as outlined in "Wet Weather Upgrades at Delaware No.1 WPCF Study of Alternatives" Report prepared by G&H. Specifically, all flows passing the headworks and the influent pumping station will receive solids and floatable removal and will receive primary clarification and disinfection prior to discharge as established in current treatment processes. The Department's approval is conditional on an instantaneous wet weather flow of 185 MGD receiving full treatment and up to 40 MGD of additional wet weather flow will receive primary treatment, removal of solids/floatables, and disinfection. This condition is included in Category A, Part IV.H.1.c. All discharged effluent must meet all effluent limitations.

5. Criteria: Demonstrate that the secondary treatment system is properly operated and maintained.

   CCMUA is currently meeting permit limits for 5-Day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$) and Total Suspended Solids (TSS); therefore, it can be concluded that the secondary treatment system is being properly operated and maintained. Proper operation and maintenance of the WWTP is a condition of the current NJPDES permit and effluent limitations serve to monitor effluent quality to ensure that receiving water quality is maintained. CCMUA's past compliance with the effluent limitations of its current NJPDES permit demonstrates that CCMUA is in compliance with and has been operating and maintaining the treatment plant properly and will continue to do so in accordance with its permit requirement. In the event of non-compliance, enforcement action can be taken by the Department.

6. Criteria: Demonstrate that the system has been designed to meet secondary limits for flows greater than peak dry weather flows and an appropriate quantity of wet weather flows.

   Current peak dry weather flows are 60 MGD. The current treatment capacity is designed for a buildout of up to 80 MGD dry weather flow and has a maximum capacity for each treatment unit as listed below:

Existing Capacity of the Delaware No.1 WPCF	
Treatment Unit	**Peak Wet Weather Capacity**
Junction Chamber	1 unit, 130 MGD receiving flows from the County (Timber Creek) interceptor (including Gloucester City)
Barscreens	3 units, 75 MGD each, 225 MGD total capacity
Influent Pumping Station	4 pumps, 60 MGD each 1-unit stand-by, 180 MGD total capacity
Grit Tanks	3 units, 75 MGD each, 225 MGD total
Primary Clarifiers	10 units, 186 feet by 50 feet with an average side water depth of 10 feet, 18 MGD capacity each (limited by 2,000 gpd/ft2 surface overflow rate at peak hourly flow), 185 MGD total capacity
Aeration Tanks	8 units, 220 feet by 55 feet with an average side water depth of 15 feet, 185 MGD total capacity.
Final Clarifiers	8 units, 270 feet long by 78 feet wide with average liquid depth of 12 feet, 185 MGD total capacity (limited by washout of solids from secondary clarifiers at 1,200 gpd/ft2 surface overflow rate at peak hourly flow)
Disinfection	2 chlorine contact basins; 328 feet long and 31 feet wide with an average liquid depth of 14 feet.

Outfall	2 60-inch diameter outfall pipes

7. Criteria: Demonstrate that it is financially or technically infeasible to provide additional secondary treatment at this time.

   Expansion of the secondary treatment system to provide additional wet weather capacity is not feasible due to the limited space available at the site. Delaware No.1 WPCF is surrounded by occupied properties from the North, South and East sites, and Delaware River from its West side.

8. Criteria: The allowance for bypassing secondary treatment will not result in any exceedance of water quality standards or permit effluent conditions.

   The plant modifications to allow peak flows greater than 185 MGD are designed to enable the facility to meet NJPDES permit limits at all times, including for CSO related bypass flows. This alternative will not result in adverse effects as it is expected to improve overall water quality given the acceptance of additional CSO flows that would otherwise be untreated. Effluent limitations are imposed in Part III (Final Phase) and this permit stipulates that the criteria in Part IV H. Sanitary Wastewater Section must be met. All applicable effluent limitations and monitoring conditions as included in this permit are required to be met at all times during wet weather bypassing events.

If the Department approves the construction and operation of the bypass via a Treatment Works Approval, the bypass can be operated in accordance with the terms and conditions of this NJPDES renewal and the terms and conditions of any Treatment Works Approval authorizing its construction and operation. As such, effluent limitations that apply to a bypass of secondary treatment are included in the Final Phase of Part III. In order to ensure continued compliance with the National CSO Policy and 40 CFR 122.41(m), this NJPDES permit approval is also conditioned on the following permit conditions being met as included in Category A, Part IV.G.2:

2. Bypass as a CSO Measure
   a. This permit renewal serves to concur with the selection of CSO related bypass as a CSO control measure. As such, effluent limitations that apply to a bypass of secondary treatment are included in the final phase of Part III. In addition, the following conditions shall be met:
      i. Bypass is prohibited unless and until a Treatment Works Approval is issued for the construction and operation of the bypass line. If issued, operation of the bypass must comply with the terms and conditions of this NJPDES permit and the Treatment Works Approval.
      ii. As part of the use of the bypass line, bypassing of the secondary treatment is prohibited except during wet weather events when influent flows exceed 185 MGD as an instantaneous flow. All bypassed flows shall receive at least screening, primary clarification and then disinfection. All bypassed flows shall be combined with fully treated effluent flow prior to discharge.
      iii. All applicable effluent limitations and monitoring conditions included in this permit for DSN 001A are required to be met at all times including during wet weather bypassing events using the TWA approved bypass line.
      iv. At any time that this bypass occurs during a calendar day, whether for the entire day or a portion of that day, the Duration of Discharge shall be reported as one day for outfall DSN 001A. In the event that the bypass line is utilized sporadically throughout a 24-hour period, that shall also be reported as one day for outfall DSN 001A.
      v. The permittee shall continuously meter flow for any flows into the plant and report it on the DMR form under the parameter "Flow, In Conduit or Thru Treatment Plant" as "Raw Sew/Influent" for DSN 001A.

vi. Total Flow (Bypass) serves to represent an approximate amount of volume that would otherwise be discharged via Combined Sewer Overflows (CSOs) but now receives primary treatment and must be reported on the DMR.

vii. Approval of the bypass and the conditions on the use of the bypass may be modified or terminated by the Department via a subsequent permit action under N.J.A.C. 7:14A-16.4 for cause such as if there is a substantial increase in the volume or character of pollutants being introduced to the WWTP.

3. Notification of Bypass

a. The permittee shall notify the Department of bypass events by submission of Discharge Monitoring Reports. Such notification serves to meet the intent of the notice requirements of 40 CFR 122.41(m)(3). By granting this approval through a permit action, the permittee is not required to notify the Department of every individual bypass event if it complies with the notification requirements contained in this NJPDES permit.

E. Use of Sufficiently Sensitive Test Methods for Reporting:

When more than one test procedure is approved under this part for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive as defined at 40 CFR 136, 122.21(e)(3), and 122.44(i)(1)(iv).

An EPA-approved method is sufficiently sensitive where:

A. The method minimum level is at or below the level of the applicable water quality criterion or permit limitation for the measured pollutant or pollutant parameter; or

B. The method minimum level is above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

C. The method has the lowest minimum level of the EPA-approved analytical methods.

When there is no analytical method that has been approved under 40 CFR part 136, required under 40 CFR chapter I, subchapter N or O, and is not otherwise required by the Department, the permittee may use any suitable method upon approval by the Department.

For questions regarding the applicability of the rule and whether or not the facility is complying with the target level of sensitivity, contact Stephen Seeberger of the Bureau of Surface Water & Pretreatment Permitting at (609) 292-4860 or via email at Stephen.Seeberger@dep.nj.gov.

For questions regarding laboratory methodologies, certifications, or specifics relating to quantitation limits associated with individual test methods, contact the Office of Quality Assurance at (609) 292-3950 or via email at OQA@dep.nj.gov.

F. Reporting Requirements:

All data requested to be submitted by this permit shall be reported on the MRFs as appropriate and submitted to the Department as required by N.J.A.C. 7:14A-6.8(a).

Electronic Reporting Requirements

On October 22, 2015, the USEPA promulgated the final NPDES Electronic Reporting Rule (see Federal Register 80:204 p. 64064). This rule requires entities regulated under the CWA NPDES program to report certain information electronically instead of filing paper reports.

In accordance with this rule, all required monitoring results reported on MRFs shall be electronically submitted to the Department via the Department's Electronic MRF Submission Service. In accordance with this rule, the following documents or reports shall be electronically submitted to the Department via the Department's designated Electronic Submission Service:

- Sewer overflow event non-compliance reports required by N.J.A.C. 7:14A-6.10
- POTW Pretreatment Program Annual Reports consistent with 40 CFR 403.12(i) and N.J.A.C. 7:14A-19.6(f)

Consistent with the provisions of the final rule, the permittee may seek a waiver from the mandatory electronic reporting of the above identified documents and reports for just cause. Such a request shall be made in accordance with the provisions of 40 CFR 127.15 and submitted to the Department at the address identified below:

NJDEP: Division of Water Quality
Mail Code 401-02B
Permit Administration Section
P.O. Box 420
401 E. State Street
Trenton, NJ 08625-0420

Consistent with this rule, the existing reporting requirements contained in the existing permit at Part IV have been removed and are now contained at Part II of the permit. Please refer to Part II of this permit action for further details regarding the new reporting requirements as a result of the Electronic Reporting Rule.

G. General Conditions:

In accordance with N.J.A.C. 7:14A-2.3 and 6.1(b), specific rules from the New Jersey Administrative Code have been incorporated either expressly or by reference in Part I and Part II.

H. Operator Classification Number:

To obtain or determine the appropriate licensed operator classification for the treatment works specified, the permittee shall contact the Bureau of Environmental, Engineering and Permitting at (609) 984-4429.

I. Flow Related Conditions:

All flow related conditions are incorporated into the permit to implement the Treatment Works Approval Program (N.J.A.C. 7:14A-22), the Sewer Ban Program (N.J.A.C. 7:14A-22.17), the applicable Water Quality Management Plan (N.J.A.C. 7:15), and the DRBC Requirements (N.J.A.C. 7:14A-2.3(b)).

The numerical value used for flow as a permit condition is consistent with the Tri-County Water Quality Management Plan in accordance with N.J.A.C. 7:14A-15.4(b).

J. Pretreatment Conditions:

The Department approved CCMUA's industrial pretreatment program on September 26, 1985. The Permittee is a local agency that owns or operates the CCMUA Delaware #1 WPCF as defined under N.J.S.A. 58:10A-3.x and y, and 40 CFR 403.8(a). Therefore, the treatment plant operated by the Permittee is subject to the industrial pretreatment program requirements noted in this NJPDES permit NJ0026182. This program shall enable the permittee to detect and enforce against violations of the categorical pretreatment standards promulgated under Section 307 (b) and (c) of the Federal CWA and prohibited discharge standards as set forth in 40 CFR Part 403.5.

The Department intends to monitor the conduct and effectiveness of the Permittee's pretreatment program by use of an on-site audit to be scheduled in February of every other year. The on-site audit will be a discussion of the Permittee's pretreatment program operational status, industrial compliance status, enforcement activities (if any),

industrial monitoring activities, an evaluation of the IPP record keeping system, and a general discussion of the miscellaneous topics related to the pretreatment program.

The program shall comply with N.J.A.C. 7:14A-19, and be implemented in accordance with the approved pretreatment program submitted by CCMUA.

All industrial pretreatment program related plant monitoring requirements have been incorporated into the Monitoring Section of the permit and should be reported in the Pretreatment Annual Report.

K. Compliance Schedule:

Since the permittee's effluent data indicates that they may be unable to consistently comply with the final effluent limitation for CPO, a schedule of compliance is included in the permit, including interim deadlines for progress or reports of progress towards compliance with the conditions of this permit, in accordance with N.J.A.C. 7:14A-6.4(a). The compliance schedule for CPO is established at 36 months from the EDP to allow the permittee sufficient time to achieve compliance with the newly established effluent limitation. This schedule is provided in consideration of the time it would require for the permittee to undertake steps needed to modify or install treatment facilities, operations or other required measures.

Beginning on EDP + 1 year and every subsequent year after, until the final effluent limitation becomes effective, the permittee must submit a progress report to the Department on the steps taken towards compliance with the final effluent limitation. The progress report must include but is not limited to the following information:

- Investigative work as to what type of treatment options or other means of compliance are considered;
- Decision on the chosen method of treatment;
- Progress on design, bidding and construction schedule;
- The permittee's intent to do studies indicated in Part IV of this permit (to obtain site specific hardness, translator and WER values, etc.).

1. Compliance Schedule for CPO:

   a. During the 1-Initial phase, from the EDP to EDP + 3 years, the permittee shall only monitor and report for the above referenced parameter.

   b. During the 2-Interim phase, beginning EDP + 3 years, the permittee shall meet the final effluent limitation for the above referenced parameter.

   c. During the 3-Final phase, the permittee shall continue to meet the final effluent limitation for the above referenced parameter.

L. Delaware River Basin PCB Monitoring and Pollutant Minimization Plan:

On December 15, 2003 the U.S. EPA Regions 2 and 3 adopted a TMDL for PCBs for Zones 2, 3, 4 and 5 of the tidal Delaware River. On December 15, 2006, the U.S. EPA, Regions 2 and 3, adopted a TMDL for PCBs for Zone 6 (Delaware Bay). These TMDLs require that the facilities identified as discharging PCBs to the Delaware River prepare and implement PCB pollutant reduction plans (hereafter referred to as PMP).

This permit renewal requires continued sampling of the 209 PCB congeners utilizing USEPA Method 1668A on an annual basis. Both dry and wet weather sampling are required for this facility with a frequency of 2 dry weather and 2 wet weather samples per year.

This permit renewal also requires that the permittee continue to implement the approved PMP and submit a PMP annual report to the DRBC each subsequent year.

Refer to Part IV Section D of this permit for further details regarding the PMP plan requirements applicable to this facility.

M. Reclaimed Water for Beneficial Reuse (RWBR):

This draft permit contains conditions allowing the CCMUA to beneficially reuse treated effluent identified as RWBR provided the effluent is in compliance with the criteria specified for the particular use. There are two main types of RWBR uses, Public Access Use and Restricted Access Use. Conditions applicable to both types of RWBR are included herein. However, currently approved types of RWBR are included in Appendix B of this permit. As specified in Part IV, the permittee must obtain approval from the Department for each additional RWBR application prior to implementation. Approval shall be granted via a minor modification to the permit for any newly requested applications and included in Appendix B of this permit.

1. Effluent Limitations and Monitoring Requirements for Distribution of RWBR for **Public Access**

   When the permittee distributes RWBR to an approved reuse location, the surface water discharge effluent limitations contained in Part III of this permit and requirements for Public Access reuse identified in Part IV of this permit shall be met. In addition, the following system, operational and monitoring conditions shall be applicable.

   Reclaimed water shall not exceed 5.0 mg/L of TSS at a point before application of disinfection. The sample type shall be grab. The facility shall provide continuous on-line monitoring for turbidity before application of disinfection. These requirements are consistent with the Department's "Technical Manual for RWBR" and USEPA document entitled, "Municipal Wastewater Reuse, Selected Readings on Water Reuse", EPA # 430/09-91-022, September 1991 and the EPA Manual, "Guidelines for Water Reuse", EPA document # 625R-92/004, September 1992.

   Where chlorine is utilized for disinfection, CPO of at least 1.0 mg/ L shall be maintained for a minimum acceptable contact time of 15 minutes at peak hourly flow. The treatment facility shall provide continuous on-line monitoring for CPO at the reuse compliance monitoring point, which shall be prior to distribution to an approved reuse location. This requirement is consistent with the Department's "Technical Manual for RWBR" and USEPA document entitled, "Municipal Wastewater Reuse, Selected Readings on Water Reuse" EPA # 430/09-91-022, September 1991 and the USEPA Manual, "Guidelines for Water Reuse", USEPA document # 625R-92/004, September 1992.

   Fecal coliform concentrations shall not exceed 14 fecal coliforms per 100 mL at any given time (as an instantaneous maximum level). Fecal coliform concentrations shall also meet a weekly (7 day) median value of 2.2 fecal coliforms per 100 mL. This is consistent with a report entitled "Regulations Governing Agricultural Use of Municipal Wastewater and Sludge", National Academy Press, Washington, D.C. 1996, Department's "Technical Manual for RWBR" and the USEPA Manual, "Guidelines for Water Reuse", USEPA document # 625R-92/004, September 1992.

   RWBR limitations shall not exceed a total nitrogen (NO3 + NH3) concentration of 10.0 mg/L. This is the Ground Water Quality Standard (as per N.J.A.C. 7:9-6) and consistent with the Department's "Technical Manual for RWBR." This requirement only applies when RWBR is land applied, however, this requirement does not apply to spray irrigation within a fenced perimeter or otherwise restricted area. The permittee may demonstrate that a concentration greater than 10 mg/l is protective of the environment by submitting and receiving approval of the information stated in the Engineering Report section of the "Technical Manual for RWBR."

2. Effluent Limitations and Monitoring Requirements for Distribution of RWBR for **Restricted Access – Land Application and Non-Edible Crops**

When the permittee distributes RWBR to an approved reuse location, the surface water discharge effluent limitations contained in Part III of this permit and requirements for Non Edible Crops reuse identified in Part IV of this permit shall be met. In addition, the following system, operational and monitoring conditions shall be applicable.

Where chlorine is utilized for disinfection, CPO of at least 1.0 mg/L shall be maintained for a minimum acceptable contact time of 15 minutes at peak hourly flow. The treatment facility shall provide continuous on-line monitoring for CPO at the reuse compliance monitoring point, which shall be prior to distribution to an approved reuse location. This requirement is consistent with the Department's "Technical Manual for RWBR" and USEPA document entitled, "Municipal Wastewater Reuse, Selected Readings on Water Reuse" USEPA # 430/09-91-022, September 1991 and the USEPA Manual, "Guidelines for Water Reuse", USEPA document # 625R-92/004, September 1992.

Fecal coliform shall comply with the permit limitations as specified in the Effluent Limitations Table in Part III of the permit. This is consistent with a report entitled "Regulations Governing Agricultural Use of Municipal Wastewater and Sludge", National Academy Press, Washington, D.C. 1996, Department's "Technical Manual for RWBR" and the USEPA Manual, "Guidelines for Water Reuse", USEPA document # 625R-92/004, September 1992.

RWBR limitations shall not exceed a total nitrogen (NO3 + NH3) concentration of 10.0 mg/L. This is the Ground Water Quality Standard (as per N.J.A.C. 7:9C) and consistent with the Department's "Technical Manual for RWBR." This requirement only applies when RWBR is land applied, however, this requirement does not apply to spray irrigation within a fenced perimeter or otherwise restricted area. The permittee may demonstrate that a concentration greater than 10 mg/L is protective of the environment by submitting and receiving approval of the information stated in the Engineering Report section of the "Technical Manual for RWBR."

3. Effluent Limitations and Monitoring Requirements for Distribution of RWBR for **Restricted Access – Construction and Maintenance Operations and Restricted Access – Industrial Systems**

When the permittee distributes RWBR to an approved reuse location, the surface water discharge effluent limitations contained in Part III of this permit and requirements for Construction and Maintenance Operation Systems and/or Industrial Systems reuse identified in Part IV of this permit shall be met.

Other Applicable Conditions for RWBR:

The following conditions are consistent with the requirements of the Department's "Technical Manual for RWBR" and the USEPA document entitled, "Municipal Wastewater Reuse, Selected Readings on Water Reuse" USEPA # 430/09-91-022, September 1991 and the USEPA Manual, "Guidelines for Water Reuse", USEPA document # 625R-92/004, September 1992.

Only reclaimed water meeting high level treatment and the conditions detailed in the approved Operations Protocol shall be diverted for beneficial reuse. Diversion of acceptable quality reclaimed water to the reuse location shall occur only during periods of operator presence, unless other provisions for increased facility reliability are detailed in the Operations Protocol. The Operations Protocol must be reviewed and updated as required. Changes to the Operations Protocol must be submitted to the Department and approved by the Department prior to implementation. Reclaimed water produced at the treatment facility that fails to meet the criteria established in the Operations Protocol shall not be diverted for beneficial reuse and must instead, be discharged in compliance with the NJPDES/DSW permitted outfall.

The application of reclaimed water shall not produce surface runoff or ponding of the reclaimed water. Land application sites shall not be frozen or saturated when applying RWBR. All setback distances shall be consistent with the requirements of the Department's "Technical Manual for RWBR".

The permittee must post advisory signs designating the nature of the project in the area where beneficial reuse is practiced. Examples of methods for notification are identified in the Department's "Technical Manual for RWBR".

No cross-connections to potable water systems shall be allowed. All reuse system valves and outlets must be appropriately tagged or labeled to warn the public and employees that the water is not intended for drinking. All piping, pipelines, valves, and outlets must be color coded, or otherwise marked, to differentiate reclaimed water from domestic or other water, as detailed in the Department's "Technical Manual for RWBR".

The permittee is required to submit a Beneficial Reuse Annual Report on February 1 of each year. The annual report shall compile the total flow of reuse water distributed to each approved reuse site for each approved type of reuse for the previous calendar year. Specific requirements for the annual report are identified in the Departments "Technical Manual for RWBR". In addition a daily log noting the volume of water supplied, the name of the user, date of pick-up, the location and type of reuse (e.g. sewer jetting, landscape irrigation, etc…) and where it is being distributed shall be maintained on-site.

The permittee is required to submit a copy of all Reuse Supplier and User Agreements for existing reuses with its permit application package. Additional Reuse Supplier and User Agreements shall be submitted for each additional user prior to start-up of that use. A Reuse Supplier and User Agreement is a binding agreement between the permittee that supplies the RWBR and the entity that beneficially reuses this water. This agreement is required to ensure that all parties involved work to ensure that construction, operation, maintenance and monitoring of the RWBR system is in compliance with the Technical Manual, all applicable rules and regulations, this permit and the permittee's NJPDES discharge permit. The requirement for submittal of this document is consistent with N.J.A.C. 7:14A-2.11(a). Please note that a Reuse Supplier and User Agreement is not required if the supplier of the RWBR and the user are the same entity.

The permittee is required to submit and receive approval of an Engineering Report in support of RWBR approval requests for new or expanded RWBR projects as detailed in the Department's "Technical Manual for RWBR".

8 Variances to Permit Conditions:

To date, the Department has not received a variance request from the permittee.

Procedures for modifying a WQBEL are found in the SWQS, N.J.A.C. 7:9B-1.8 and 1.9. If a WQBEL has been proposed in this permit action, the permittee may request a modification of that limitation in accordance with N.J.A.C. 7:14A-11.7(a). This request must be made prior to the close of the public comment period. The information that must be submitted to support the request may be obtained from the Bureau of Environmental Analysis, Restoration and Standards at (609) 633-1441.

9 Calculation Equations:

A. Steady State Mass Balance Equation: $C_d = C_i = (Q_{up} \times C_{up} + Q_w \times WLA)/ (Q_{up} + Q_w)$

where,
- C_d = downstream concentration
- C_i = instream surface water criteria (from N.J.A.C. 7:9B)
- C_{up} = upstream concentration
- Q_{up} = upstream design low flow value, cfs
- Q_w = wastewater flow, cfs
- WLA = wasteload allocation

B. Wasteload Allocation: $WLA = C_i \times Df - C_{up}(Df - 1)$

where,
- WLA = wasteload allocation
- C_i = instream surface water criteria (from N.J.A.C. 7:9B)
- C_{up} = upstream concentration
- Df = dilution factor

C. Long Term Average: LTA = (WLA) × [WLA multiplier (LTA)]

where,
- LTA = long term average
- WLA = wasteload allocation
- WLA multiplier (LTA) = wasteload allocation multiplier for long term average, the 99th percentile multiplier, (see Table 5-1 in USEPA TSD, page 102)

D. Maximum Daily Limitation: MDL = (LTA) × [LTA multiplier (MDL)]

where,
- MDL = maximum daily limitation
- LTA = long term average
- LTA multiplier (MDL) = long term average multiplier for the maximum daily limitation , the 99th percentile multiplier, (see Table 5-2 in USEPA TSD, page 103)

E. Average Monthly Limitation: AML = (LTA) × [LTA multiplier (AML)]

where,
- AML = average monthly limitation
- LTA = long term average
- LTA multiplier (AML) = long term average multiplier for the average monthly limitation, the 99th percentile multiplier, (see Table 5-2 in USEPA TSD, page 103)

10 Permit Summary Table – DSN 001A

Unless otherwise noted, all effluent limitations are expressed as maximums. Dashes (--) indicate there is no effluent data, no limitations, or no monitoring for this parameter depending on the column in which it appears.

PARAMETER	# Det. / N.D.	UNITS	AVERAGING PERIOD	WASTEWATER DATA (1) June 2018-June 2023	EXISTING LIMITS	1-INITIAL LIMITS (2)	2-INTERIM LIMITS (2)	3-FINAL LIMITS (2)	MONITORING	
									Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant *Effluent Gross Value*	61 / 0	MGD	Monthly Avg. Daily Max. 12-Mo. Rolling Avg.	53.87 122.90 --	MR MR --	MR MR MR	MR MR MR	MR MR MR	Continuous	Metered
Flow, In Conduit or Thru Treatment Plant *Raw Sewage/Influent*	--	MGD	Monthly Avg. Daily Max.	-- --	-- --	-- --	-- --	MR MR	Continuous	Metered
Flow, Total	--	mgal	Monthly Total	--	--	--	--	MR	1/Month	Metered
Duration of Discharge *Bypass*	--	# of days	Monthly Total	--	--	--	--	MR	1/Month	Calculated
5 Day Carbonaceous Biochemical Oxygen Demand (CBOD5)	61 / 0	kg/d	Monthly Avg. Weekly Avg.	1,585.80 2,373.82	8,118 12,112	6,457 9,686	6,457 9,686	6,457 9,686	1/Day	24-Hour Composite
		mg/L	Monthly Avg. Weekly Avg.	7.74 11.08	25 40	25 40	25 40	25 40		
Influent CBOD5	61 / 0	mg/L	Monthly Avg. Weekly Avg.	227.23 273.00	MR MR	MR MR	MR MR	MR MR	1/Day	24-Hour Composite
CBOD5 Minimum Percent Removal	61 / 0	%	Monthly Avg.	96.60	86	87	87	87	1/Day	Calculated
Influent pH	61 / 0	su	Instant. Min. Instant. Max.	5.40 9.90	MR MR	MR MR	MR MR	MR MR	6/Day	Grab
Effluent pH	61 / 0	su	Instant. Min. Instant. Max.	6.00 8.40	6.0 9.0	6.0 9.0	6.0 9.0	6.0 9.0	6/Day	Grab
Total Suspended Solids (TSS)	61 / 0	kg/d	Monthly Avg. Weekly Avg.	2,412.02 4,062.95	9,084 13,626	9,084 13,626	9,084 13,626	9,084 13,626	1/Day	24-Hour Composite
		mg/L	Monthly Avg. Weekly Avg.	11.46 18.54	30 45	30 45	30 45	30 45		
Influent TSS	61 / 0	mg/L	Monthly Avg. Weekly Avg.	274.57 351.44	MR MR	MR MR	MR MR	MR MR	1/Day	24-Hour Composite
TSS Minimum Percent Removal	61 / 0	%	Monthly Avg.	95.68	85	85	85	85	1/Day	Calculated
Oil and Grease	0 / 61	mg/L	Monthly Avg. Instant Max.	<1.9 - <4.2 <1.9 - <4.2	10 15	10 15	10 15	10 15	2/Month	Grab
Ammonia (Total as N)	61 / 0	kg/d	Monthly Avg. Daily Max.	4,621.06 20,892.00	MR MR	MR MR	MR MR	MR MR	1/Day	24-Hour Composite
		mg/L	Monthly Avg. Daily Max.	23.67 55.00	35 MR	35 MR	35 MR	35 MR		

PARAMETER	# Det. / N.D.	UNITS	AVERAGING PERIOD	WASTEWATER DATA (1) June 2018-June 2023	EXISTING LIMITS	1-INITIAL LIMITS (2)	2-INTERIM LIMITS (2)	3-FINAL LIMITS (2)	MONITORING	
									Frequency	Sample Type
Total Dissolved Solids	--	kg/d	Monthly Avg. Weekly Avg.	-- --	-- --	MR MR	MR MR	MR MR	1/Month	24-Hour Composite
		mg/L	Monthly Avg. Weekly Avg.	-- --	-- --	MR MR	MR MR	MR MR		
Fecal Coliform (geometric mean)	61 / 0	# per 100mL	Monthly Avg. Weekly Avg.	8.80 78.26	200 400	200 400	200 400	200 400	1/Day	Grab
E. coli (geometric mean)	61 / 0	# per 100mL	Monthly Avg. Instant Max	14.18 2,135.10	MR MR	-- --	-- --	-- --	--	--
Nitrate (Total as N)	--	kg/d	Monthly Avg. Daily Max.	-- --	-- --	MR MR	MR MR	MR MR	1/Month	24-Hour Composite
		mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	MR MR	MR MR		
Chronic Toxicity, IC25	18 / 1	% effluent	Minimum	47.03	26	26	26	26	1/6 Months	Composite
Chlorine Produced Oxidants	61 / 0	mg/L	Monthly Avg. Daily Max.	1.01 2.20	MR MR	MR MR	0.04 0.07	0.04 0.07	6/Day	Grab
Influent Temperature	61 / 0	°C	Instant. Min. Monthly Avg. Instant. Max.	9.00 20.32 35.00	MR MR MR	MR MR MR	MR MR MR	MR MR MR	1/Week	Grab
Effluent Temperature	61 / 0	°C	Instant. Min. Monthly Avg. Instant. Max.	7.00 20.02 32.00	MR MR MR	MR MR MR	MR MR MR	MR MR MR	1/Week	Grab
Dissolved Oxygen (minimum)	--	mg/L	Daily Avg.	--	--	MR	MR	MR	1/Day	Grab
Phosphorus (Total as P)	21 / 0	kg/d	Monthly Avg. Weekly Avg.	578.30 594.92	MR MR	MR MR	MR MR	MR MR	1/Month	24-Hour Composite
		mg/L	Monthly Avg. Weekly Avg.	2.75 2.86	MR MR	MR MR	MR MR	MR MR		
Color (platinum cobalt scale)	--	units	Monthly Avg.	--	--	MR	MR	MR	1/Month	Grab
Copper, Total Recoverable	59 / 2	g/day	Monthly Avg. Daily Max.	1,496.28 4,930.00	MR 30,300	MR 30,300	MR 30,300	MR 30,300	1/Month	24-Hour Composite
		µg/L	Monthly Avg. Daily Max.	7.73 21.00	MR 100	MR 100	MR 100	MR 100		
Cyanide, Total	60 / 1	g/day	Monthly Avg. Daily Max.	1,968.30 6,560.00	5,996 9,601	5,996 9,601	5,996 9,601	5,996 9,601	1/Month	24-Hour Composite
		µg/L	Monthly Avg. Daily Max.	10.09 34.00	20 32	20 32	20 32	20 32		

PARAMETER	# Det. / N.D.	UNITS	AVERAGING PERIOD	WASTEWATER DATA (1) June 2018-June 2023	EXISTING LIMITS	1-INITIAL LIMITS (2)	2-INTERIM LIMITS (2)	3-FINAL LIMITS (2)	MONITORING	
									Frequency	Sample Type
Zinc, Total Recoverable	61 / 0	g/day	Monthly Avg. Daily Max.	4,961.20 12,599.00	MR 68,450	MR 68,450	MR 68,450	MR 68,450	1/Month	24-Hour Composite
		µg/L	Monthly Avg. Daily Max.	25.16 56.00	MR 226	MR 226	MR 226	MR 226		
Nickel, Total Recoverable	4 / 17	g/day	Monthly Avg. Daily Max.	-- --	-- --	234,635 385,411	234,635 385,411	234,635 385,411	1/Month	24-Hour Composite
		µg/L	Monthly Avg. Daily Max.	18.72 --	-- --	774 1,272	774 1,272	774 1,272		

Footnotes and Abbreviations:

MR Monitor and report only

(1) If a data set includes both detectable and non-detectable values, then the average and maximum values represent only the detectable values.

(2) The "1-Initial" Phase limitations and monitoring conditions are effective from the EDP until the EDP + 3 years. The "2-Interim" Phase limitations and monitoring conditions become effective on EDP + 3 years. The "3-Final" Phase can be activated when bypass operations began once a Treatment Works Approval is obtained.

11 Climate Change and Environmental Justice:

A. Climate Change:

The State of New Jersey and the Department are working to address and mitigate the impacts of climate change. Climate change, a result of rising atmospheric levels of carbon dioxide and other greenhouse gases, is causing significant direct and secondary changes in New Jersey's environment. Many of these changes are projected to worsen in coming years. These climate changes include increases in temperature, increases and variability in precipitation, frequency and intensity of storms, sea-level rise, ocean acidification, and associated impacts to both natural and built environments, ecological systems, human health, and the economy. Additional information is available here: https://www.nj.gov/dep/climatechange/.

The State of New Jersey is working to reduce and respond to climate change, including through enhanced water infrastructure resilience measures. This NJPDES permit requires measures to prepare for and respond to the effects of climate change, including: Adaptive Management provisions, the preparation of an Emergency Plan (including Vulnerability Analysis and Asset Management requirements), and annual precipitation analyses over the life of the permit. The requirements of this permit may be modified or updated at the discretion of the Department as technology, information, and legal or regulatory requirements relating to climate change continue to develop.

B. Environmental Justice:

Pursuant to New Jersey's Environmental Justice Law, N.J.S.A. 13:1D-157, et seq., it is the policy of the State that all residents, regardless of income, race, ethnicity, color, or national origin, have a right to live, work, learn, and recreate in a clean and healthy environment, and that no community should bear a disproportionate share of the adverse environmental and public health consequences that accompany the State's economic growth. To further the promise of environmental justice, it is the policy of the State that all New Jersey communities, and especially those disproportionately affected by environmental and public health stressors, must have a meaningful opportunity to participate in decision-making that affects their environment, communities, homes, and health.

Consistent with the objectives of the Environmental Justice Law and, as required by the Federal CSO Control Policy and NJPDES Regulations, the NJPDES permit has been subjected to an extensive public participation process throughout the three steps of the LTCP process which has continued as part of the preparation of this renewal permit. This is summarized and described in Part IV.G.2 where the goal is to continue meaningful engagement and opportunities in permitting decisions. Prior to issuance of this draft NJPDES permit, the Department held stakeholder sessions on the topics of Public Engagement, Environmental Justice, Climate Change and CSO Metrics on December 7, 2021, January 13, 2022, February 10, 2022 and February 17, 2022, respectively. A stakeholder meeting was also held on October 6, 2022 regarding permitting concepts. In addition, the Department is holding a public hearing for this NJPDES permit as detailed within the public notice with a 60-day public comment period consistent with N.J.A.C. 7:14A-15.10.

12 Summary of Permit Conditions (Category CSM – Combined Sewer Management):

A. NJPDES CSO Permit Overview

The existing NJPDES CSO Permit as issued to the CCMUA on March 12, 2015 (2015 NJPDES CSO Permit) includes NMC and LTCP conditions, consistent with the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C, and also includes a requirement to submit an LTCP. This renewal permit serves to include enhanced NMC conditions and LTCP requirements as well as to incorporate CSO controls to meet a minimum wet weather percent capture with an implementation schedule.

B. Components of Nine Minimum Controls

1. Proper Operation and Maintenance Programs for the Sewer System and CSOs

Background and Summary of 2015 Permit Requirement

The 2015 NJPDES CSO permit renewal required the permittee to implement and update annually, an Operations & Maintenance (O&M) Manual including an Emergency Plan, in accordance with N.J.A.C. 7:14A-6.12. The O&M Manual is required in order to ensure that the treatment works, including but not limited to the collection system, CSO outfall, solids/floatables facility, regulators, and related appurtenances, that are owned/operated by the permittee, are operated and maintained in a manner to achieve compliance with all terms and conditions of this permit. Additionally, Part IV.F.1 required the permittee to characterize the entire collection system, delineate characterization information in GIS, create Standard Operating Procedures (SOPs) for operations, inspections and schedule preventative maintenance, including the development of an Emergency Plan, and an Asset Management Plan. The Asset Management Plan serves to demonstrate that the entire collection system owned/operated by the permittee that conveys flows to the treatment works is perpetually and proactively managed with the appropriate resources (capital, staffing, training, supplies, equipment) allocated in the permittee's budget.

Changes were incorporated to Part IV.F.1.h. of this section in a major permit modification dated May 1, 2020. Specifically, this condition was modified to clarify that a schedule regarding identification of infiltration and inflow (I/I) were most relevant as a LTCP measure and Part IV.G.4 was modified as well.

Status of Collection System Cleaning and Maintenance and Outfall Dredging for Camden

Under baseline conditions as established in the 2016 System Characterization Work Plan, the Camden sewer pipes were heavily impacted by accumulated debris and sedimentation. An extensive cleaning program of the collection system began in 2016. This permit establishes and requires Camden to complete cleaning of its system by October 31, 2024. A summary and map of areas cleaned is provided in Attachment B of the September 8, 2023 submission to the Department.

Flows into the interceptor sewers are controlled by regulator structures which admit the dry weather flows plus a portion of the stormwater runoff during wet weather. When the rate of wet weather flows exceeds the flow rates that can be admitted to the interceptor, the remaining wet weather flows are shunted to an outfall pipe to the receiving stream. The City of Camden completed a regulator structure rehabilitation project to restore full functionality of its twenty-eight regulators in 2022.

The Camden outfalls were inspected in 2016. Based on these inspections, CCMUA and Camden undertook a cleaning and dredging program. As many of the outfalls are submerged and in tidal waters, dredging was required to regain full hydraulic capacities. CCMUA has contracted for the dredging of nine outfalls. The City of Camden has undertaken the cleaning of twelve of the twenty-two outfalls within its combined sewer system with an anticipated completion date in 2023.

Status of Collection System Cleaning and Maintenance and Outfall Dredging for Gloucester

Approximately 18 miles of sewer were cleaned and jetted between 2021 and May of 2023 out of a total of 39 miles of sewers. Gloucester City anticipates that the system-wide cleaning will be completed within 2023. A map showing the extent of the system cleaning is provided as Attachment D within the September 2023 LTCP. As a result of regular inspections of Gloucester's seven regulator structures, the need for remedial cleaning of regulator G-1 was identified and completed in May of 2023, resulting in a reduction in street flooding.

In August of 2023 CCMUA conducted an inspection of the Gloucester regulator and outfall structures and identified outfall structures with obstructions. These are expected to be cleaned in 2025 and into 2026 based on

planning, design and permitting work to be completed in 2024. A copy of the 2023 outfall and regulator inspection report is provided as Attachment E to Appendix D within the September 2023 LTCP.

Inflow and Infiltration (I/I) in the CSS

As part of the evaluation of CSO control alternatives conducted by the permittees, the June 2019 DEAR states that I&I reduction will not play a major role in long term CSO control due to the high volumes of wet weather flow generated in the combined sewered areas relative to the volume of I/I contributed from the hydraulically connected sanitary sewered areas. However, Part IV.F.1.h.1.ii of the NJPDES permit requires that I&I be identified and reduced to non-excessive levels as defined at N.J.A.C. 7:14A-1.2. A revised baseline level of I&I in and contributing to the CCMUA, Camden, and Gloucester City CSSs will be determined through the comprehensive flow monitoring and model update to be completed once the Camden and Gloucester sewers and outfall cleaning is completed. The results of this analysis will be integrated into the revised LTCP model and used in the revised control alternatives analysis to be completed in the 2027-2028 time frame.

Renewal Permit Requirements for Operation and Maintenance

The existing 2015 NJPDES CSO permit included enhancements of the NMCs to clarify requirements consistent with the Federal CSO Control Policy and N.J.A.C. 7:14A-11 Appendix C. Specifically, Part IV.F.1 contains three (3) significant components as follows: (i) O&M Manual; (ii) Emergency Plan; and (iii) Asset Management Plan, which are being continued and further clarified in this permit renewal.

i. The O&M Manual provides system operators of POTWs with the comprehensive guidance, procedures, and the necessary technical references to efficiently operate their treatment works. Proper operation and maintenance includes the implementation of detailed SOPs and corrective/preventive maintenance SOPs within a structured maintenance program, adequate funding, effective management, adequate operator staffing, training and process controls.
ii. The Emergency Plan provides operators of POTWs with the comprehensive guidance and procedures to ensure the safe and effective operation of the treatment works during emergencies or disasters of man-made or natural origin.
iii. The Asset Management Plan is a process to ensure that there is sufficient investment in the CSO control strategy as well as the planned maintenance, needed repair, replacement, and upgrade of the infrastructure for the treatment works.

Additional detail on these three requirements is as follows:

i. O&M Manual

Given that the permittee is incorporating CSO control measures as part of the LTCP, revisions and updates of these components are appropriate. The permittee was and is still required to update the Operations & Maintenance (O&M) Manual and establish an Asset Management Plan which are required to be kept on-site. The Emergency Plan is also required to be kept on-site. Note that Part IV.F.1 details the requirements related to the entire treatment works, including but not limited to the collection system, CSO outfall, solids/floatables facility, regulators, and related appurtenances including any green infrastructure which are owned/operated by the permittee, whereas Part IV.G.6 outlines new CSO control measures that will require changes to the O&M Manual, Emergency Plan and Asset Management Plan.

In continuation of the enhancements of the NMCs, this renewal permit requires the permittee to maintain and perform regular updates to the Operations & Maintenance (O&M) Manual, on an annual basis. Also, this renewal permit builds upon the 2015 NJPDES CSO permit language to further clarify the requirement pertaining to the O&M Manual for the treatment works. To supplement and improve this permit condition, the Department is enhancing the requirements for the O&M Manual to address certain requirements for the permittee's treatment works. Specifically, to ensure that the treatment works and facilities are being operated and maintained to

achieve compliance with the terms and conditions of the discharge permit, the O&M Manual must include, but is not limited to, the following details for the treatment works and facilities owned/operated by permittees:

- Normal operating positions, alternate operating positions;
- Start-up, shut-down, and draining procedures;
- Process control;
- Fail-safe features;
- Emergency operation procedures;
- Common operating and control problems;
- Out-of-service procedures;
- Instrumentation and controls descriptions;
- Engineering design information; and
- Bypass operation procedures.

The O&M Manual must provide the schedules and procedures pertaining to the preventative maintenance program and corrective maintenance procedures, or references to these procedures in the manufacturer's maintenance manuals for the treatment works' infrastructure.

Moving forward, the permittee shall include in the O&M Program and corresponding Manual, a System Cleaning Program which is designed to ensure the entire collection system, including, but not limited to, outfalls and regulators, is sufficiently clean in order to function properly and minimize CSO-related street flooding which can include overflows to basements, streets and other public and private areas. Ensuring the entire collection system is sufficiently clean can be done through regular inspection and, if necessary, cleaning. Such inspection and cleaning should be done, such that within five years, the entire system has been covered where the length of the system shall be defined in linear feet/miles. Specifically, for the CCMUA, the total system is 135 miles long. The System Cleaning Program shall also include an annual certification to be sent to NJDEP that a minimum of 20% of the system (by linear feet/miles) shall have been inspected and, if necessary, cleaned, within the last year. Alternatively, if less than 20% of the system has been completed within the last year, a statement of how much of the system was inspected and, if necessary, cleaned, within the last year and a plan to ensure that 100% of the system is inspected and if necessary cleaned, by the expiration date of the permit.

ii. Emergency Plan

Additionally, this renewal permit enhances the requirements to maintain and perform regular updates to the Emergency Plan, as necessary. To ensure effective operation of the treatment works and facilities under emergency conditions, including those due to climate change, the Emergency Plan must include a Vulnerability Analysis. The Vulnerability Analysis is intended to estimate the degree to which the treatment works and facilities would be adversely affected by each type of emergency situation which could reasonably be expected to occur including, but not limited to, those emergencies caused by natural disaster; extreme weather events, including those as a result of climate change; civil disorder; strike; sabotage; faulty maintenance; negligent operation or accident. A Vulnerability Analysis shall include, but is not limited to, an estimate of the effects of such an emergency upon the following:

- Power supply;
- Communication;
- Equipment;
- Supplies;
- Personnel;
- Security; and
- Emergency procedures to be followed.

The Emergency Plan shall include SOPs which will ensure the effective operation of the treatment works under emergency conditions, such as extreme weather events, which could be due to climate change, and extended

periods of no power. The Department's Emergency Response Preparedness/Planning Guidance and Best Practices can be found at: https://www.nj.gov/dep/dwq/erp_home.htm.

iii. Asset Management Plan

Furthermore, this renewal permit enhances the requirements to maintain and perform regular updates to the Asset Management Plan, as necessary. An Asset Management Plan must incorporate detailed asset inventories, operation and maintenance tasks and a long-range financial planning strategy and to ensure that annual revenue reserves and reinvestment are sufficient to facilitate long-term viability of the treatment works and facilities. The Asset Management Plan must include, but not limited to, the following details:

- Asset inventory/mapping and condition assessment;
- Level of service;
- Criticality/prioritization assessment;
- Life-cycle costing; and
- Long-term funding strategy of the treatment works and facilities.

The Department's Asset Management Technical Guidance can be found at: https://www.nj.gov/dep/assetmanagement/pdf/asset-management-plan-guidance.pdf.

These enhanced permit conditions for all three components are included in Part IV.F.1.

2. Maximum Use of the Collection System for Storage

Background and Summary of 2015 Permit Requirement

The 2015 NJPDES CSO permit renewal included permit conditions requiring use of the entire collection system owned/operated by the permittee to be used for in-line storage of sewage for future conveyance to the STP when sewer system flows subside. In summary, the 2015 NJPDES CSO permit required that the collection system be used to store as much flow as possible without causing CSO-related flooding and basement back-ups. This includes maintaining the ability of wastewater to flow freely into and through the system and continuing to evaluate the system for additional storage so that the collection system and STP convey and treat flows to meet the requirements of the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C.

Renewal Permit Requirements for Maximum Use of the Collection System for Storage

This renewal permit action continues the requirement for the maximum use of the collection system for storage so that the collection system can store as much flow as possible and minimize CSO discharges without causing CSO-related flooding. The renewal permit requires maintaining the ability of wastewater to flow freely into and through the system while also requiring the permittee to evaluate the system for additional storage so that the collection system and STP work together to convey and treat flows to meet the requirements of the Federal CSO Control Policy and NJPDES Regulations. These requirements can be categorized as follows:

a. The permittee shall use the entire collection system owned/operated by the permittee for in-line storage of sewage for future conveyance to the STP when sewer system flows subside by ensuring that the sewage is retained in the sewer system to the extent possible to minimize CSO discharges (i.e. volume, frequency and duration), while not creating or increasing sewage overflows, including to basements, streets and other public and private areas.

b. The permittee shall minimize the introduction of sediment and obstructions in the entire collection system owned/operated by the permittee that conveys flows to the treatment works pursuant to Sections F.1., Proper Operation and Regular Maintenance Program Requirements and F.7., Pollution Prevention.

c. The permittee shall operate and maintain the entire collection system owned/operated by the permittee that conveys flows to the treatment works pursuant to Section F.1.

d. The permittee shall identify and implement minor modifications, based on the ongoing evaluations, to enable appropriate segments of the collection system owned/operated by the permittee to store additional wet weather flows to reduce any CSOs until downstream sewers and treatment facilities can adequately convey and treat the flows.

This condition is included in Part IV.F.2.

3. Review and Modification of Pretreatment Requirements to Assure CSO impacts are Minimized

Background and Summary of 2015 Permit Requirement

The 2015 NJPDES CSO permit renewal included a permit condition regarding the review and modification of pretreatment requirements. Changes were incorporated to Part IV.F.7.c. of this section in a major permit modification dated May 1, 2020 to improve this language and to clarify the Department's expectations.

Renewal Permit Requirements for Pretreatment Requirements

To ensure consistency with the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C, the Department has retained Part IV.F.3 in the renewal permit with language modifications to emphasize the prioritization of O&M measures. This language is as follows:

a. For the SIU dischargers upstream of any CSO outfall which is owned/operated by the permittee, the permittee shall: (1) determine the locations of the SIUs; (2) identify the CSO outfalls associated with each of the SIUs; and (3) determine the discharge volume and loading of SIU-permitted parameters for each SIU. In the case of a municipal permittee or non-delegated STP permittee, information to satisfy (1) and (3) shall be obtained from the delegated local agency that regulates the SIU or, if there is no delegated local agency, from the Department. This information shall be used to prioritize O&M activities in portions of the CSS affected by SIU discharges.

b. The permittee shall require SIUs upstream of any CSO outfall which is owned/operated by the Permittee to investigate ways to minimize their discharges during wet weather and report their findings to the permittee.

c. The permittee shall establish agreements with SIUs upstream of any CSO outfall which is owned or operated by the permittee or ordinances specifying that the SIUs (especially for batch discharges, non-continuous dischargers) should restrict discharges to the extent practical during wet weather periods.

All SIU discharges are directed to the treatment plant.

This condition is included in Part IV.F.3.

4. Maximization of Flow to the POTW for Treatment

Background and Summary of 2015 Permit Requirement

The 2015 NJPDES CSO permit renewal required the operation and maintenance of the entire collection system owned/operated by the permittee that conveys flows to the treatment works to maximize the conveyance of wastewater to the STP for treatment subject to existing capacity. The permittee was required to evaluate and implement alternatives for increasing flow to the STP. These alternatives included capacity evaluations of the entire collection system owned/operated by the permittee that conveys flows to the treatment works to determine the maximum amount of flow that can be stored and transported as well as the identification of other activities conducted and/or planned to further maximize flow to the POTW.

Renewal Permit Requirements for Maximization of Flow to the POTW for Treatment

The Department has determined that the existing permit condition related to Maximization of Flow to the POTW for Treatment is still applicable to ensure the ongoing operation of the system in an effective manner and to ensure that the CSO controls are properly implemented to address the Presumption Approach as set forth in the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C. However, this permit condition requires updates to reflect the work completed as part of the LTCP. As a result, this renewal permit action continues the requirement to maximize the conveyance of wastewater to the STP for treatment with wording modifications. This includes the operation and maintenance of the collection system to increase flow to the STP in order to convey and treat flows to meet the requirements of the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C.

This condition is included in Part IV.F.4.

5. Prohibition of CSOs During Dry Weather

Background and Summary of 2015 Permit Requirement

The 2015 NJPDES CSO permit renewal included a permit condition regarding the prohibition of dry weather overflows at Part IV.F.5 where the term "dry weather overflow" is defined within the permit as follows:

> "Dry weather overflow (DWO)" means a combined sewer overflow that cannot be attributed to a precipitation event, including snow melt, within the hydraulically connected system. DWOs include the following flows: domestic sewage, dewatering activities, commercial and industrial wastewater, ground water and tidal infiltration upstream of the regulator, and any other non-precipitation event related flows downstream of the regulator to the outfall pipe.
>
> Groundwater infiltration and tidal infiltration originating downstream of the regulator are allowable sources of discharges from a CSO during dry weather. On a case-by-case basis, the Department reserves the right to allow temporary use of the CSO outfall structures for other types of discharges to address extraordinary circumstances. Such use must be specifically approved by the Department."

Renewal Permit Requirements for Prohibition of CSOs During Dry Weather

The Department has determined that the existing permit condition related to DWOs is still applicable. As a result, this renewal permit action retains the DWO definition and continues the requirement to prohibit CSOs during dry weather. This condition also serves to ensure the ongoing operation of the system in an effective manner. Part IV.F.5 is included in the renewal permit as follows:

a. Dry weather overflows (DWOs) are prohibited from any CSO outfall in the entire collection system owned/operated by the permittee.
b. All DWOs must be reported to the Department as incidents of non-compliance in accordance with the requirements at N.J.A.C. 7:14A-6.10(c) and (e), along with a description of the corrective actions taken.
c. The permittee shall inspect the combined sewer system as required under Section F.1. to minimize the potential of DWOs and to abate DWOs that occur.
d. The permittee shall prohibit any connections, including but not limited to construction dewatering, remediation activities or similar activities, downstream of a CSO regulator, that will convey flow to the CSO during dry weather. On a case-by-case basis, the Department reserves the right to allow temporary use of the CSO outfall structures for other types of discharges to address extraordinary circumstances. Any use under this provision must be specifically approved by the Department.

This condition is included in Part IV.F.5.

6. Control of Solid and Floatable Materials in CSOs

Background and Summary of 2015 Permit Requirement

The 2015 NJPDES CSO permit renewal included a permit condition that required the permittee to capture and remove solids/floatables which cannot pass through a bar screen having a bar or netting spacing of 0.5 inches or less. The permit further stipulates that this cannot be achieved by reducing the particle size of the solids/floatables. Captured debris shall be removed as necessary to ensure that there will be no flow restrictions during the next CSO discharge event and captured debris must be disposed of properly.

Renewal Permit Requirements for Control of Solid and Floatable Materials in CSOs

Prior to the issuance of the 2015 NJPDES CSO permit, the permittee installed a working solids/floatables netting facility with a spacing of 0.5 inches or less. Thus, the Department has determined that the permittee is in compliance with Part IV.F.6. of the existing permit.

The Department has determined that the existing permit condition related to the Control of Solid and Floatable Materials in CSOs is still applicable to the ongoing operation of the system in an effective manner. As a result, this renewal permit action continues the requirement to control solid and floatable material from being discharged from CSO outfalls. Additionally, the Department acknowledges that the permittee had implemented a solids/floatables control facility prior to issuance of the 2015 NJPDES CSO permit.

This condition is included in Part IV.F.6.

7. Pollution Prevention

Background and Summary of 2015 Permit Requirement

The 2015 NJPDES CSO permit renewal included a permit condition regarding implementation and upgrade of pollution prevention measures to prevent and limit contaminants from entering the collection system owned/operated by the permittee that conveys flows to the treatment works. Further, the permittee is required to enforce rules and regulations on illegal connections and unauthorized discharges into the POTW. Finally, the permittee was required to submit a schedule to revise applicable rules, ordinances and sewer use agreements to address the reduction of I/I into the collection system in accordance with Part IV.F.1.h.

Changes were incorporated to Part IV.F.7 in a major permit modification dated May 1, 2020. Specifically, this condition was modified to clarify that a schedule regarding identification of infiltration and inflow (I/I) were most relevant as a LTCP measure and Part IV.G.4 was modified as well.

Renewal Permit Requirements for Pollution Prevention

The Department has determined that the existing permit conditions related to pollution prevention are still applicable as these conditions are reflective of good operating practices. In addition, some of these conditions are already required by other regulatory mechanisms (i.e., solid waste collection and recycling ordinances). NJPDES CSO permit language regarding Pollutant Prevention is consistent with the NJPDES MS4 permit, pursuant to N.J.A.C. 7:14A-24, as is applicable to those portions of the town that are separately sewered.

This condition is included in Part IV.F.7 as follows:

a. The permittee shall continue to encourage municipalities to implement and upgrade pollution prevention measures necessary to prevent and limit contaminants from entering the entire collection system owned/operated by the permittee that conveys flows to the treatment works. Unless demonstrated to the Department to be impracticable, measures shall include, but not be limited to, the following:

i. Implementation of a regular street cleaning program.
ii. Retrofitting of existing storm drains to meet the standards in Appendix C, where such inlets are in direct contact with repaving, repairing (excluding repair of individual potholes), reconstruction, resurfacing (including top coating of chip sealing with asphalt emulsion or a thin base of hot bitumen) or alterations of facilities owned/operated by the permittee. Any exemptions to this standard are listed in Appendix C.
iii. Implementation of stormwater pollution prevention rules and ordinances.
iv. Implementation of solid waste collection and recycling ordinances.
v. Implementation of public education programs.

b. The permittee shall enforce street litter ordinances and rules and regulations on illegal connections and unauthorized discharge(s) into the POTW.

This condition is included in Part IV.F.7.

8. Public Notification to Ensure that the Public Receives Adequate Notification of CSO Occurrences and CSO Impacts

Background and Summary of 2015 Permit Requirement

The 2015 NJPDES CSO permit renewal included two permit conditions regarding public notification. The first of these required posting CSO Identification Signs at every CSO outfall. The permit specified how the signs should be installed, the size of the signs and what the signs must display. The second set of permit conditions regarding public notification are related to informing the affected public of where CSOs may be occurring based on rainfall data. The permit lists measures that can be taken by the permittee in order to inform the public of CSOs, including by website.

Renewal Permit Requirements for Public Notification

The permittee installed the required signs as specified in the permit at the CSO outfalls. In addition, the permittee incorporated measures to comply with other components of this permit condition such as creation of a notification system. As a result, the Department has determined that the permittee is in compliance with Part IV.F.8. of the existing permit.

The Department has determined that the existing permit condition related to Public Notification is still applicable and is necessary to keep the public informed of the locations of CSOs. As a result, this renewal permit action continues the requirement to maintain a CSO Identification Sign at each CSO outfall including information as to how the signs should be installed, the size of the signs and what the signs must display. The renewal permit also continues the requirement for the permittees to provide up-to-date information regarding where CSO discharges may be occurring on its website. This condition is included in Part IV.F.8 as follows:

a. The permittee shall ensure that CSO Identification Signs are posted and maintained at every CSO outfall location identified in Part III of this permit. The signs shall conform to the following specifications unless alternatives have been approved by the Department.

i. Signs shall be installed in such a manner as to have the same information visible from both the land and from the water, within 100' from the outfall pipe along the shoreline.
ii. Signs shall be at least 18" x 24" and printed with reflective material.
iii. Signs shall be in compliance with applicable local ordinances.
iv. The signs shall depict the following information below:
- Warning, possible sewage overflows during and following wet weather. Contact with water may also cause illness.
- Report dry weather discharge to NJDEP Hotline at 1 (877) 927-6337 (WARN-DEP).
- Report foul odors or unusual discoloration to NJDEP Hotline or (Permittee) at (phone number).

- NJPDES Permit Number NJ0026182.
- Discharge Serial No. (e.g. DSN 040A).
- www.state.nj.us/dep/dwq/cso.htm
- Signs that depict symbols prohibiting swimming, fishing and kayaking.

b. The permittee shall continue to employ measures to provide reasonable assurance that the affected public is informed of CSO discharges in a timely manner. These measures shall include, but are not limited to, the items listed below:

i. Posting leaflets/flyers/signs with general information at affected use areas such as beaches, marinas, docks, fishing piers, boat ramps, parks and other public places (within 100 feet of outfall) to inform the public what CSOs are, the location(s) of the CSO outfall(s) and the frequency and nature of the discharges and precautions that should be undertaken for public health/safety and web sites where additional CSO/CSS information can be found.

ii. Notification to all residents by either US Postal Service or email, (with copies sent to the NJDEP) in the permittee's sewer service area. This notification shall provide additional information as to what efforts the permittee has made and plans to continue to undertake to reduce/eliminate the CSOs and related threat to public health. Updated notifications shall be mailed on an annual basis.

iii. The permittee shall maintain on a daily basis a CSO Notification System website to inform interested citizens of CSO discharges that are occurring or have occurred.

Please note that these requirements differ from, and are less extensive than, the Public Participation requirements of the LTCP. See the LTCP Section G.2 below for details of the Public Participation requirements.

This condition is included in Part IV.F.8.

9. Monitoring to Effectively Characterize CSO Impacts and the Efficacy of CSO Controls

Background and Summary of 2015 Permit Requirement

The 2015 NJPDES CSO permit renewal required the permittee to monitor the CSO discharge events and record the date, "duration of discharge", rainfall, location of rain gauge, and quantity of solids/floatables removed for each CSO and discharge event. See also: https://www.nj.gov/dep/dwq/pdf/cso-quick-guide-dmr.pdf. Flow information can be assessed through appropriate modeling or by an appropriately placed flow meter/totaling device, level sensor, or other appropriate measuring device, where the required information shall be reported on the monitoring report form (MRF).

Renewal Permit Requirements for Monitoring to Effectively Characterize CSO Impacts and the Efficacy of CSO Controls

As per Part III of the existing NJPDES permit, the permittee submitted MRFs to the Department through monthly Discharge Monitoring Reports (DMRs) for the parameters specified above. Reported data on the DMRs include the parameters: Solids/Floatables, Precipitation and Duration of Discharge. Throughout the existing NJPDES permit cycle, the permittee submitted monthly DMRs with data for these parameters and is therefore in compliance with Part IV.F.9. This data can be found in the DEP DataMiner at: https://www13.state.nj.us/DataMiner and is also tracked by outfall at NJ CSO Outfalls (arcgis.com).

This renewal permit action continues the requirement of monitoring the CSO discharge events. This includes reporting Duration of Discharge, Precipitation, and quantity of Solids/Floatables removed from the CSO on a MRF. This permit condition requires a measure of CSO discharge events by measuring CSO “Duration of Discharge” to provide a measure of the effect of CSO controls on discharge events. In addition, these reporting requirements will continue to track precipitation trends by assessing precipitation amounts at a local rain gage. A summary of each parameter is as follows:

- Duration of Discharge represents the number of days (in whole numbers) that at least one discharge occurred from that outfall (i.e., not the number of discharge events). Sample type is "Estimated".
- Precipitation represents the total amount of precipitation (i.e. rainfall and snowmelt) measured during the monitoring period from a single rain gauge representative of the area.
- Solids/Floatables (S/F) represents the total volume (reported in cubic yards) of all S/F removed and disposed of from all outfalls during the month. Reporting a S/F value is only necessary when the S/F material is measured for disposal (e.g. filled dumpsters).

This condition is included in Part IV.F.9 as follows:

a. The permittee shall monitor the CSO discharge events and record the date, "Duration of Discharge", Precipitation, and quantity of Solids/Floatables removed for each CSO and discharge event through appropriate modeling or by an appropriately placed flow meter/totaling device, level sensor, or other appropriate measuring device, and report the required information on the MRF as required by Part III of this permit.

C. Components of Long Term Control Plan (LTCP)

1. Characterization, Monitoring, and Modeling of the Combined Sewer System

Background of 2015 Permit Requirement

The 2015 NJPDES CSO permit renewal required the permittees to characterize their sewer system and CSO discharges as part of the LTCP. The purpose of this characterization was to review the entire collection system as well as to identify all CSO outfalls and water quality impacts from CSO outfalls. Major elements of the characterization included: 1) rainfall records, 2) any activity necessary to understand the CSO discharges including sensitive areas and pollution sources, such as Significant Industrial Users (SIUs), 3) monitoring data from CSO discharges and ambient in-stream monitoring data for pathogens, 4) modeling and 5) identification of sensitive areas. The 2015 permit also encouraged the use of previously submitted studies, when appropriate.

A work plan was required by January 1, 2016 to be followed by a System Characterization Report by July 1, 2018.

Summary of Compliance with 2015 Permit Requirement

A work plan as entitled "System Characterization Report Work Plan" dated October 2015 (revised February 2016 and July 2016) was submitted to the Department. The Work Plan was approved by the Department on August 3, 2016.
The System Characterization Report is entitled "System Characterization Report" dated June 2018 (revised September 17, 2018 and January 14, 2019) was submitted to the Department. The objective of the System Characterization Report (SCR) is to provide CCMUA, the City of Camden and Gloucester City with a comprehensive and empirical understanding of the physical nature and hydraulic performance of their respective sewerage systems for use in optimizing the performance of the current systems and in the development of CSO control alternatives. The SCR is organized into eight sections: Introduction; Combined Sewer System Characterization; Hydrologic Characterization; Receiving Waterbodies; Combined Sewer System Monitoring and Modeling; Rainfall Analysis and Typical Hydrologic Record; Combined Sewer System Performance; Institutional Context; and Control Alternatives Baseline Conditions.

A response to the "Sewer System Characterization Report" was issued by the Department on January 24, 2019.

A schematic of the system that documents the system components is as follows from the "Sewer System Characterization Report":

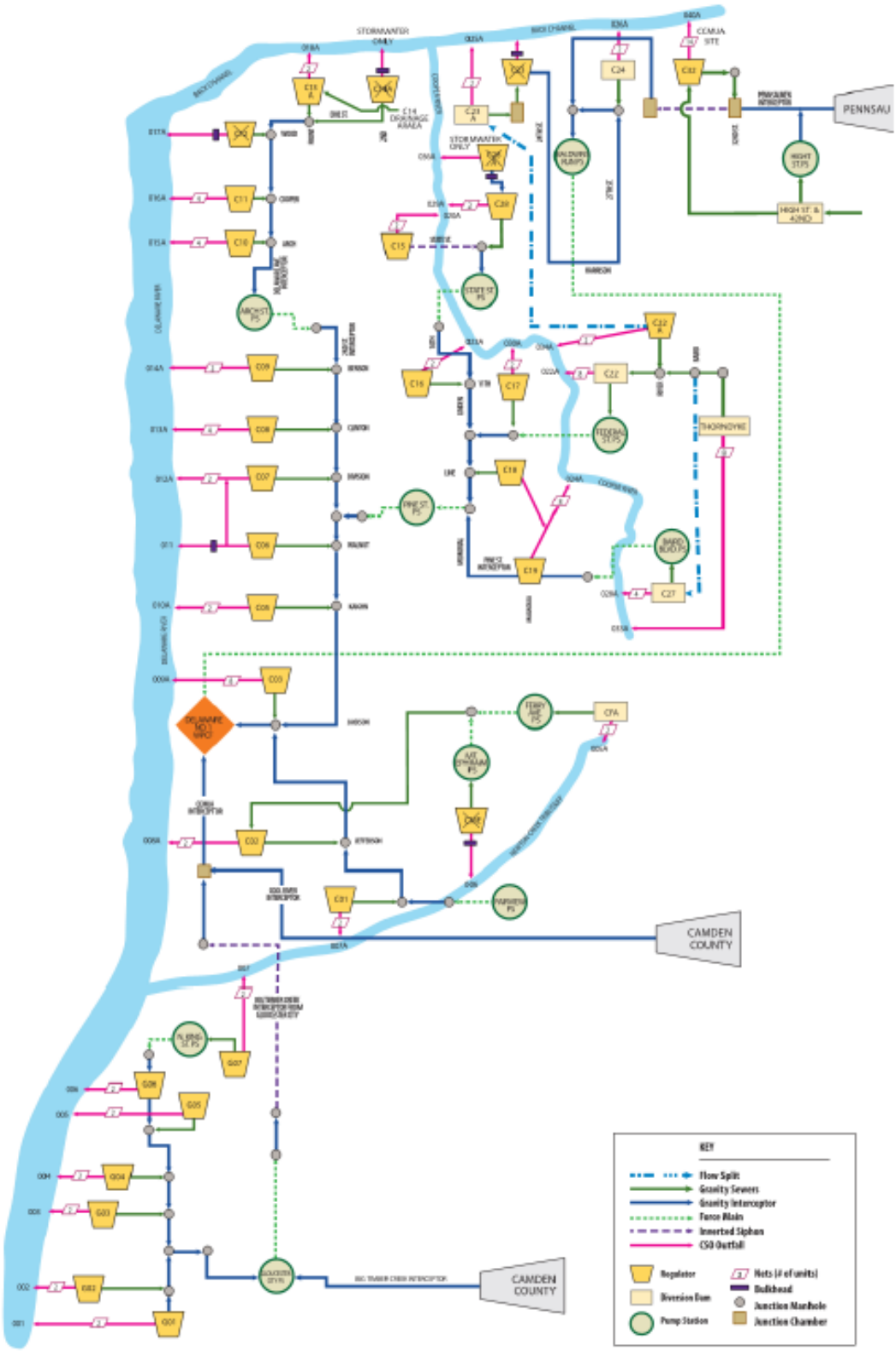


Figure 2-2 – System Schematic

Renewal Permit Requirements for Characterization, Monitoring and Modeling of the Combined Sewer System

The above information was submitted to comply with the Characterization, Monitoring, and Modeling of the Combined Sewer System requirement. This information was utilized to develop the hydrologic and hydraulic model which was then used to assess minimum wet weather percent capture. The Department determined that the permittees have submitted sufficient information to comply with the Characterization, Monitoring, and Modeling of the Combined Sewer System requirement. The Department approved the Sewer System Characterization Report on January 24, 2019 with certain conditions.

This renewal permit includes information in Part IV.G.1 to inform the status of the Characterization, Monitoring, and Modeling of the Combined Sewer System requirement; to acknowledge submittals received; and to highlight major report elements. These elements will help inform the overall CSO contributions and to assess compliance with the Presumption Approach as set forth in the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C.

This condition is included in Part IV.G.1.

2. Public Participation

Background of 2015 Permit Requirement

The 2015 NJPDES CSO permit renewal required the permittee to engage in public participation and to submit a Public Participation Process report within 36 months of the effective date of that permit. The purpose of this requirement was to actively involve the affected public throughout each of the 3 steps of the LTCP process. The affected public includes rate payers (including rate payers in the separate sewer sections), industrial users of the sewer system, persons who reside downstream from the CSOs, persons who use and enjoy the downstream waters, and any other interested persons. The Public Participation Process Plan was required to include the following elements:

- Conduct outreach to inform the affected/interested public (during the development of the permittee's LTCP) through various methods which may include: public meetings, direct mailers, billing inserts, newsletters, press releases to the media, postings of information on the permittee's website, hotline, development of advisory committees, etc.; and
- Invite members of the affected/interested public to join a Supplemental CSO Team to work with the permittee's assigned staff, consultants and/or contractors.

Regarding the establishment of the Supplemental CSO Team, this team was required to work as an informal work group as a liaison between the general public and the decision makers for the permittee regarding the planning and development of CSO control alternatives. As outlined in the 2015 NJPDES CSO permit, the goals of the Supplemental CSO Team could consist of the following elements:

- Meet periodically to assist in the sharing of information, and to provide input to the planning process;
- Review the proposed nature and extent of data and information to be collected during LTCP development;
- Provide input for consideration in the evaluation of CSO control alternatives; and
- Provide input for consideration in the selection of those CSO controls that will cost effectively meet the Clean Water Act (CWA) requirements.

Summary of Compliance with 2015 Permit Requirement

The permittee conducted and participated in a broad range of activities to comply with Part IV.G.2 in order to implement a public participation process to actively involve the public. CCMUA and the City of Camden agreed to work together to engage, inform and educate the public. A report dated June 2018, as entitled "Public

Participation Report" was submitted which outlines public participation activities that were conducted to inform the LTCP. Gloucester City submitted a report dated June 26, 2018 as entitled "Long Term Control Plan – Public Participation Process Report" which outlines public participation activities that were conducted to inform the LTCP.

The following is a summary of the major elements of the public participation process:

- The City of Camden and CCMUA created a CSO Supplemental Team that made up of 20 individuals representing more than 15 entities in order to be representative of the area and its needs. The stated purpose of the CSO Supplemental Team was to gain public perspective on CSOs, local water quality issues and sewer system problems including flooding. CSO Supplemental Team invitees were asked to continue to encourage, identify and invite people and/or entities to be involved in the LTCP process. CSO Supplemental Team meetings were held on May 25, 2017; December 13, 2017; July 17, 2018; June 18, 2019; and January 16, 2020.

- The CCMUA website (http://www.ccmua.org) provides a central resource for relevant information available to the general public. Media coverage of the LTCP Team's actions in promoting information regarding CSO problems and solutions are listed in News Archive on the CCMUA website.

- The CCMUA designed brochures to inform their rate payers of various stormwater-related issues that affect the county. The brochures are as follows:
  - 7 SMART Steps to reduce neighborhood flooding and improve stormwater management.
  - How to Prevent Stormwater Pollution.
  - Camden County Conserves – Saving Water, Saving Money.
  - Toilets Are Not Trashcans.

- The Camden SMART (Stormwater Management and Resource Training) Initiative, a voluntary collaboration among the City of Camden, CCMUA, Cooper's Ferry Partnership, Rutgers Cooperative Extension Water Resources Program, New Jersey Tree Foundation and the NJ Department of Environmental Protection was formed in 2011 to protect human health, improve conditions for economic development, improve water quality and enhance the quality of life for the residents of Camden City. The Camden SMART Initiative also had a public outreach component to CSO education.

- PowerCorps Camden is an AmeriCorps direct service program focused on improving Green Infrastructure in the City of Camden. In partnership with CCMUA and the City of Camden under the National Governor and Mayor's Initiative, Center for Family Services launched the program in December 2015. Through projects focused on Camden's green infrastructure network, PowerCorps members play a key role in maintaining green infrastructure installations including rain gardens, city and county parks, vacant lots, and stormwater inlets that comprise Camden City's network. The service projects that PowerCorps Camden members take part in are often in collaboration with CCMUA, the Camden SMART partners, and many of the Camden Collaborative Initiative partners.

- The Camden Rain Barrel Installation Program began in late June 2017 and community meetings are set up throughout the City of Camden. City residents who attend a one-hour meeting are then eligible to have a free rain barrel installed at their home. The one-hour meeting describes how the rain barrel functions and the problem with combined sewer systems. This educational program is presented by the Pennsylvania Horticulture Society and Camden SMART Partners are responsible for the promotion of the program and make the arrangements for the meetings. Flyers are printed and distributed by the Camden PowerCorps and by the host organization.

- The City of Camden and CCMUA conducted outreach through conventional media and the CCMUA website. The actions were categorized into one or more of the following:
  - Water conservation efforts, including green infrastructure and rain barrel programs.

- Impact of combined sewer overflows on environmental justice communities.
- Reduction of combined sewer overflows as a best management practice for wastewater utilities.
- Public and organizational recognition of CCMUA/Camden SMART/Camden Collaborative Initiative efforts.
- Contribution of green space and parks to stormwater management.
- Impact of climate change on water infrastructure planning.
- Wastewater treatment as a resource (e.g. for energy generation and process cooling)
- Publicization of innovative financing for infrastructure and other techniques to support stormwater reduction.

- Environmental stewardship events were held in Camden so that all stakeholders including local citizens, local workers, non-profits, and governmental entities can be educated about, and actively participate in, the green infrastructure projects addressing combined sewer flooding and overflows.
  - 5/4/2018 and 5/11/2018 – Subaru staff rain garden maintenance.
  - 4/16/2018 – Tree planting at Gateway Park.
  - 4/11/2018 – Renovation of rain garden at Urban Promise School.
  - 10/12/2017 – Camden Public School, Brimm Medical Arts.
  - 9/20/2017 – Camden City's Aramark Building Communities Day.
  - 9/17/2017 – Rutgers Environment Stewards.
  - 8/20/2017 – New Jersey American Water employees 29th Street Rain Garden maintenance.
  - 6/7/2017 – Camden Environmental Summit.
  - 4/28/2017 – Arbor Day celebration.
  - 9/15/2015 – Stantec's Union field rain garden.
  - 5/13/2015 – Home Depot volunteers rain garden maintenance.

- Gloucester City created a Supplemental CSO Team (Gloucester City Green Team) which includes Gloucester City Department of Utilities, Gloucester City Business Administrator, Rutgers University, CCMUA, NJ Arbor Group and members of the public. The goal of this team was to actively involve the public as part of the review and decision making process with a focus on the control and remediation of flooding. In addition, the goal of the team is to involve the public with CSO concerns to recommend public policy to the governing body.

<u>Renewal Permit Requirements for Public Engagement</u>

The Department is committed to active public outreach and engagement during the planning, design and construction of CSO control projects. The Public Participation outreach requirements of the 2015 permit were established to introduce, inform, and gather feedback from the interested public on the steps of the development of the LTCP. This permit, which now implements the LTCP, requires that Public Participation changes. Future public participation should be designed to inform, educate and engage specific to implementation of the CSO control projects included in the Implementation Schedule. Future public participation should include education of the public about the status of the program; document progress in implementing the program; and inform neighborhood residents before, during, and after construction. Given that the outreach requirements under Public Participation must change, this section of the permit is being renamed Public Engagement.

Renewal permit conditions regarding Public Outreach and Engagement specific to the CSO control projects specified in Part IV.G.4 are as follows:

- The permittee shall conduct a public engagement process to inform, educate and engage members of the hydraulically connected communities in accordance with Part IV.G.10. The goal of this process is to generate participation and collect input from the affected community and the interested public.
- The permittee shall develop a CSO Supplemental Team to serve as a liaison between the affected community, interested public and the decision makers for the permittee regarding the implementation of the

CSO control alternatives. The CSO Supplemental Team shall be reconstituted with the goal of including members of the following groups, at a minimum, where possible: mayor's office, local planning board, local community groups and residents from the affected areas and from any affected areas that are also overburdened communities. The permittee shall solicit members of its community to join the CSO Supplemental Team through various outreach and public notice activities. The permittees efforts to recruit CSO Supplemental Team members shall be documented on the permittee's website.

- The permittee is required to hold regular public meetings (virtual, in person, or a combination of both) in order to:
  - Inform the affected community and interested public of the ongoing progress of implementing the LTCP including reports of project status and its present impact on the local community.
  - Continue to identify areas of combined sewer related flooding.
  - Allow the affected community and interested public an opportunity to provide input on the siting of GI as required by the permit.
  - Engage the affected community and interested public in solutions they can implement to further reduce CSOs. Examples may include an adopt-a-catch-basin program, rain barrels, water conservation, the removal of impervious surfaces, and the installation of green infrastructure projects.
  - Neighborhood specific information on construction of CSO control projects throughout the process including before and during construction in order to receive feedback from the community. This should include the posting of information on scheduling of street closures as well as any other potential impacts to the residents in the vicinity of any CSO mitigation projects.
- The frequency of meetings shall be determined by the milestones in the Implementation Schedule (See G.8.) and by input from the affected community and interested public. Meeting frequency may subsequently be adjusted based on documented attendance. Meetings should be held with accessibility for the interested public in mind. This may include varying start times and attendance options (availability of public transit or parking and virtual meetings), as fits the needs of the affected community and interested public.
- The permittee shall engage with overburdened communities (OBC) within combined sewer service areas in order to solicit representation and engagement, ensure the OBCs' awareness of the meeting schedule, and encourage participation. The Department published a list of overburdened communities in the State and associated electronic mapping available at https://www.nj.gov/dep/ej/communities.html.
- For each LTCP, permittees must designate one LTCP outreach coordinator. This coordinator (or any another person designated by the permittee) shall be available to maintain regular communication with the affected community and interested public including, but not limited to:
  - Maintain a website that acts as a clearinghouse for information regarding implementation of the LTCP.
    - The website shall contain public engagement information and include a platform for the affected community and interested public to sign up and attend any meetings.
    - The website shall contain any progress reports required to be submitted by this permit.
    - The website shall also list the construction status of any project identified in the Implementation Schedule in Section G.8. below.
  - Engage the affected community and interested public in order to solicit individuals who are willing to become involved.
  - Post meeting invitations (including dates and times) on the website at least one month in advance.
  - Post handouts or other meeting materials on the website within one week after the meeting.
  - Make data available on the amount of public feedback received including the number of meeting attendees.
  - Any project identified in the Implementation Schedule in Section G.8. below must display signage indicating that the project is required by the LTCP.

- The Department's Office of Environmental Justice (see https://dep.nj.gov/ej/) shall be given 30 days advance notice of the meeting schedule so that it can be shared with Environmental Justice community leaders.
- Public meetings shall be live streamed and made available to the affected community interested public for viewing afterwards including materials in the language(s) appropriate to the majority of community demographics.
- Outreach materials, including physical handouts and websites, should be produced in the language(s) appropriate to the majority of community demographics.

This condition is included in Part IV.G.2.

3. Consideration of Sensitive Areas

Background of 2015 Permit Requirement

The 2015 NJPDES CSO permit renewal included a permit condition regarding Consideration of Sensitive Areas as part of the LTCP. Specifically, the permittee is required to give the highest priority to controlling CSOs to sensitive areas consistent with the Federal CSO Control Policy as well as N.J.A.C. 7:14A-11, Appendix C. Sensitive areas include designated Outstanding National Resource Waters, National Marine Sanctuaries, waters with threatened or endangered species and their habitat, waters used for primary contact recreation (including but not limited to bathing beaches), public drinking water intakes or their designated protection areas, and shellfish beds. As a result, the permittee's LTCP was required to prohibit new or significantly increased CSOs and to eliminate or relocate CSOs that discharge to sensitive areas wherever physically possible and economically achievable. Additionally, where elimination or relocation is not physically possible and economically achievable, or would provide less environmental protection than additional treatment, the permittee is required to provide the level of treatment for the remaining CSOs deemed necessary to meet water quality standards for full protection of existing and designated uses.

Summary of Compliance with the 2015 Permit Requirement

In accordance with Part IV.D.3.b.iv of the existing NJPDES permit, the permittee was required to submit a Consideration of Sensitive Areas report within 36 months from the effective date of the permit. CCMUA, the City of Camden and Gloucester City submitted the "Baseline Consideration of Sensitive Areas" dated June 2018. The report provided an analysis to identify any sensitive water bodies and the CSO outfalls that discharge to them. Affected waters include the Delaware River, Cooper River, and Newton Creek.

The Department issued findings on this report in a technical comment letter dated September 20, 2018 which subsequently resulted in revisions to the report. The Department's findings included concurrence that there are no Outstanding National Resource Waters or National Marine Sanctuaries within the Study Area; and there are no operational shellfish beds in the vicinity of the CSO outfalls at this time.

The Department further determined that there are no active surface water intakes used for drinking water in New Jersey in the vicinity of the CSO outfalls based on consultation with the Department's Division of Water Supply and Geoscience that oversees data management for surface water intakes. The closest intakes are in Delran (approximately 6 miles) and Burlington City (approximately 15 miles). The Department also agrees that the City of Philadelphia has three (3) surface water intakes namely Belmont, Queen Lane and Baxter (www.phila.gov/2016waterquality.com) where only the Baxter intake utilizes the Delaware River as the water source. The National CSO Control Policy and EPA guidance do not specify a set distance with respect to proximity of the CSO outfalls for this review element. However, the Department acknowledges the distance from the northernmost CSO outfall to the closest surface water intake.

CCMUA owns/operates one (1) CSO outfall (DSN 040A) in the City of Camden that discharges to the Delaware River. Regarding waters with threatened or endangered species and their habitat, the Department issued findings

that the area of the Delaware River, including in the vicinity of DSN 040A, are potential habitat for the Atlantic Sturgeon, Shortnose Sturgeon and one (1) or more freshwater mussels namely Eastern Pondmussel, Yellow Lampmussel, and/or Tidewater Mucket. As a result, the Department determined that this outfall discharges to a Sensitive Area.

The Department determined in its December 17, 2018 approval letter that the Baseline Consideration of Sensitive Areas report sufficiently addressed all review elements for the Consideration of Sensitive Areas as included in the existing NJPDES permit.

Renewal Permit Requirements for Consideration of Sensitive Areas

This renewal permit action requires CSO control measures to be implemented consistent with the Presumption Approach within the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C. This renewal permit action requires that the CSO outfalls identified in the Identification of Sensitive Areas Report as discharging to a Sensitive Area be given priority with respect to controlling overflows to meet the minimum 85% wet weather capture requirement consistent with the Presumption Approach.

This condition is included in Part IV.G.3.

4. Evaluation of Alternatives

Background of 2015 Permit Requirement

The 2015 NJPDES CSO permit renewal required the permittees to evaluate a range of CSO control alternatives to meet the requirements of the CWA as set forth in the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C using either the Presumption Approach or the Demonstration Approach as part of the LTCP. The CSO control alternatives included: green infrastructure; increased storage capacity in the collection system; STP expansion and/or storage at the plant; I/I reduction; sewer separation; treatment of the CSO discharge; and CSO related bypass of the secondary treatment of the STP. In evaluation of each CSO control alternative, the permittee was required to use hydrologic, hydraulic and water quality models to simulate the existing conditions and the conditions after construction and operation of the chosen alternative(s). Subsequent to evaluating the CSO control alternatives, the permittees were required to choose an approach to ensure that the requirements of the CWA are met for each group of hydraulically connected CSOs.

The "Presumption Approach" is a program that presumes to provide an adequate level of control to meet the water quality-based requirements of the CWA. To utilize this approach, the permittee was required to demonstrate any of the following criteria:

- No more than an average of four overflow events per year from a hydraulically connected system;
- The elimination or the capture for treatment of no less than 85% by volume of the combined sewage collected during precipitation events on a hydraulically connected system-wide annual average basis; or
- The elimination or removal of no less than the mass of the pollutants identified as causing water quality impairment.

The "Demonstration Approach" is a program that does not meet the criteria of the Presumption Approach but demonstrates that a selected control program is adequate to meet the water quality-based requirements of the CWA. To utilize this approach, the permittee would be required to demonstrate each of the following:

- The planned control program is adequate to meet Water Quality Standards and protect designated uses unless water quality standards or uses cannot be met as a result of natural background conditions or pollution sources other than CSOs;
- The CSO discharges remaining after implementation of the control program will not preclude the attainment of WQS or the receiving waters' designated uses or contribute to their impairment;
- The planned control program will provide the maximum pollution reduction benefits attainable; and

- The planned control program is designed to allow cost effective expansion or cost effective retrofitting if additional controls are subsequently determined to be necessary to meet WQS or designated uses.

Changes were incorporated to Part IV.G.4 in a major permit modification dated May 1, 2020. Specifically, this condition was modified to clarify that requirements pertaining to the identification of infiltration and inflow (I/I) as originally included in Part IV.F.1.h were more relevant as a LTCP measure in Part IV.G.4.

Summary of Compliance with the 2015 Permit Requirement

Development and Evaluation of Alternatives Report (DEAR):

Prior to the submission of the LTCP, the permittees were required to submit a Development and Evaluation of Alternatives Report (DEAR). The objective of the DEAR submission was to provide a comprehensive evaluation of CSO control alternatives that would enable the selection of alternatives to ensure the CSO controls would meet the Clean Water Act; will be protective of the existing and designated uses; give the highest priority to controlling CSOs to sensitive areas; and address minimizing impacts from SIU discharges. The DEAR was supported by several foundational studies as submitted by the permittee that culminated with the preparation of the LTCP.

The percent capture equation specified in Section 2.3 of the revised DEAR is as follows:

$$Percentage\ Capture = 1 - \frac{(Total\ CSO\ Volume + Total\ Flooding\ Volume)}{(\text{Total System WW Inflow} - \text{Total WW Flow from Separate Sanitary Communities})}$$

As described within the DEAR, the permittee divided 30 active outfalls within the combined sewer system were divided into hydraulically connected and geographically proximate groupings. A listing of the sewershed locations and general characteristics is shown in Table 2-1 of the DEAR:

Table 2-1 – Sewershed Location and General Characteristics

Sewershed / Regulator			Owner Municipality	Receiving Stream	Contributing Area (acres)
Count	Name	Status			
1	C1	Active	Camden	Newton Cr.	422
2	C2	Active	Camden	Delaware R.	193
3	C3	Active	Camden	Delaware R.	686
4	C5	Active	Camden	Delaware R.	104
5	C6	Active	Camden	Delaware R.	52
6	C7	Active	Camden	Delaware R.	66
7	C8	Active	Camden	Delaware R.	100
8	C9	Active	Camden	Delaware R.	103
9	C10	Active	Camden	Delaware R.	86
10	C11	Active	Camden	Delaware R.	175
11	C12	Inactive	Camden	Delaware R.	15
12	C13 / C13	Inactive	Camden	Delaware R. back Channel	94
	C13 / C13A	Active			
13	C14	Inactive	Camden	Delaware R. back Channel	27
14	C15	Active	Camden	Cooper R.	25
15	C16	Active	Camden	Cooper R.	33
16	C17	Active	Camden	Cooper R.	129
17	C18	Active	Camden	Cooper R.	79
18	C19	Active	Camden	Cooper R.	179
19	C22	Active	Camden	Cooper R.	518
20	C22A	Active	Camden	Cooper R.	81
21	C23A / C23	Inactive	Camden	Delaware R. back Ch.	67
	C23A / C23A	Active	Camden	Delaware R. back Ch.	
22	C24	Active	Camden	Delaware R. back Ch.	66
23	C27	Active	Camden	Cooper R.	120
24	C28 / C28	Active	Camden	Cooper R.	33
	C28 / C28A	Inactive	Camden	Cooper R.	
25	C32	Active	CCMUA	Delaware R. back Ch.	491
26	CFA	Active	Camden	Newton Cr.	170
27	CME	Inactive	Camden	Newton Cr.	122
28	G1	Active	Gloucester	Delaware R.	160
29	G2	Active	Gloucester	Delaware R.	16
30	G3	Active	Gloucester	Delaware R.	20
31	G4	Active	Gloucester	Delaware R.	144
32	G5	Active	Gloucester	Delaware R.	182
33	G6	Active	Gloucester	Delaware R.	468
34	G7	Active	Gloucester	Newton Cr.	10
Totals					5,235

These groupings are also shown in Figure 2-2:

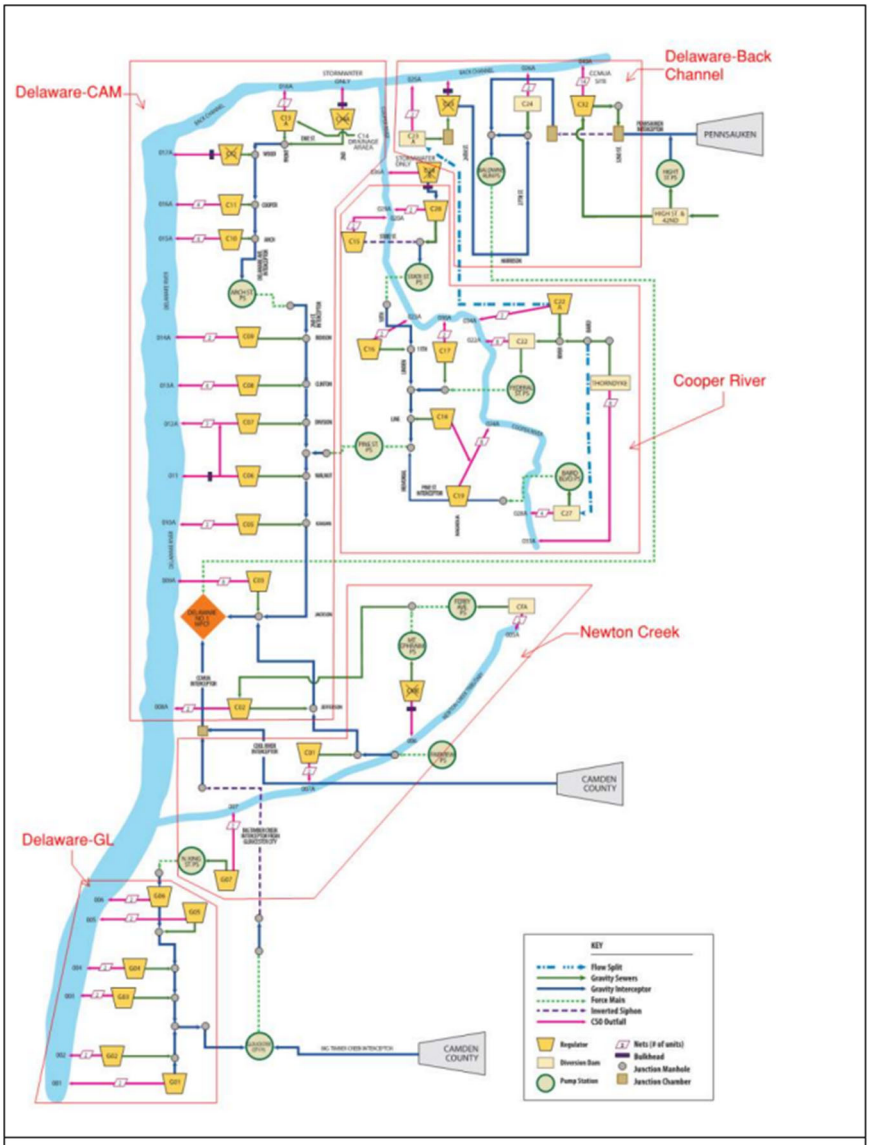


Figure 2-2 – Logical Groupings of Outfalls - Schematic View

Table 2-2 of the DEAR shows a list of active outfalls and the total number of active outfalls by group:

Table 2-2 – CSO Outfall Groupings

Outfall Grouping		Active Outfalls	No. of Active Outfalls
1	Delaware River – Camden	C2 – C13A	9
2	Delaware River – Gloucester	G1-G6	6
3	Delaware River – Back Channel	C23A, C24, C32	3
4	Cooper River	C15-C19, C22, C22A, C27, C28, Thorndyke	9
5	Newton Creek	C1, CFA, G7	3
	Total		30

As stated within the DEAR, the expansion of wet weather treatment capacity at WPCF, along with the restoration of the hydraulic capacity of the Camden collection system and controlling runoff from 10% of the directly connected impervious area (DCIA), will not result in 85% system-wide wet weather capture. In addition, system hydraulics preclude achievement of the 85% capture target through the expansion of the treatment plant and source reduction alone. Therefore, either satellite facilities and / or expanded conveyance capacities will be required in some subsystems to meet regulatory control targets. A summary of projected attainment of 85% capture from the DEAR as well as descriptive language of the relative amounts of contributing acres within the system is as follows:

Delaware River – Camden: Expansion of the WPCF and attainment of GSI with the systemwide control of runoff from 10% of the DCIA will allow for wet weather percent capture of at least 85%. As per Table 2-1 and 2-2 above, the Delaware River – Camden group encompasses 9 outfalls where the number of contributing acres is approximately 32% of the entire system. This system includes outfall C-3 which has the largest number of contributing acres within the system namely 686 acres.

Delaware River – Gloucester: – A conveyance only 85% capture control option would be feasible through the operation of the Gloucester City pump station to 45 MGD during wet weather along with regulator modifications and interceptor upsizing. Potential impacts on other areas served by the Gloucester City pump station would need to be evaluated and managed. A satellite treatment or storage facility for Gloucester City would be hydraulically feasible. Potential sizes and sites of a Gloucester facility and relationship to the Gloucester interceptor sewer capacity must be evaluated.

Delaware River – Backchannel: The Delaware River Backchannel subsystem is hydraulically isolated from the impacts of expanding the WPCF by the current capacity limits of the Baldwins Run pump station and force main. By removing the Pennsauken wet weather flow at High Street that is currently routed into the Camden Collection system, the need for satellite treatment or storage at C-32 could be eliminated. The Baldwin Run's pump station would need to be upgraded to 25 MGD capacity which could be possible without upsizing the force main to the WPCF. Outfall C-32 has one of the largest amount of contributing acres namely 491 acres.

Cooper River: The Cooper River is hydraulically isolated from the impacts of expanding the WPCF by the capacity limits of the Pine Street pump station and force main. As a result, achieving 85% capture in the Cooper River subsystem will require satellite treatment or storage and/or significant conveyance capacity upgrades starting at the C-27 and Thorndyke outfalls to the WPCF through a dedicated process train or a combination of other high rate treatment processes.

Newton Creek: Expansion of the WPCF and attainment of GSI with the systemwide control of runoff from 10% of the DCIA will allow for wet weather percent capture of at least 85%. As per Table 2-1 and 2-2 above, the Newton Creek group encompasses 3 outfalls that includes 714 acres which encompasses 14% of the entire system.

The DEAR provided sufficient analysis of the required CSO technologies and was approved by the Department on January 30, 2020.

Selected Alternatives in the LTCP:

The Evaluation of Alternatives is supported by several foundational studies as submitted by the permittees that culminated with the preparation of the LTCP. As described within the LTCP, the permittees state that LTCP recommendations are based upon information and evaluations performed during the earlier phases of the planning process, including the characterization of the receiving waters, hydraulic and water quality modeling, screening of CSO control technologies, development and evaluation of alternatives, public participation, and the nine minimum controls.

The LTCP was submitted in September 2020. The Department issued technical comment letters and requests for information as cited in the Contents of the Administrative Record. A revised version of the LTCP dated September 2023 incorporated responses to the Department's requests for information and serves to update the 2020 report to reflect progress to date.

A summary of projects included in Section 8 of the LTCP is as follows:

Due Date	Permittee Lead	Activities
2023	Gloucester	Complete initial inspection & cleaning of 100% of Gloucester collection system.
2024	Camden	Complete initial inspection & cleaning of 100% of Camden collection system.
2025	CCMUA	Begin new flow monitoring to assess flow levels in the in the CCMUA, Camden & Gloucester systems.
	Gloucester	Complete Gloucester CSO outfall cleaning to restore hydraulic capacity.
	Camden & Gloucester	Formalize Green Stormwater Infrastructure (GSI) Programs.
	Camden & Gloucester	Formalize Street Flooding Mitigation Programs.
2026	CCMUA	Complete new flow monitoring in the CCMUA, Camden & Gloucester systems.
	CCMUA	Update the Hydrologic/Hydraulic model as a result of new flow monitoring.
	Camden & Gloucester	Continued implementation of GSI and Street Flood Mitigation Programs.
2027	Camden & Gloucester	Continued implementation of GSI and Street Flood Mitigation Programs.
2028	CCMUA	Complete evaluation of structural control alternatives to capture a minimum of 85% of the annual average combined sewage collected in the system during wet weather and submit to the NJDEP for review.
	CCMUA	Develop Cooper River Water Quality Strategy
	CCMUA	Complete implementing C-32 Controls.
	Camden & Gloucester	Continued implementation of GSI and Flood Mitigation Programs.
2029-2033	CCMUA, Camden & Gloucester	Planning, design, permitting and land acquisition for structural control alternatives to capture a minimum of 85% of the annual average combined sewage collected in the system during wet weather.
	Camden & Gloucester	Continued implementation of GSI and Street Flood Mitigation Programs.
2034-2038	Camden & Gloucester	Construct structural control alternatives to capture a minimum of 85% of the annual average combined sewage collected in the system during wet weather.
	Camden & Gloucester	Continued implementation of GSI and Street Flood Mitigation Programs.

The September 2020 LTCP and September 2023 revised LTCP did not make a recommendation between storage and treatment. Additional satellite or storage controls will be needed for certain CSO discharges to the Cooper River in Camden and to the Delaware River in Gloucester City. Based on the post cleaning flow monitoring and H&H model update, the permittees will provide an analysis that will include final sizing of and scheduling for the implementation of the facilities will occur as a part of facilities planning. The updated analysis will include detailed design and construction schedules.

Compliance with Wet Weather Percent Capture:

The DEAR states that the Presumption Approach has been selected in Section 3. The minimum 85% wet weather capture requirement is specified in the Federal CSO Control Policy and the NJPDES permit at Part IV.G.4.f.ii. The baseline percent calculation utilized for the LTCP is specified in 2.3 of the revised DEAR and is as follows:

$$Percentage\ Capture = 1 - \frac{(Total\ CSO\ Volume + Total\ Flooding\ Volume)}{(\text{Total System WW Inflow} - \text{Total WW Flow from Separate Sanitary Communities})}$$

The baseline condition percent capture is listed in Table 1-2 of the DEAR where details for the system are as follows:

Table 1- 2 – System Wide Performance Characteristics Used for Control Alternatives Development

System Wide Performance Metrics		Baseline Condition	Upon Completion of Current Improvements [1]	Further Increase in Wet Weather Treatment Capacity[1]
		Camden Hydraulic Capacity not Restored	*Camden Hydraulic Capacity Restored*	*Camden Hydraulic Capacity Restored*[2]
WPCF # 1 Capacity		150 MGD	185 MGD	185 MGD full treatment + 35 MGD through CSO Related Bypassing
1	% Capture	68%	76%	79%
2	Overflow Volume (million gallons)	829	627	541
3	Range of Overflow Frequencies (events)	10-69	5-70	9-70[4]
4	Modeled Surface Flooding (million gallons)	90	44	43

Note: 1. Does not include a 10% reduction in directly connected impervious area.

2. Includes C3 regulator opened to utilized increased available wet weather treatment capacity.

3. Ranges reflect variations between individual CSO outfalls.

4. The increase in minimum overflow frequency is due to the increased capture flow at C3 preventing the flow at C5 from being captured. This led to an increase of overflow volume at C5 (1 MG) and 4 more overflows during the typical year. Meanwhile annual overflow at C3 reduced by 100 MG.

For comparison, a summary of percent capture after implementation of the CSO control alternatives is shown below. This information is summarized from Table 7-1 as entitled “Project Cumulative CSO Control Levels as the Program is Implemented” of the revised LTCP:

Program Element		System Wide
Baseline	**Baseline Conditions**	
	Percent Capture	69%
	Overflow Volume (MGY)	822.9
	Modeled Street Flooding (MGY)	79.7
Program Element 1	**System Optimization – Completion of Current Projects**	
	Percent Capture	78%
	Overflow Volume (MGY)	579.9
	Modeled Street Flooding (MGY)	33.0
Program Element 2	**Efficacy Evaluation**	
Program Element 3	**Formalized Green Stormwater Infrastructure Program**	
	Percent Capture	81%
	Overflow Volume (MGY)	487.0
	Modeled Street Flooding (MGY)	24.4
Program Element 4	**Street Flooding Mitigation Program**	
Program Element 5	**Cooper River Regional Water Quality Optimization Strategy**	
Program Element 6	**Additional Structural Controls** (statistics are for satellite storage for Del-GL and Cooper)	
	Percent Capture	86%
	Overflow Volume (MGY)	341.5
	Modeled Street Flooding (MGY)	<24.4

Summary:

As shown above, the selected long term control program consists of six program elements that will have phased and overlapping implementation schedules. These six program elements are summarized from the revised LTCP and are as follows:

1. ***Completion of Projects to Optimize Current Assets*:** Since the submittal of the LTCP in September of 2020, CCMUA has completed the capacity expansion of its WPCF to 185 MGD in 2020. The City of Camden has also completed the rehabilitation of 28 regulator structures; upgrades to the Arch Street pump station; and is working towards the restoration of the hydraulic capacity of Camden's CSS through a comprehensive sewer and outfall cleaning and rehabilitation program. Gloucester City has also been progressing with system-wide collection system and outfall cleaning and as-needed spot repairs.

2. ***Efficacy Evaluation*:** The evaluation of the efficacy of these recent improvements as described above will occur through comprehensive flow monitoring which will take place upon completion of the comprehensive system wide cleaning. This flow monitoring will inform the refinement and recalibration

of the existing hydrologic / hydraulic model to reflect current conditions. This will establish a new baseline of overflow statistics informed by the wet weather operating history with these capacity improvements in place.

3. ***Formalized Green Stormwater Infrastructure Program*:** Camden's, Gloucester City's and CCMUA's green stormwater infrastructure (GSI) and neighborhood redevelopment efforts will be formalized and expanded with a goal of optimizing the capture of stormwater runoff to the combined sewer system.

4. ***Street Flooding Mitigation Program*:** It is proposed that a Comprehensive Street Flooding Mitigation Program be developed by each city with technical assistance from CCMUA as an early long term CSO control plan implementation action. This will serve as the basis for short and long term operational and capital improvements.

   Contextually, a reduction in street flooding along the Delaware River has been observed as a result of the paralleling efforts of sewer and outfall cleaning and the expansion of treatment capacity at CCMUA's WPCF.

5. ***Cooper River Water Quality Optimization Program*** –CCMUA and the City of Camden are committing to work with the other Cooper River municipalities, stakeholders and NJDEP to develop a Cooper River Water Quality Optimization Strategy.

6. ***Additional Structural Controls*** – Additional CSO controls were evaluated for three of the five sub-systems to achieve the control objective of 85% system-wide wet weather capture. Upon completion of the remedial system-wide sewer cleaning efforts by the City of Camden and Gloucester City, CCMUA will undertake a comprehensive flow monitoring program to provide data for the updating of the LTCP model which will provide updated capture rate data and refine the understanding of additional controls necessary to achieve 85% system-wide wet weather capture.

In the LTCP, CCMUA and the Cities proposed that the scope and sizing of the satellite facilities be re-evaluated through an updated LTCP including construction to occur during subsequent permit cycles. This timing was intended to provide sufficient time for the completion of the system capacity restoration in Camden and Gloucester City, the implementation of likely feasible GSI for DCIA removal prior to conducting a comprehensive flow monitoring and modeling update to document the system condition then and re-evaluate control needs.

The permittee has submitted the required studies that form the basis of the Evaluation of Alternatives where these studies have been previously approved by the Department as noted in the Contents of the Administrative Record. In addition, the permittee has selected the minimum 85% wet weather capture criteria of the Presumption Approach as a means of compliance with the Federal CSO Control Policy and the NJPDES permit at Part IV.G.4.f.ii. As described within the LTCP, this value will be met through the implementation of CSO control alternatives identified above.

<u>Renewal Permit Requirements for Evaluation of Alternatives</u>

This permit renewal includes an implementation schedule as well as specific requirements to track and assess compliance with the attainment of wet weather percent capture upon completion of the CSO control alternatives. In order to evaluate the performance of the CSO control measures, the permittees are required to demonstrate a value of 85% wet weather capture through the use of the hydrologic and hydraulic model. Please refer to Part IV.G.9 for compliance with this performance criteria.

This condition is included in Part IV.G.4.

5. Cost/Performance

Background of 2015 Permit Requirement

The 2015 NJPDES CSO permit renewal included a permit condition regarding Cost/Performance as part of the LTCP. The Cost/Performance requirement is intended to demonstrate the relationships among proposed control alternatives that correspond to those required in Section G.4. This shall include an analysis to determine where the increment of pollutant reduction achieved in the receiving water diminishes compared to the increased costs. This analysis, often known as the "knee of the curve" analysis, is used in order to help guide the selection of controls. The permittee can use previous studies to the extent that they are accurate and representative of a properly operated and maintained sewer system and of the required information.

Summary of Compliance with 2015 Permit Requirement

As described in Section 5.4.1, Cost and Performance Evaluation of the LTCP contains a cost and performance evaluation. The analysis evaluated the relationship between the frequencies of overflows from the 30 active outfalls and the volumes of combined sewage discharged from the overflows.

Renewal Permit Requirements for Cost/Performance

In accordance with Part IV.D.3.b. of the existing NJPDES permit, the permittee was required to develop an approvable LTCP. Capital costs were evaluated for the purposes of the LTCP. The Department is requiring that the permittee complete all projects set forth in the Implementation Schedule included in Part IV.G.8.

This condition is included in Part IV.G.5.

6. Operational Plan

Background of 2015 Permit Requirements

The 2015 NJPDES CSO permit renewal included a permit condition regarding the Operational Plan as part of the LTCP in Part IV.G.6.

Summary of Compliance with the 2015 Permit Requirements

Section 6.5 of the LTCP as entitled "Institutional Context" specifies that the permittee would prepare updates to their O&M manual to include any new or modified facilities which are a part of the LTCP. These manuals would include a description of the equipment and features of the facility, operating instructions, maintenance guides, and safety considerations.

Renewal Permit Requirements for the Operational Plan

In accordance with N.J.A.C. 7:14A-6.12 of the NJPDES Rules, the permittee must maintain and operate the treatment works and facilities installed by the permittee to achieve compliance with the terms and conditions of the discharge permit. The rules provide that proper operation and maintenance includes, but is not limited to, effective performance; adequate funding; effective management; adequate staffing and training; regularly scheduled inspections and maintenance; and adequate laboratory/process controls.

As the CSO Control Measures are implemented in accordance with the implementation schedule, updates will need to be incorporated to the Operational Plan which includes the O&M Manual, Emergency Plan and Asset Management Plan. These updates shall address effective performance; adequate funding; effective management; adequate staffing and training; regularly scheduled inspections and maintenance; and adequate laboratory/process controls. In addition, this shall include the operation and maintenance of green infrastructure.

As noted above, the permittee must maintain and operate the treatment works installed by the permittee to achieve compliance with the terms and conditions of the discharge permit pursuant to N.J.A.C. 7:14A-6.12. Part

IV.F.1 (Proper Operation and Regular Maintenance Program Requirements) of the existing NJPDES permit, required the permittee to characterize the entire collection system, delineate characterization information in GIS, and create Standard Operating Procedures (SOPs) for operations, inspections, & scheduled preventative maintenance, including an Emergency Plan and incorporate an Asset Management Plan. In addition, Asset Management is the process to ensure that there is sufficient investment in the CSO control strategy as well as the planned maintenance, needed repair, replacement, and upgrade of the physical components of the infrastructure for the treatment works.

This condition has been updated as follows:

a. Throughout implementation of the LTCP as appropriate, the permittee shall modify the Operational Plan, including Operation & Maintenance (O&M) Manual, Emergency Plan, and Asset Management Plan in accordance with F.1., to address the LTCP CSO control facilities and operating strategies, including but not limited to: the implementation, operation, and maintenance of Gray and Green Infrastructure; staffing and budgeting; and I/I. Climate change resilience requirements shall also be considered in the update of these plans.

This condition is included in Part IV.G.6.

7. Maximizing Treatment at the Existing STP

Background of 2015 Permit Requirements

The 2015 NJPDES CSO permit renewal included a permit condition regarding Maximizing Treatment at the Existing STP as part of the LTCP. Specifically, this permit condition required a demonstration of the maximization of the removal of pollutants during and after each precipitation event at the STP to ensure that such flows receive treatment to the greatest extent practicable, utilizing existing tankage for storage, while still meeting all permit limits.

Summary of Compliance with 2015 Permit Requirements

The LTCP includes CSO control measures to demonstrate the maximization of the removal of pollutants during and after each precipitation event at the STP. These measures are designed to ensure that such flows receive treatment to the greatest extent practicable utilizing existing tankage for storage, while still meeting all permit limits.

Renewal Permit Requirements for Maximizing Treatment at the Existing STP

This renewal permit action identifies that adequate and effective CSO control measures are being implemented consistent with the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C. However, this permit condition has been continued to ensure that construction of the CSO controls continues and current practices are maintained to ensure compliance with the Presumption Approach as set forth in the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C. Part IV.G.7 is stated as follows:

a. The permittee shall continue to operate and maintain the entire collection system owned/operated by the permittee that conveys flows to the treatment works to maximize treatment at the hydraulically connected STP.

This condition is included in Part IV.G.7.

8. Implementation Schedule

Background of 2015 Permit Requirements

The 2015 NJPDES CSO permit renewal included a permit condition regarding the Implementation Schedule as part of the LTCP which requires the permittee to submit a construction and financing schedule for the implementation of Department approved LTCP CSO controls. This schedule may be phased on the relative importance of the adverse impacts upon water quality standards and designated uses, the permittee's financial capability, and other water quality related infrastructure improvements, including those related to stormwater improvements that would be connected to CSO control measures. The permittee is required to begin implementation of the LTCP in accordance with the set schedule. The implementation schedule is required to address yearly milestones for:

- Adequately addressing areas of sewage overflows, including to basements, streets and other public and private areas;
- CSO overflows that discharge to sensitive areas as the highest priority;
- Use impairment of the receiving water;
- The permittee's financial capability (factors shall include: median household income, total annual wastewater and CSO control costs per household as a percent of median household income, overall net debt as a percent of full market property value, property tax revenues as a percent of full market property value, property tax collection rate, unemployment, and bond rating)
- Grant and loan availability
- Previous and current residential, commercial and industrial sewer user fees and rate structures.
- Other viable funding mechanisms and sources of financing.
- Resources necessary to design, construct and/or implement other water related infrastructure improvements as part of an Asset Management Plan.

Summary of Compliance with the 2015 Permit Requirement

The 2015 NJPDES permit required submission of a LTCP with an Implementation Schedule.

Renewal Permit Requirements for Implementation Schedule

Since submission of the LTCP, the permittee has commenced and completed certain CSO control projects. The Department requested information in letters dated June 13, 2023 and June 28, 2023. As a result of the letters, the permittee provided an updated implementation schedule in a submission dated July 12, 2023. In addition, the Department met with the permittee on August 2, 2023. The Department requested further information on August 9, 2023 and received a response on September 8, 2023. The permittee submitted a revised LTCP dated September 2023. The implementation schedule as included in this permit as a result of this updated information is as follows:

Due Date	Permittee Lead	Activities
Completed in 2020	CCMUA	Expansion of CCMUA's WPCF # 1 to 185 MGD.
	Camden	Arch Street Pump Station capacity expansion.
	Camden	Camden SMART GSI projects totaling 2.75 acres.
Completed in 2022	Camden	Regulator mechanism rehabilitation of 28 regulators in Camden.
Completed in 2023	Camden	Camden CSO outfall cleaning.
	Camden	Various GSI projects totaling 6 acres.
	Camden	Part of initial cleaning of Camden collection system.
	Gloucester	Initial inspection & cleaning of 100% of Gloucester collection system.
	Gloucester	Gloucester regulator cleaning.
2024	Camden	Complete initial inspection & cleaning of 100% of Camden collection system by October 31, 2024.
	CCMUA	Conduct Alternatives Analysis for C-32 CSO controls.
2025	CCMUA	Begin new flow monitoring to assess flow levels in the in the CCMUA, Camden & Gloucester systems.
	Gloucester	Complete Gloucester CSO outfall cleaning.
	Camden & Gloucester	Formalize Green Stormwater Infrastructure (GSI) Programs.
	Camden & Gloucester	Formalize Street Flooding Mitigation Programs.
	CCMUA	Design and permitting for C-32 controls.
2026	CCMUA	Design and permitting for C-32 controls.
	CCMUA	Separation of Pennsauken combined sewer area.
	CCMUA	Complete new flow monitoring in the CCMUA, Camden & Gloucester systems.
	CCMUA	Update the Hydrologic/Hydraulic model as a result of new flow monitoring.
	Camden & Gloucester	Continued implementation of GSI and Street Flood Mitigation Programs.
2027	CCMUA	Evaluate structural control alternatives to capture of a minimum of 85% of the annual average combined sewage collected in the system during wet weather.
	CCMUA	Implementation of C-32 controls.
	Camden & Gloucester	Continued implementation of GSI and Street Flood Mitigation Programs.
2028	CCMUA	Complete evaluation of structural control alternatives to capture a minimum of 85% of the annual average combined sewage collected in the system during wet weather and submit to the NJDEP for review.
	CCMUA	Implementation of C-32 controls.
	CCMUA	Develop Cooper River Water Quality Strategy
	Camden & Gloucester	Continued implementation of GSI and Flood Mitigation Programs.
2029-2033	CCMUA, Camden & Gloucester	Planning, design, permitting and land acquisition for structural control alternatives to capture a minimum of 85% of the annual average combined sewage collected in the system during wet weather.
	Camden & Gloucester	Continued implementation of GSI and Street Flood Mitigation Programs.
2034-2038	Camden & Gloucester	Construct structural control alternatives to capture a minimum of 85% of the annual average combined sewage collected in the system during wet weather.
	CCMUA	Complete implementation of C-32 controls.
	Camden & Gloucester	Continued implementation of GSI and Street Flood Mitigation Programs.

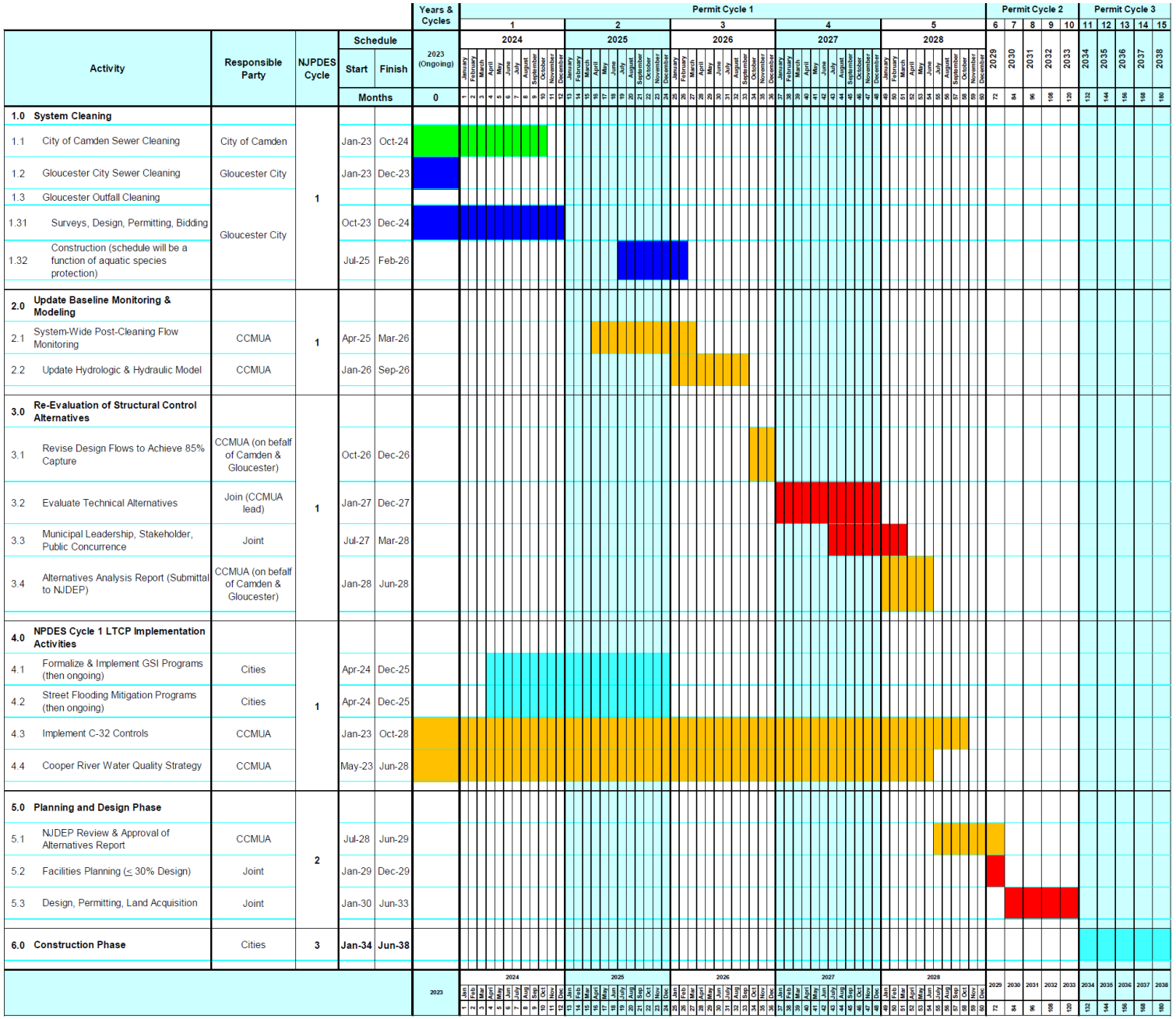


Figure 8-1 – Proposed LTCP Implementation Schedule

This renewal permit requires that the permittee complete the above referenced projects based on the Implementation Schedule. Consistent with the Federal CSO Control Policy, the permittee is hereby required to attain a minimum wet weather percent capture value of 85%. The Department reserves the right to require the permittee to re-evaluate the Implementation Schedule at the end of this 5-year renewal permit action to determine if additional measures are needed in order to comply with 85% wet weather capture.

This condition is included in Part IV.G.8.

9. Compliance Monitoring Program

Background of 2015 Permit Requirements

The 2015 NJPDES CSO permit renewal included a permit condition regarding the Compliance Monitoring Program (CMP) which is a component of Part IV.G.1 as well as a separate component of the LTCP. The CMP consists primarily of ambient baseline monitoring to provide a present day evaluation or snapshot of ambient water quality conditions. The 2015 snapshot is to be used as a baseline to compare future evaluations in order to assure the effectiveness of the CSO control measures. The CMP was required to include the following specific components: 1) ambient in-stream monitoring data, 2) discharge frequency, duration and quality data and 3) rainfall data.

Summary of Compliance with the 2015 Permit Requirement

In accordance with Part IV.D.3.d and Part IV.G.1.d.3 and G.9 of the existing NJPDES permit, the permittee was required to submit a work plan within 6 months of the effective date of the permit to be followed by a baseline Compliance Monitoring Program (CMP) report within 36 months from the effective date of the permit. The work plan was dated December 2015, revised March 2016, and was approved by the Department on April 7, 2016. Regarding the report, CCMUA, the City of Camden and Gloucester City submitted the "Baseline Compliance Monitoring Report" dated June 2018.

For the purposes of the Baseline Compliance Monitoring Program Report, CCMUA searched and extracted all relevant historical water quality data from the USEPA's STORET database. Extensive analysis on these data was carried out to determine the sampling locations; precipitation, tidal, and CSO conditions at the time of sampling; the total numbers of samples at each location under dry and wet weather conditions; and the measured concentration of each regulated pathogen species. Nine sampling stations were identified with 3 sites located on each receiving water. The Delaware River Basin Commission (DRBC) has sampled the main stem of the Delaware River between Trenton and the Delaware Bay since 1967. Samples are collected monthly from April through October. The pathogen species tested include Fecal Coliform, Enterococcus, and E. Coli. Existing pathogen data is collected by the Delaware River Basin Commission (DRBC) as part of the DRBC Boat Run Program as performed under an approved Quality Assurance Project Plan (QAPP). This data is collected from the Delaware River, Cooper River and Newton Creek and the Department finds that these data collection efforts are sufficient to provide an assessment for the purposes of data characterization for "baseline and existing conditions."

The Department issued findings in the technical comment letter dated September 12, 2018 which subsequently resulted in a revision to the report on January 2019.

The Department approved the CMP report on February 7, 2019. Specifically, in that letter, the Department determined that the data collection effort provided sufficient information for the purposes of data characterization for baseline and existing conditions. However, as referenced in Part IV.G.9 of the 2015 NJPDES CSO permit, "this CMP shall be conducted before, during and after implementation of the LTCP." Therefore, the acceptability of the CMP on a long-term basis beyond pre-LTCP conditions is conditional on the continuation of the DRBC Boat Run Program to supplement the Baseline Compliance Monitoring Program data for future conditions to ensure consistency for sampling stations, parameters etc. In fact, any subsequent approval of the

Baseline Compliance Monitoring Program for future phases of the LTCP may also require specific sampling for Cooper River and Newton Creek.

Please refer to Part IV.G.1 regarding the Department's comments on hydraulic and hydrological modeling which is also a component of Part IV.G.9.

Renewal Permit Requirements for the Compliance Monitoring Program

The permittee shall implement a Compliance Monitoring Program **(**CMP) adequate to: verify baseline and existing conditions, the effectiveness of CSO control measure, compliance with water quality standards, and protection of designated uses. The portion of the CMP conducted during and after implementation of the LTCP is referred to as the Post Construction Compliance Monitoring Plan (PCCMP). The main elements of the PCCMP shall include:

- A process to determine whether the CSO control measures are meeting the interim required percent capture milestone set forth in the LTCP or the final required percent capture of no less than 85% by volume of the combined sewage collected in the CSS during precipitation events is eliminated or captured for treatment on a system-wide annual average basis as defined in the Federal CSO Policy and N.J.A.C.7:14A-11, Appendix C. The PCCMP shall provide data to evaluate the effectiveness of the CSO control measures constructed during and after the implementation of the LTCP.
- A monitoring schedule, regulator monitoring locations, receiving water sampling locations, and rain gauge locations.
- The approach for analysis of the PCCMP data for assessing the performance of CSO control measures and for reporting progress to regulatory agencies and the general public. The PCCMP shall evaluate the incremental reduction in overflow rates and volumes as the CSO control measures are placed into operation.
- A Public Notification System to notify the public of the occurrence of combined sewer overflows for each receiving water body.

The PCCMP shall include the implementation of a rainfall and hydraulic monitoring program, as well as a detailed analysis and evaluation of the CSO control measures' efficacy. Through a calibrated/validated hydrologic and hydraulic model, a continuous simulation for the system-wide annual average shall be run by the permittee to compare the remaining CSO discharge volume to baseline conditions and determine whether the CSO control measures have achieved the interim required percent capture or the final required percent capture. Note that any effort to recalibrate the hydrologic and hydraulic model shall be performed after consultation with the Department.

The PCCMP shall use the following steps to determine if the CSO control measures are meeting the interim required percent capture or the final required percent capture:

1) Collect flow monitoring for a 1-year period and rainfall data for a 1-year period during the effective NJPDES permit. Perform QA/QC on the data;

2) At the end of the effective NJPDES permit, update the hydrologic and hydraulic model to include all completed CSO control measures and any other modifications to the CSS since the hydrologic and hydraulic model was calibrated for the LTCP;

3) Calibrate and/or validate the updated hydrologic and hydraulic model, if needed, using the flow and rainfall data collected during the effective NJPDES permit. Any recalibration of the hydrologic and hydraulic model shall be approved by the Department; and

4) Perform continuous simulation using the updated hydrologic and hydraulic model for the system-wide annual average and calculate the percent capture to determine if the interim required percent capture or the final required percent capture is being achieved.

The permittee shall conduct interim post-construction compliance monitoring every five years as established in the LTCP. Such monitoring shall assess the projects and implementation schedule including attainment of percent capture milestones set forth in the LTCP. These projects shall be monitored and analyzed to determine if they are operating as intended and whether the implementation of projects under the LTCP are achieving the interim required percent capture milestones set forth in the LTCP. If the PCCMP determines that the implemented CSO control measures do not meet the interim required percent capture or the final required percent criteria, an evaluation must be included in the Adaptive Management Plan in accordance with H. below.

The permittee shall submit an Interim PCCMP Report on or before 54 months from the effective date of the permit (EDP). The report shall include:

- A statement setting forth the deadlines and other terms that the permittees were required to meet in the effective NJPDES permit;
- A summary of principal contacts with the Department during the effective NJPDES permit relating to CSOs or implementation of the LTCP;
- NJPDES permit violations, including but not limited to dry weather overflows;
- A summary of flow and hydraulic monitoring data collected by the permittees during the effective NJPDES permit;
- A description of the CSO control measures completed within the effective NJPDES permit and a projection of CSO control measure work to be performed during the subsequent renewal NJPDES permit;
- An evaluation of the effectiveness of the CSO control measures constructed in the effective NJPDES permit to determine if the interim required percent capture is achieved; and
- A summary of any proposed adjustments to the components of the LTCP.

A Final PCCMP Report shall be submitted to the Department within 30 months after the last LTCP project has been implemented. The single Interim or Final PCCMP Report shall evaluate and document the system-wide performance of the LTCP CSO control measures. The Report shall include an assessment of whether the control measures are meeting the final required percent capture and complying with water quality standards. The report shall include:

- A complete post-construction compliance monitoring period data summary and analysis;
- A reporting of all of the CSO control measures that have been constructed, implemented, and that are in operation;
- An evaluation of the CSO control measures' performance, and whether the controls meet the final required percent capture;
- A description of any actions that were needed to be implemented to meet the interim required percent capture or the final required percent capture; and
- An assessment of whether the control measures are complying with water quality standards.

These conditions are included in Part IV.G.9.

10. Permittee's LTCP Responsibilities

Background of 2015 Permit Requirement

The NJPDES Permits for CCMUA, the City of Camden and Gloucester City encouraged collaboration among Permittees within a hydraulically connected sewer system for the development of a LTCP. Part IV.G.10 of the permit stated the following:

a. The permittee is responsible for submitting an LTCP that addresses all nine elements in Part IV.G.

   Where multiple permittees own/operate different portions of a hydraulically connected CSS, the permittee is required to work cooperatively with all other permittees to ensure the LTCPs are consistent. The LTCP

documents must be based on the same data, characterization, models, engineering and cost studies, and other information, where appropriate. Each permittee is required to prepare the necessary information for the portion of the hydraulically connected system that the permittee owns/operates and provide this information to the other permittees within the hydraulically connected system in a timely manner for LTCP submission.

Summary of Compliance with 2015 Permit Requirement

As noted in the LTCP in Section 1, due to the unique and challenging circumstances facing Camden and Gloucester City, it was apparent to CCMUA and the Cities from the outset that the communities and the environment will be best served by leveraging a coordinated and collaborative approach combining regulatory compliance, sustainable redevelopment and environmental justice.

The combined sewer system that LTCP addresses consists of the respective collection systems owned and operated by the Cities of Camden and Gloucester and the portion of the CCMUA's regional conveyance interceptor system that is located within the Cities of Camden and Gloucester. There are 34 sewersheds within the Camden and Gloucester combined sewer collection systems. These include twenty-seven within the City of Camden and seven in Gloucester City. Each of these sewersheds drain to a regulator structure controlling the amount of wet weather flow that enters into the CCMUA interceptors from the Camden and Gloucester trunk sewers.

Renewal Permit Requirements for Permittee's LTCP Responsibilities

As described in previous sections, the permittees have worked collaboratively throughout the LTCP process resulting in a single, coordinated LTCP. As a result, the objective of "Permittee's LTCP Responsibilities" has been satisfied and this requirement has been fulfilled with respect to preparation of the LTCP. However, the overall objective of this permit condition has been continued to ensure that CSO control measures are continued in a collaborative manner. This permit condition has been updated as follows:

a. The permittee is responsible for implementing CSO control measures to ensure compliance with the Federal CSO Control Policy and N.J.A.C. 7:14-11, Appendix C as outlined in the LTCP. Since multiple permittees own/operate different portions of a hydraulically connected CSS, the permittee is required to work cooperatively and provide the necessary information with all other permittees to ensure overall compliance. In addition, each permittee is required to institute necessary measures for the LTCP for the portion of the hydraulically connected system that the permittee owns/operates and provide this information to the other permittees for compliance with the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C.

This condition is included in Part IV.G.10.

D. Renewal Permit Requirements

1. Precipitation Trends

Since the issuance of the 2015 NJPDES CSO permit, the State has further studied the presently existing and likely future impacts of climate change specific to New Jersey and the Department issued the New Jersey Climate Science Report in 2020, an addendum in 2022, and will routinely update these materials as the science evolves, which are available at https://nj.gov/dep/climatechange/data.html. The State also assembled the Interagency Council on Climate Resilience to identify the measures necessary to promote the long-term mitigation, adaptation and resilience of New Jersey's economy, communities, infrastructure and natural resources, which was issued to build resilience to the impacts of climate change across public and private sectors, and issued the statewide Climate Change Resilience Strategy in 2021, which will be routinely updated as statewide resilience planning efforts advance. These materials are available at https://nj.gov/dep/climatechange/resilience.html.

As climate change will impact all of New Jersey's natural resources and their supporting infrastructure, management plans must be adaptive as conditions continue to evolve and new data becomes available. Adaptive

management takes an iterative approach designed to expect and respond to uncertainty and variability of resources over time. By incorporating adaptive management and future conditions into planning and asset management, water resource managers, including those permitted by the Department, can best ensure that their systems and service to the public are best prepared for a changing climate.

The following information shall be submitted to the Department as part of the NJPDES permit renewal application:

- The permittee shall analyze and submit the annual precipitation depth obtained by the National Oceanic Atmospheric Administration (NOAA) at the Philadelphia International Airport in order to determine the annual precipitation depth during the effective period of the permit.
- The permittee shall determine and submit the annual precipitation depth for each calendar year, such that by the end of the permit, the most recent five calendar years of data has been collected. The permittee shall compare this data to assumptions utilized in the development of the LTCP.
- This information shall be submitted to the Department with the NJPDES renewal application with an assessment of any change in precipitation trends. The Department will review this information and make a determination that Adaptive Management measures may need to be pursued in a subsequent permit action.

2. Adaptive Management Plan

An Adaptive Management Plan shall be submitted with the NJPDES permit renewal application if any of the following occurs:

i. An Interim or the Final PCCMP Report determines that the implemented CSO control measures do not meet the interim required percent capture or the final required percent capture as per Part IV.G.9.e; and/or
ii. A permittee requests to modify the implementation schedule and/or CSO control measures in the implementation schedule; and/or
iii. The precipitation trends required in Part IV.H.1 above demonstrates a change in the assumptions used in the development of the LTCP.

If an Interim or the Final PCCMP Report determines that the implemented CSO control measures do not meet the interim required percent capture or the final required percent capture, the Adaptive Management Plan shall include:

i. Modified or additional CSO control measures that will be to achieve the interim required percent capture or the final required percent capture;
ii. A detailed analysis and a modified implementation plan and schedule of the CSO control measures; and
iii. Inclusion of any adaptive management modifications based on an Interim or the Final PCCMP Report.

If a permittee requests to modify the implementation schedule and/or CSO control measures in the implementation schedule by incorporating new technologies, group similar control measures to reduce cost, increase wet weather, change the order of the control measures and/or accelerate the schedule. If such a request, the Adaptive Management Plan shall include:

i. A detailed analysis of the modified and/or new CSO control measures including verification that the interim required percent capture or the final required percent capture will be achieved; and
ii. A modified implementation plan and schedule of the CSO control measures.

Any additional CSO control measures that are determined to be necessary as a result of Adaptive Management will be required through a NJPDES permit action and will require a revision to the LTCP.

These conditions are included in Part IV.H.

E. Basis and Derivation for Monitoring Requirements:

The Permit Summary Table within this fact sheet contains a summary of data for all the CSO outfalls. The proposed requirements and other pertinent information regarding the draft permit are described below, where monitoring requirements for Duration of Discharge is included for all outfalls, and Precipitation and Solid/Floatables is only for DSN 040A:

1. Duration of Discharge: Duration of Discharge represents the number of days (in whole numbers) that at least one discharge occurred from that outfall (i.e., not the number of discharge events). Monitoring and reporting for this parameter has been retained from the existing permit pursuant to N.J.A.C. 7:14A-13.19.

   The monitoring frequency is **once per month** with an **estimated** sample type.

2. Precipitation: Precipitation represents the total amount of precipitation (i.e. rainfall and snowmelt) measured during the monitoring period from a single rain gauge representative of the area. Monitoring and reporting for this parameter has been retained from the existing permit pursuant to N.J.A.C. 7:14A-13.19.

   The monitoring frequency is **once per month** with a **measured** sample type.

3. Solids/Floatables: Solids/Floatables (S/F) represents the total volume (reported in cubic yards) of all S/F removed and disposed of from all outfalls during the month. Reporting a S/F value is only necessary when the S/F material is measured for disposal (e.g. filled dumpsters). Monitoring and reporting for this parameter has been retained from the existing permit pursuant to N.J.A.C. 7:14A-13.19.

   The monitoring frequency is **once per month** with a **measured** sample type.

F. Reporting Requirements:

All data requested to be submitted by this permit shall be reported on the MRFs as appropriate and submitted to the Department as required by N.J.A.C. 7:14A-6.8(a).

Electronic Reporting Requirements

On October 22, 2015, the USEPA promulgated the final NPDES Electronic Reporting Rule (see Federal Register 80:204 p. 64064). This rule requires entities regulated under the CWA NPDES program to report certain information electronically instead of filing paper reports.

In accordance with this rule, all required monitoring results reported on MRFs shall be electronically submitted to the Department via the Department's Electronic MRF Submission Service. In addition, starting December 21, 2020, the following document(s) or report(s) shall be electronically submitted to the Department via the Department's designated Electronic Submission Service:

- Sewer overflow event non-compliance reports required by N.J.A.C. 7:14A-6.10

Consistent with this rule, the existing reporting requirements contained in the existing permit at Part IV have been removed and are now contained at Part II of the permit. Please refer to Part II of this permit action for further details regarding the new reporting requirements as a result of the Electronic Reporting Rule.

G. General Conditions:

In accordance with N.J.A.C. 7:14A-2.3 and 6.1(b), specific rules from the New Jersey Administrative Code have been incorporated either expressly or by reference in Part I and Part II.

H. Operator Classification Number:

To obtain or determine the appropriate licensed operator classification for the treatment works specified, the permittee shall contact the Bureau of Environmental, Engineering and Permitting at (609) 984-4429.

I. Progress Reports:

This renewal permit includes a compliance schedule for the submission of progress reports beginning on the effective date of the permit (EDP). The permittee must submit a progress report to the Department on February 1st and August 1st of each year to document the permittee's progress towards compliance with the Federal CSO Control Policy and N.J.A.C. 7:14A-11 – Appendix C. The progress reports must include but are not limited to the following information:

- A summary of all CSO measures implemented and the effectiveness of those measures;
- Verification that the Operation & Maintenance Manual, Asset Management Plan and Emergency Plan have been updated annually including detail on the System Cleaning Program;
- A discussion of the continued implementation of the NMCs including maintaining the telephone hotline/website pursuant to Section F.8, and
- A list of any complaints received by the permittee regarding CSO related flooding including location and duration.

13 Permit Summary Table – DSN 040A

DSN 040A							
PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA **(1)**	EXISTING LIMITS	FINAL LIMITS	MONITORING	
						Freq.	Sample Type
Duration of Discharge	Days	Monthly Total	4.66	MR	MR	1/Month	Estimated
Solids/Floatables	Cu. Yd.	Monthly Total	14.87	MR	MR	1/Month	Measured
Precipitation	Inches	Monthly Total	3.87	MR	MR	1/Month	Measured

Footnotes and Abbreviations:
MR Monitor and report only
(1) Wastewater data originates from the information submitted on the monitoring report forms July 2015 through September 2023.

14 Description of Procedures for Reaching a Final Decision on the Draft Action:

Please refer to the procedures described in the public notice that is part of the draft permit. The public notice for this permit action is published in the *Courier Post* and in the *DEP Bulletin* available at https://dep.nj.gov/bulletin/.

15 Contact Information

If you have any questions regarding this permit action, please contact Molly Jacoby of the Bureau of Surface Water & Pretreatment Permitting at (609) 292-4860 or Molly.Jacoby@dep.nj.gov.

16 Contents of the Administrative Record

The following items are used to establish the basis of the Draft Permit:

Rules and Regulations:

1. 33 U.S.C. 1251 et seq., Federal Water Pollution Control Act.
2. 40 CFR Part 131, Federal Water Quality Standards. [A]
3. 40 CFR Part 122, National Pollutant Discharge Elimination System.
4. Federal CSO Control Policy (Published April 19, 1994, at 59 Federal Register 18688)
5. N.J.S.A. 58:10A-1 et seq., New Jersey Water Pollution Control Act. [A] [B]
6. N.J.A.C. 7:14A-1 et seq., New Jersey Pollutant Discharge Elimination System Regulations. [A] [B]
7. N.J.A.C. 7:9B-1 et seq., New Jersey Surface Water Quality Standards. [A] [B]
8. N.J.A.C. 7:15, Statewide Water Quality Management Planning Rules. [A]
9. DRBC: Administrative Manual – Part III Water Quality Regulations.
10. N.J.S.A. 58:25-23 et/ seq., Sewage Infrastructure Improvement Act
11. Pretreatment Program Requirements for Local Agencies (N.J.A.C. 7:14A-19).

To help permittees and NPDES permitting and WQS authorities implement the provisions of the CSO Control Policy, EPA has developed the following guidance documents:

1. Combined Sewer Overflows – Guidance for Long-Term Control Plan (EPA 832-B-95-002)
2. Combined Sewer Overflows – Guidance for Nine Minimum Controls (EPA 832-B-95-003)
3. Combined Sewer Overflows – Guidance for Screening and Ranking Combined Sewer System Discharges (EPA 832-B-95-004)
4. Combined Sewer Overflows – Guidance for Monitoring and Modeling (EPA 832-B-95-05)
5. Combined Sewer Overflows – Guidance for Financial Capability Assessment (EPA 832-B-95-006)
6. Combined Sewer Overflows – Guidance for Funding Options (EPA 832-B-95-007)
7. Combined Sewer Overflows – Guidance for Permit Writers (EPA 832-B-95-008)
8. Combined Sewer Overflows – Questions and Answers on Water Quality Standards and the CSO Program (EPA 832-B-95-009)
9. CSO Post Construction Compliance Monitoring Guidance (EPA 833-K-11-001)

Guidance Documents / Reports:

1. "Field Sampling Procedures Manual", published by the Department. [A]
2. "NJPDES Monitoring Report Form Reference Manual", updated December 2007, and available on the web at http://www.state.nj.us/dep/dwq/pdf/MRF_Manual.pdf. [A]
3. "USEPA TSD for Water Quality-based Toxics Control", EPA/505/2-90-001, March 1991. [B]
4. New Jersey's 2018/2020 Integrated Water Quality Monitoring and Assessment Report (includes 305 (b) Report 303(d) List). *[A]*
5. DRBC Docket No. D-1971-009 CP-10.
6. Compliance Evaluation reports dated December 4, 2015; May 3, 2016; October 5, 2016; May 18. 2017; December 6, 2017; May 17, 2018; February 13, 2019; June 5, 2019; December 16, 2019; December 9, 2020; February 9, 2021; November 24, 2021; December 14, 2022; and May 23, 2023.
7. MRFs dated July 2015 to June 2023.

Permits / Applications:

1. NJPDES/DSW Permit Application dated NJ0026182.
2. Existing NJPDES/DSW Permit NJ0026182, issued March 12, 2015 and effective July 1, 2015.
3. Minor Modification to NJPDES/DSW Permit NJ0026182, issued October 9, 2015 and effective on July 1, 2015.
4. Minor Modification to NJPDES/DSW Permit NJ0026182 issued July 18, 2019 to acknowledge an increase in wet weather flow from 150 MGD to 185 MGD.

5. Major Modification to NJPDES/DSW Permit NJ0026182, issued May 1, 2020 and effective on June 1, 2020 to incorporate changes to Part IV.F.1.h., F.3., and F.7.c.
6. Stay to NJPDES/DSW Permit NJ0026182, issued February 2, 2018 which serves to stay Part IV.F.1.h of the existing permit.
7. Stay to NJPDES/DSW Permit NJ0026182, issued April 15, 2020 which serves to extend the LTCP submission date.

LTCP Report Submissions:

1. "System Characterization Report Work Plan" dated October 2015, revised February 2016 and July 2016.
2. "Sewer System Characterization Report" dated June 2018, revised September 17, 2018 and January 14, 2019.
3. "Compliance Monitoring Program Work Plan" dated December 2015, revised March 2016.
4. "Baseline Compliance Monitoring Report" dated June 2018, revised January 2019.
5. "Public Participation Report" dated June 2018.
6. "Baseline Consideration of Sensitive Areas" dated June 2018.
7. "Development and Evaluation of Alternatives Report" dated June 2019, revised December 2019.
8. "Selection and Implementation of Alternatives Report" dated September 2020 (with additional information dated June 30, 2021) and revised September 2023.

Correspondences:

1. Technical Comments on the "System Characterization Report Work Plan" dated November 25, 2015 and May 5, 2016 with the approval letter dated August 3, 2016.
2. Technical Comments on the "System Characterization Report" dated November 2, 2018 with the approval letter dated January 24, 2019.
3. Technical Comments on the "Compliance Monitoring Program Work Plan" dated January 15, 2016, with the approval letter dated April 7, 2016.
4. Technical Comments on the "Baseline Compliance Monitoring Report" dated September 12, 2018 with the approval letter dated February 7, 2019.
5. Technical Comments on the "Public Participation Report" dated October 16, 2018 and August 9, 2019.
6. Technical Comments on the "Baseline Consideration of Sensitive Areas" dated September 20, 2018 with the approval letter dated December 17, 2018.
7. Technical Comments on the "Development and Evaluation of Alternatives Report" dated September 6, 2019 and November 14, 2019 with the approval letter dated January 30, 2020.
8. Technical Comments on the "Selection and Implementation of Alternatives Report" dated May 7, 2021.
9. Technical submissions from CCMUA dated March 11, 2021 and March 16, 2021 regarding the Camden-Pennsauken disconnect project.
10. NJDEP Response dated March 24, 2021 identifying that the Camden Pennsauken disconnect project is identified in the LTCP and requesting prioritization of this project to reduce CSO flows from outfall C-32.
11. NJDEP Request for Information dated June 13, 2023 and June 28, 2023 regarding the implementation schedule.
12. Response to Request for Information dated July 12, 2023.
13. NJDEP Request for Information dated August 9, 2023 regarding the status of collection system maintenance and wet weather expansion.
14. Response to Request for Information dated September 8, 2023.
15. Correspondence with DRBC dated October 13, 2023 and October 25, 2023.

Meetings / Site Visits:

1. Site Visit on November 3, 2023.

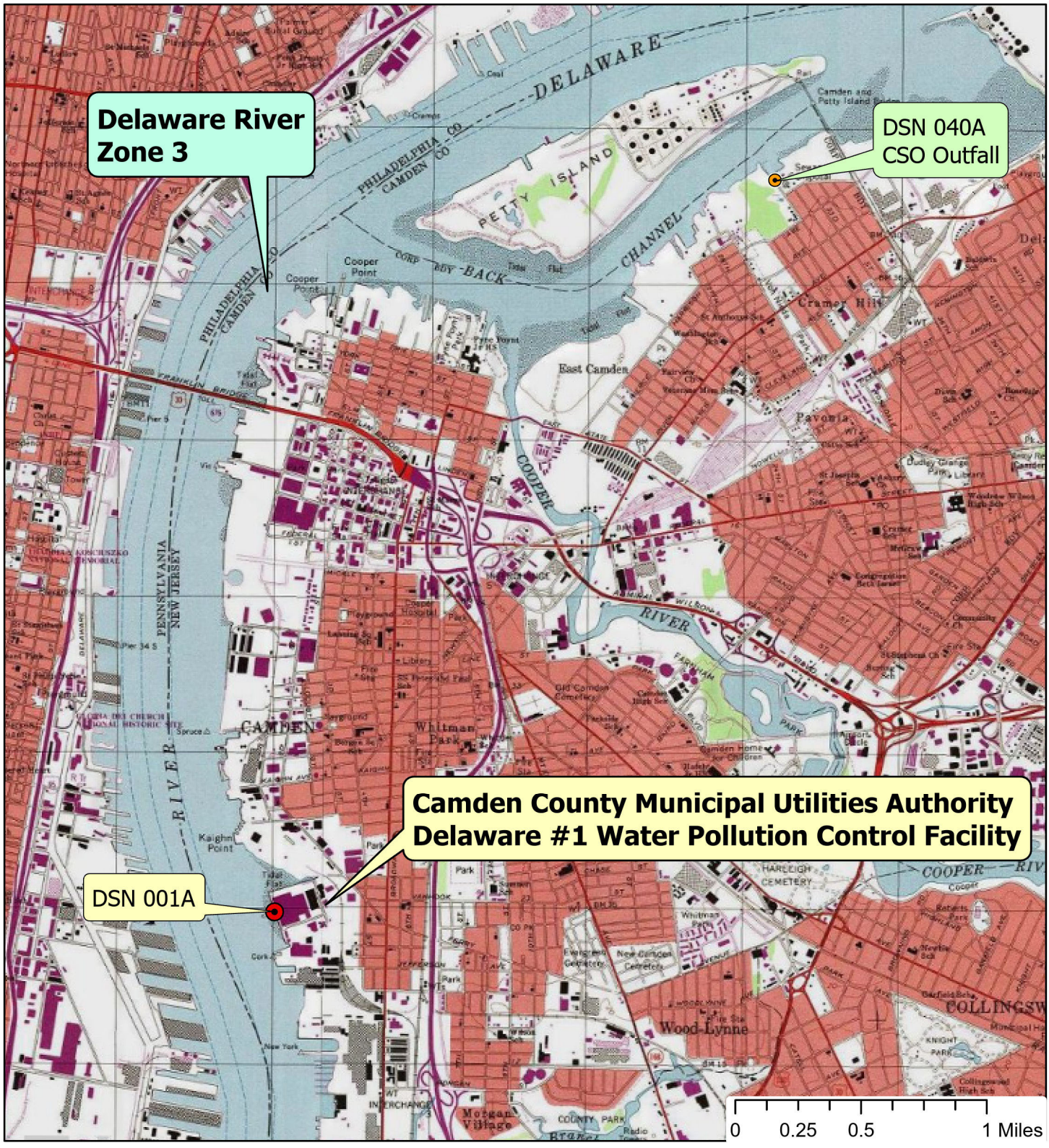
Other:

1. Water Quality Based Effluent Limitation and End-Of-Pipe Limitation Analysis Calculation Sheets.
2. Whole Effluent Toxicity (WET) Calculation Sheets.

Footnotes:

[A] Denotes items that may be found on the Department's website located at "http://www.state.nj.us/dep/".

[B] Denotes items that may be found on the USEPA website at “http://www.epa.gov/”.



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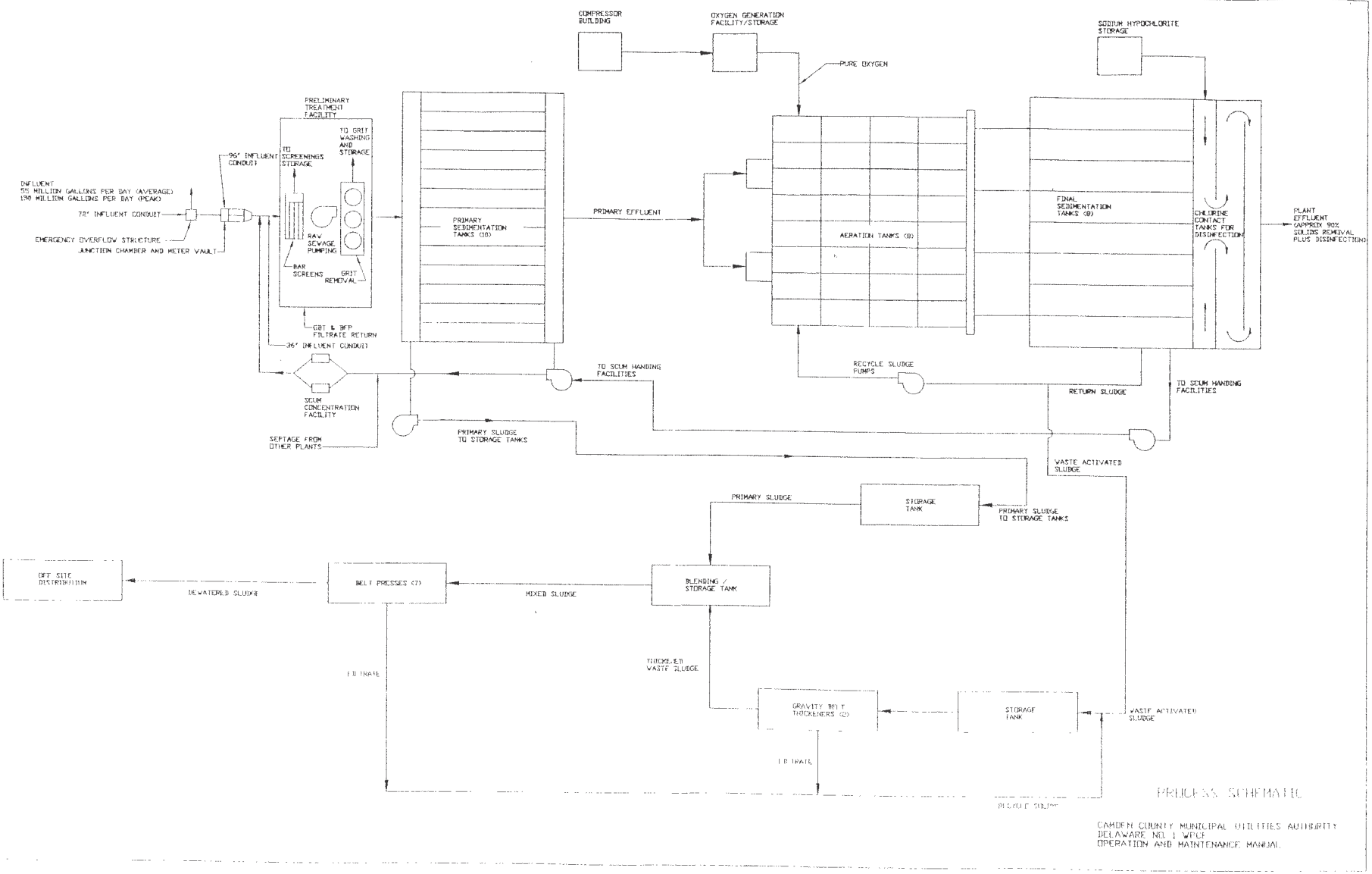
USGS Topographical Map
Camden County Municipal Utilities Authority
Delaware #1 Water Pollution Control Facility
Camden City, Camden County
Watershed: Delaware River


COMPRESSOR BUILDING
OXYGEN GENERATION FACILITY/STORAGE
PURE OXYGEN
SODIUM HYPOCHLORITE STORAGE
PRELIMINARY TREATMENT FACILITY
TO GRIT WASHING AND STORAGE
TO SCREENINGS STORAGE
96" INFLUENT CONDUIT
INFLUENT
55 MILLION GALLONS PER DAY (AVERAGE)
130 MILLION GALLONS PER DAY (PEAK)
72" INFLUENT CONDUIT
EMERGENCY OVERFLOW STRUCTURE
JUNCTION CHAMBER AND METER VAULT
RAW SEWAGE PUMPING
BAR SCREENS
GRIT REMOVAL
GRIT & BFP FILTRATE RETURN
36" INFLUENT CONDUIT
PRIMARY SEDIMENTATION TANKS (10)
PRIMARY EFFLUENT
AERATION TANKS (8)
FINAL SEDIMENTATION TANKS (8)
CHLORINE CONTACT TANKS FOR DISINFECTION
PLANT EFFLUENT (APPROX 90% SOLIDS REMOVAL PLUS DISINFECTION)
TO SCUM HANDING FACILITIES
RECYCLE SLUDGE PUMPS
RETURN SLUDGE
TO SCUM HANDING FACILITIES
SCUM CONCENTRATION FACILITY
SEPTAGE FROM OTHER PLANTS
PRIMARY SLUDGE TO STORAGE TANKS
WASTE ACTIVATED SLUDGE
PRIMARY SLUDGE
STORAGE TANK
PRIMARY SLUDGE TO STORAGE TANKS
OFF SITE DISTRIBUTION
DEWATERED SLUDGE
BELT PRESSES (7)
MIXED SLUDGE
BLENDING / STORAGE TANK
FILTRATE
THICKENED WASTE SLUDGE
GRAVITY BELT THICKENERS (2)
STORAGE TANK
WASTE ACTIVATED SLUDGE
FILTRATE
RECYCLE SCUM
PROCESS SCHEMATIC
CAMDEN COUNTY MUNICIPAL UTILITIES AUTHORITY
DELAWARE NO. 1 WPCP
OPERATION AND MAINTENANCE MANUAL

NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM

The New Jersey Department of Environmental Protection hereby grants you a NJPDES permit for the facility/activity named in this document. This permit is the regulatory mechanism used by the Department to help ensure your discharge will not harm the environment. By complying with the terms and conditions specified, you are assuming an important role in protecting New Jersey's valuable water resources. Your acceptance of this permit is an agreement to conform with all of its provisions when constructing, installing, modifying, or operating any facility for the collection, treatment, or discharge of pollutants to waters of the state. If you have any questions about this document, please feel free to contact the Department representative listed in the permit cover letter. Your cooperation in helping us protect and safeguard our state's environment is appreciated.

Permit Number: NJ0026182

DRAFT: Surface Water Renewal Permit Action

Permittee:
Camden County Municipal Utilities Authority
1645 Ferry Avenue
Camden, NJ 08104

Co-Permittee:

Property Owner:
Camden County Municipal Utilities Authority
1645 Ferry Avenue
Camden, NJ 08104

Location Of Activity:
Delaware #1 Water Pollution Control Facility
2nd & Jackson Streets
Camden City, NJ 08104
Camden County

Authorization(s) Covered Under This Approval	Issuance Date	Effective Date	Expiration Date
A - Sanitary Wastewater - Renewal CSM - Combined Sewer Management - Renewal	Pending	Pending	Pending

DEP AUTHORIZATION
Susan Rosenwinkel
Assistant Director
Water Pollution Management Element

(Terms, conditions and provisions attached hereto)

PART I
GENERAL REQUIREMENTS:
NJPDES

A. General Requirements of all NJPDES Permits

1. Requirements Incorporated by Reference

a. The permittee shall comply with all conditions set forth in this permit and with all the applicable requirements incorporated into this permit by reference. The permittee is required to comply with the regulations, including those cited in paragraphs b. through e. following, which are in effect as of the effective date of the final permit.

b. General Conditions

Penalties for Violations	N.J.A.C. 7:14-8.1 et seq.
Incorporation by Reference	N.J.A.C. 7:14A-2.3
Toxic Pollutants	N.J.A.C. 7:14A-6.2(a)4i
Duty to Comply	N.J.A.C. 7:14A-6.2(a)1 & 4
Duty to Mitigate	N.J.A.C. 7:14A-6.2(a)5 & 11
Inspection and Entry	N.J.A.C. 7:14A-2.11(e)
Enforcement Action	N.J.A.C. 7:14A-2.9
Duty to Reapply	N.J.A.C. 7:14A-4.2(e)3
Signatory Requirements for Applications and Reports	N.J.A.C. 7:14A-4.9
Effect of Permit/Other Laws	N.J.A.C. 7:14A-6.2(a)6 & 7 & 2.9(c)
Severability	N.J.A.C. 7:14A-2.2
Administrative Continuation of Permits	N.J.A.C. 7:14A-2.8
Permit Actions	N.J.A.C. 7:14A-2.7(c)
Reopener Clause	N.J.A.C. 7:14A-6.2(a)10
Permit Duration and Renewal	N.J.A.C. 7:14A-2.7(a) & (b)
Consolidation of Permit Process	N.J.A.C. 7:14A-15.5
Confidentiality	N.J.A.C. 7:14A-18.2 & 2.11(g)
Fee Schedule	N.J.A.C. 7:14A-3.1
Treatment Works Approval	N.J.A.C. 7:14A-22 & 23

c. Operation And Maintenance

Need to Halt or Reduce not a Defense	N.J.A.C. 7:14A-2.9(b)
Proper Operation and Maintenance	N.J.A.C. 7:14A-6.12

d. Monitoring And Records

Monitoring	N.J.A.C. 7:14A-6.5
Recordkeeping	N.J.A.C. 7:14A-6.6
Signatory Requirements for Monitoring Reports	N.J.A.C. 7:14A-6.9

e. Reporting Requirements

Planned Changes	N.J.A.C. 7:14A-6.7
Reporting of Monitoring Results	N.J.A.C. 7:14A-6.8
Noncompliance Reporting	N.J.A.C. 7:14A-6.10 & 6.8(h)
Hotline/Two Hour & Twenty-four Hour Reporting	N.J.A.C. 7:14A-6.10(c) & (d)
Written Reporting	N.J.A.C. 7:14A-6.10(e) &(f) & 6.8(h)
Duty to Provide Information	N.J.A.C. 7:14A-2.11, 6.2(a)14 & 18.1
Schedules of Compliance	N.J.A.C. 7:14A-6.4
Transfer	N.J.A.C. 7:14A-6.2(a)8 & 16.2

PART II

GENERAL REQUIREMENTS: DISCHARGE CATEGORIES

A. Additional Requirements Incorporated By Reference

1. Requirements for Discharges to Surface Waters

a. In addition to conditions in Part I of this permit, the conditions in this section are applicable to activities at the permitted location and are incorporated by reference. The permittee is required to comply with the regulations which are in effect as of the effective date of the final permit.

i. Surface Water Quality Standards N.J.A.C. 7:9B-1

ii. Water Quality Management Planning Regulations N.J.A.C. 7:15

B. General Conditions

1. Scope

a. The issuance of this permit shall not be considered as a waiver of any applicable federal, state, and local rules, regulations and ordinances.

2. Permit Renewal Requirement

a. Permit conditions remain in effect and enforceable until and unless the permit is modified, renewed or revoked by the Department.

b. Submit a complete permit renewal application: 180 days before the.

3. Notification of Non-Compliance

a. The permittee shall notify the Department of all non-compliance when required in accordance with N.J.A.C. 7:14A-6.10 by contacting the DEP HOTLINE at 1-877-WARNDEP (1-877-927-6337).

b. The permittee shall submit a written report as required by N.J.A.C. 7:14A-6.10 within five days.

4. Notification of Changes

a. The permittee shall give written notification to the Department of any planned physical or operational alterations or additions to the permitted facility when the alteration is expected to result in a significant change in the permittee's discharge and/or residuals use or disposal practices including the cessation of discharge in accordance with N.J.A.C. 7:14A-6.7.

b. Prior to any change in ownership, the current permittee shall comply with the requirements of N.J.A.C. 7:14A-16.2, pertaining to the notification of change in ownership.

5. Access to Information

a. The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to enter upon a person's premises, for purposes of inspection, and to access / copy any records that must be kept under the conditions of this permit.

6. Standard Reporting Requirements – Monitoring Report Forms (MRFs)

a. All MRFs shall be electronically submitted to the Department's MRF Submission Service.

b. MRF data submission shall be in accordance with the guidelines and provisions outlined in the Department's Electronic Data Interchange (EDI) agreement with the permittee.

c. MRFs shall be submitted at the frequencies identified in Part III of this permit.

d. All MRFs shall be certified by the highest ranking official having day-to-day managerial and operational responsibilities for the discharging facility.

e. The highest ranking official may delegate responsibility to certify the MRFs in his or her absence. Authorizations for other individuals to certify shall be made in accordance with N.J.A.C. 7:14A-4.9(b).

f. Monitoring results shall be submitted in accordance with the current NJPDES MRF Reference Manual and any updates thereof.

g. If monitoring for a parameter is not required in a monitoring period, the permittee must report "CODE=N" for that parameter.

h. If, for a monitored location, there are no discharge events during an entire monitoring period, the permittee must notify the Department when submitting the monitoring results by checking the "No Discharge this monitoring period" box on the paper or electronic version of the monitoring report submittal form.

7. Standard Reporting Requirements - Electronic Submission of NJPDES Information

a. The below identified documents and reports shall be electronically submitted to the NJDEP via the Department's designated Electronic Submission Service.

i. POTW pretreatment program annual reports

ii. Non-compliance reports required by N.J.A.C. 7:14A-6.10 and 40 CFR 122.41(1)(6) and (7) related to sanitary sewer overflows or bypass events.

iii. Non-compliance reports required by N.J.A.C. 7:14A-6.10 and 40 CFR 122.41(1)(6) and (7) related to combined sewer overflows(see Part II.B.3.c).

8. Operator Certification

a. Pursuant to N.J.A.C. 7:10A-1.1 et seq. every wastewater system not exempt pursuant to N.J.A.C. 7:10A-1.1(b) requires a licensed operator. The operator of a system shall meet the Department's requirements pursuant to N.J.A.C. 7:10A-1.1 and any amendments. The name of the proposed operator, where required shall be submitted to the Department at the address below, in order that his/her qualifications may be determined prior to initiating operation of the treatment works.

i. Notifications shall be submitted to:
NJDEP
Bureau of Water System Engineering
Mail Code 401-04Q
PO Box 420
Trenton, New Jersey 08625 - 0420
(609) 292-2957
or via email to www@dep.nj.gov

b. The permittee shall notify the Department of any changes in licensed operator within two weeks of the change.

9. Operation Restrictions

a. The operation of a waste treatment or disposal facility shall at no time create: (a) a discharge, except as authorized by the Department in the manner and location specified in Part III of this permit; (b) any discharge to the waters of the state or any standing or ponded condition for water or waste, except as specifically authorized by a valid NJPDES permit.

C. Custom Requirement

1. CSO Reopener Clause

a. This reopener clause authorizes the NJDEP to reopen and modify the permit upon determination that the CSO controls as contained in a LTCP fail to meet WQS or protect designated uses.

PART III
LIMITS AND MONITORING REQUIREMENTS

MONITORED LOCATION:	RECEIVING STREAM:	STREAM CLASSIFICATION:	DISCHARGE CATEGORY(IES):
001A SW Outfall DSN001A	Delaware River (Zone 3)	Mainstem Delaware-Zone 3	A - Sanitary Wastewater (IP)

Location Description

Influent monitoring shall be performed before any treatment, other than degritting, and before the addition of any internal waste streams. Effluent monitoring for all parameters (except WET) shall be after chlorination at DSN 001A prior to discharge to the Delaware River. Effluent samples for WET testing shall be performed prior to chlorination. DSN 001A discharges into Zone 3 of the Delaware River at Latitude 39° 55' 21.8" N and Longitude 75° 07' 41.5" W.

Contributing Waste Types

Sanitary

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

3-Final Phase limitations can be activated when bypass operations begin once a Treatment Works Approval is obtained.

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: 1-Initial **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	REPORT 12 Month Rolling Av	*****	MGD	Continuous	Metered
January thru December	QL	***	***		***	***	***			
pH	Raw Sew/influent	*****	*****	*****	REPORT Instant Minimum	*****	REPORT Instant Maximum	SU	6/Day	Grab
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Instant Minimum	*****	9.0 Instant Maximum	SU	6/Day	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

3-Final Phase limitations can be activated when bypass operations begin once a Treatment Works Approval is obtained.

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: 1-Initial **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Solids, Total Suspended	Effluent Gross Value	9084 Monthly Average	13626 Weekly Average	KG/DAY	*****	30 Monthly Average	45 Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
Oil and Grease	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Daily Maximum	MG/L	2/Month	Grab
January thru December	QL	***	***		***	***	***			
Nitrogen, Ammonia Total (as N)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	35 Monthly Average	REPORT Daily Maximum	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Nitrogen, Nitrate Total (as N)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Dissolved (TDS)	Effluent Gross Value	REPORT Monthly Average	REPORT Weekly Average	KG/DAY	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Coliform, Fecal General	Effluent Gross Value	*****	*****	*****	*****	200 Monthly Geo Avg	400 Weekly Geometric	#/100ML	1/Day	Grab
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

3-Final Phase limitations can be activated when bypass operations begin once a Treatment Works Approval is obtained.

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: 1-Initial **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
BOD, Carbonaceous 5 Day, 20oC	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, Carbonaceous 5 Day, 20oC	Effluent Gross Value	6457 Monthly Average	9686 Weekly Average	KG/DAY	*****	25 Monthly Average	40 Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, Carbonaceous 5 Day, 20oC	Percent Removal	*****	*****	*****	87 Monthly Av Minimum	*****	*****	PERCENT	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
IC25 Statre 7day Chr Ceriodaphnia	Effluent Gross Value	*****	*****	*****	26 Report Per Minimum	*****	*****	%EFFL	1/6 Months	Composite
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	6/Day	Grab
January thru December	MDL	***	***		***	***	***			
Temperature, oC	Raw Sew/influent	*****	*****	*****	REPORT Instant Minimum	REPORT Monthly Average	REPORT Instant Maximum	DEG.C	1/Week	Grab
January thru December	QL	***	***		***	***	***			
Temperature, oC	Effluent Gross Value	*****	*****	*****	REPORT Instant Minimum	REPORT Monthly Average	REPORT Instant Maximum	DEG.C	1/Week	Grab
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

3-Final Phase limitations can be activated when bypass operations begin once a Treatment Works Approval is obtained.

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: 1-Initial **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Color (pt-co Units)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	*****	PT-CO	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Oxygen, Dissolved (DO)	Effluent Gross Value	*****	*****	*****	*****	REPORT Daily Avg Minimum	*****	MG/L	1/Day	Grab
January thru December	QL	***	***		***	***	***			
Phosphorus, Total (as P)	Effluent Gross Value	REPORT Monthly Average	REPORT Weekly Average	KG/DAY	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Cyanide, Total (as CN)	Effluent Gross Value	5996 Monthly Average	9601 Daily Maximum	GR/DAY	*****	20 Monthly Average	32 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	***	***		***	***	***			
Nickel, Total Recoverable	Effluent Gross Value	234635 Monthly Average	385411 Daily Maximum	GR/DAY	*****	774 Monthly Average	1272 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Zinc, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	68450 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	226 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

3-Final Phase limitations can be activated when bypass operations begin once a Treatment Works Approval is obtained.

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: 1-Initial **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Copper, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	30300 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	100 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	***	***		***	***	***			

Table III - A - 2: Surface Water DMR Limits and Monitoring Requirements

PHASE: 2-Interim **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	REPORT 12 Month Rolling Av	*****	MGD	Continuous	Metered
January thru December	QL	***	***		***	***	***			
pH	Raw Sew/influent	*****	*****	*****	REPORT Instant Minimum	*****	REPORT Instant Maximum	SU	6/Day	Grab
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Instant Minimum	*****	9.0 Instant Maximum	SU	6/Day	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

3-Final Phase limitations can be activated when bypass operations begin once a Treatment Works Approval is obtained.

Table III - A - 2: Surface Water DMR Limits and Monitoring Requirements

PHASE: 2-Interim **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Solids, Total Suspended	Effluent Gross Value	9084 Monthly Average	13626 Weekly Average	KG/DAY	*****	30 Monthly Average	45 Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
Oil and Grease	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Daily Maximum	MG/L	2/Month	Grab
January thru December	QL	***	***		***	***	***			
Nitrogen, Ammonia Total (as N)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	35 Monthly Average	REPORT Daily Maximum	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Nitrogen, Nitrate Total (as N)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Dissolved (TDS)	Effluent Gross Value	REPORT Monthly Average	REPORT Weekly Average	KG/DAY	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Coliform, Fecal General	Effluent Gross Value	*****	*****	*****	*****	200 Monthly Geo Avg	400 Weekly Geometric	#/100ML	1/Day	Grab
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

3-Final Phase limitations can be activated when bypass operations begin once a Treatment Works Approval is obtained.

Table III - A - 2: Surface Water DMR Limits and Monitoring Requirements

PHASE: 2-Interim **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
BOD, Carbonaceous 5 Day, 20oC	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, Carbonaceous 5 Day, 20oC	Effluent Gross Value	6457 Monthly Average	9686 Weekly Average	KG/DAY	*****	25 Monthly Average	40 Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, Carbonaceous 5 Day, 20oC	Percent Removal	*****	*****	*****	87 Monthly Av Minimum	*****	*****	PERCENT	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
IC25 Statre 7day Chr Ceriodaphnia	Effluent Gross Value	*****	*****	*****	26 Report Per Minimum	*****	*****	%EFFL	1/6 Months	Composite
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	*****	*****	*****	*****	0.04 Monthly Average	0.07 Daily Maximum	MG/L	6/Day	Grab
January thru December	MDL	***	***		***	***	***			
Temperature, oC	Raw Sew/influent	*****	*****	*****	REPORT Instant Minimum	REPORT Monthly Average	REPORT Instant Maximum	DEG.C	1/Week	Grab
January thru December	QL	***	***		***	***	***			
Temperature, oC	Effluent Gross Value	*****	*****	*****	REPORT Instant Minimum	REPORT Monthly Average	REPORT Instant Maximum	DEG.C	1/Week	Grab
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

3-Final Phase limitations can be activated when bypass operations begin once a Treatment Works Approval is obtained.

Table III - A - 2: Surface Water DMR Limits and Monitoring Requirements

PHASE: 2-Interim **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Color (pt-co Units)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	*****	PT-CO	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Oxygen, Dissolved (DO)	Effluent Gross Value	*****	*****	*****	*****	REPORT Daily Avg Minimum	*****	MG/L	1/Day	Grab
January thru December	QL	***	***		***	***	***			
Phosphorus, Total (as P)	Effluent Gross Value	REPORT Monthly Average	REPORT Weekly Average	KG/DAY	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Cyanide, Total (as CN)	Effluent Gross Value	5996 Monthly Average	9601 Daily Maximum	GR/DAY	*****	20 Monthly Average	32 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	***	***		***	***	***			
Nickel, Total Recoverable	Effluent Gross Value	234635 Monthly Average	385411 Daily Maximum	GR/DAY	*****	774 Monthly Average	1272 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Zinc, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	68450 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	226 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

3-Final Phase limitations can be activated when bypass operations begin once a Treatment Works Approval is obtained.

Table III - A - 2: Surface Water DMR Limits and Monitoring Requirements

PHASE: 2-Interim **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Copper, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	30300 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	100 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	***	***		***	***	***			

Table III - A - 3: Surface Water DMR Limits and Monitoring Requirements

PHASE: 3-Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Duration Of Discharge	Bypass	*****	*****	*****	*****	REPORT Monthly Total	*****	# OF DAYS	1/Month	Calculated
January thru December	QL	***	***		***	***	***			
Flow, In Conduit or Thru Treatment Plant	Raw Sew/influent	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	REPORT 12 Month Rolling Av	*****	MGD	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Flow, Total	Bypass	REPORT Monthly Total	*****	MGAL	*****	*****	*****	*****	1/Month	Metered
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

3-Final Phase limitations can be activated when bypass operations begin once a Treatment Works Approval is obtained.

Table III - A - 3: Surface Water DMR Limits and Monitoring Requirements

PHASE: 3-Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
pH	Raw Sew/influent	*****	*****	*****	REPORT Instant Minimum	*****	REPORT Instant Maximum	SU	6/Day	Grab
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Instant Minimum	*****	9.0 Instant Maximum	SU	6/Day	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	9084 Monthly Average	13626 Weekly Average	KG/DAY	*****	30 Monthly Average	45 Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
Oil and Grease	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Daily Maximum	MG/L	2/Month	Grab
January thru December	QL	***	***		***	***	***			
Nitrogen, Ammonia Total (as N)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	35 Monthly Average	REPORT Daily Maximum	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

3-Final Phase limitations can be activated when bypass operations begin once a Treatment Works Approval is obtained.

Table III - A - 3: Surface Water DMR Limits and Monitoring Requirements

PHASE: 3-Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Nitrogen, Nitrate Total (as N)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Dissolved (TDS)	Effluent Gross Value	REPORT Monthly Average	REPORT Weekly Average	KG/DAY	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Coliform, Fecal General	Effluent Gross Value	*****	*****	*****	*****	200 Monthly Geo Avg	400 Weekly Geometric	#/100ML	1/Day	Grab
January thru December	QL	***	***		***	***	***			
BOD, Carbonaceous 5 Day, 20oC	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, Carbonaceous 5 Day, 20oC	Effluent Gross Value	6457 Monthly Average	9686 Weekly Average	KG/DAY	*****	25 Monthly Average	40 Weekly Average	MG/L	1/Day	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, Carbonaceous 5 Day, 20oC	Percent Removal	*****	*****	*****	87 Monthly Av Minimum	*****	*****	PERCENT	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
IC25 Statre 7day Chr Ceriodaphnia	Effluent Gross Value	*****	*****	*****	26 Report Per Minimum	*****	*****	%EFFL	1/6 Months	Composite
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

3-Final Phase limitations can be activated when bypass operations begin once a Treatment Works Approval is obtained.

Table III - A - 3: Surface Water DMR Limits and Monitoring Requirements

PHASE: 3-Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Chlorine Produced Oxidants	Effluent Gross Value	*****	*****	*****	*****	0.04 Monthly Average	0.07 Daily Maximum	MG/L	6/Day	Grab
January thru December	MDL	***	***		***	***	***			
Temperature, oC	Raw Sew/influent	*****	*****	*****	REPORT Instant Minimum	REPORT Monthly Average	REPORT Instant Maximum	DEG.C	1/Week	Grab
January thru December	QL	***	***		***	***	***			
Temperature, oC	Effluent Gross Value	*****	*****	*****	REPORT Instant Minimum	REPORT Monthly Average	REPORT Instant Maximum	DEG.C	1/Week	Grab
January thru December	QL	***	***		***	***	***			
Color (pt-co Units)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	*****	PT-CO	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Oxygen, Dissolved (DO)	Effluent Gross Value	*****	*****	*****	*****	REPORT Daily Avg Minimum	*****	MG/L	1/Day	Grab
January thru December	QL	***	***		***	***	***			
Phosphorus, Total (as P)	Effluent Gross Value	REPORT Monthly Average	REPORT Weekly Average	KG/DAY	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Cyanide, Total (as CN)	Effluent Gross Value	5996 Monthly Average	9601 Daily Maximum	GR/DAY	*****	20 Monthly Average	32 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

3-Final Phase limitations can be activated when bypass operations begin once a Treatment Works Approval is obtained.

Table III - A - 3: Surface Water DMR Limits and Monitoring Requirements

PHASE: 3-Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Nickel, Total Recoverable	Effluent Gross Value	234635 Monthly Average	385411 Daily Maximum	GR/DAY	*****	774 Monthly Average	1272 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Zinc, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	68450 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	226 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	***	***		***	***	***			
Copper, Total Recoverable	Effluent Gross Value	REPORT Monthly Average	30300 Daily Maximum	GR/DAY	*****	REPORT Monthly Average	100 Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	RQL	***	***		***	***	***			

Surface Water WCR - Quarterly Reporting Requirements:

Submit a Quarterly WCR: within twenty-five days after the end of every quarterly monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the effluent sample for the priority pollutant scan shall be collected to coincide with the influent and sludge monitoring for the priority pollutants.

Table III - A - 4: Surface Water WCR - Quarterly Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Barium, Total Recoverable (as Ba)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
1,4-Dichlorobenzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Bis(2-ethylhexyl) phthalate	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Chloroform	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Methylene Chloride	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Cyanide, free	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the effluent sample for the priority pollutant scan shall be collected to coincide with the influent and sludge monitoring for the priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Molybdenum, Total (as Mo)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Arsenic, Total Recoverable (as As)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Selenium, Total Recoverable	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Thallium, Total Recoverable	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Silver, Total Recoverable	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Cadmium, Total Recoverable	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Lead, Total Recoverable	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Chromium, Total Recoverable	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Antimony, Total Recoverable	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Mercury Total Recoverable	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Acenaphthylene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Acenaphthene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Anthracene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Benzo(b)fluoranthene (3,4-benzo)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Benzo(k)fluoranthene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the effluent sample for the priority pollutant scan shall be collected to coincide with the influent and sludge monitoring for the priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Benzo(a)pyrene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Bis(2-chloroethyl) ether	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Bis(2-chloroethoxy) methane	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Bis (2-chloroiso-propyl) ether	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Butyl benzyl phthalate	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Chrysene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Diethyl phthalate	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Dimethyl phthalate	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
1,2-Diphenyl-hydrazine	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Fluoranthene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Fluorene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Hexachlorocyclo-pentadiene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Hexachloroethane	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Indeno(1,2,3-cd)-pyrene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Isophorone	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the effluent sample for the priority pollutant scan shall be collected to coincide with the influent and sludge monitoring for the priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
N-nitrosodi-n-propylamine	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
N-nitrosodiphenyl-amine	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
N-nitrosodimethyl-amine	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Nitrobenzene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Phenanthrene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Pyrene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Benzo(ghi)perylene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Benzo(a)anthracene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
1,2-Dichlorobenzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
1,2,4-Trichloro-benzene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Dibenzo(a,h) anthracene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
1,3-Dichlorobenzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2-Chloronaphthalene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Di-n-octyl Phthalate	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
2,4-Dinitrotoluene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the effluent sample for the priority pollutant scan shall be collected to coincide with the influent and sludge monitoring for the priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
2,6-Dinitrotoluene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
3,3'-Dichloro-benzidine	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
4-Bromophenyl phenyl ether	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Naphthalene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Di-n-butyl phthalate	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Benzidine	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Malathion	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Demeton	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Hexachlorobenzene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Hexachlorobutadiene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Mirex	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
1,3-Dichloropropene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
1,2,4,5-Tetrachloro-benzene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
N-nitrosodiethyl-amine	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
N-nitrosopyrrolidine	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the effluent sample for the priority pollutant scan shall be collected to coincide with the influent and sludge monitoring for the priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Carbon Tetrachloride	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
1,2-Dichloroethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Bromoform	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Benzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Acrolein	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Acrylonitrile	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Chlorobenzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Chlorodibromomethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Ethylbenzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Methyl Bromide	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Methyl Chloride	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Tetrachloroethylene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Trichlorofluoro-methane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
1,1-Dichloroethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
1,1-Dichloroethylene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the effluent sample for the priority pollutant scan shall be collected to coincide with the influent and sludge monitoring for the priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
1,1,1-Trichloro-ethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
1,1,2-Trichloro-ethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
1,1,2,2-Tetrachloro-ethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
1,2-Dichloropropane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
1,2-trans-Dichloro-ethylene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2-Chloroethyl Vinyl Ether (Mixed)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Bromodichloromethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Vinyl Chloride	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Trichloroethylene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Methoxychlor	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
N-Nitrosodi-n-butylamine	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Chloroethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Parachloro-m-cresol	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Parathion	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
2,4,5-Trichloro-phenol	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the effluent sample for the priority pollutant scan shall be collected to coincide with the influent and sludge monitoring for the priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Delta BHC, Total (ug/l)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Endosulfan Sulfate	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Beta Endosulfan	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Alpha Endosulfan	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Endrin Aldehyde	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
2,3,7,8-Tetrachloro-dibenzo-p-dioxin	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
4,4'-DDT(p,p'-DDT)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
4,4'-DDD(p,p'-DDD)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
4,4'-DDE(p,p'-DDE)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Aldrin	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Alpha BHC	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Beta BHC	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Gamma BHC (lindane),	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Chlordane	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Dieldrin	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the effluent sample for the priority pollutant scan shall be collected to coincide with the influent and sludge monitoring for the priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Endosulfans, Total (alpha and beta)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Endrin	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Toxaphene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Heptachlor	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Heptachlor Epoxide	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Chlorpyrifos	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
2-Chlorophenol	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
2-Nitrophenol	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
2,4-Dichlorophenol	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
2,4-Dimethylphenol	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
2,4-Dinitrophenol	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
2,4,6-Trichloro-phenol	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
4-Chlorophenyl phenyl ether	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
4-Nitrophenol	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
4,6-Dinitro-o-cresol	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Semi Annual Reporting Requirements:

Submit a Semi-Annual WCR: within twenty-five days after the end of every 6 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the effluent sample for the priority pollutant scan shall be collected to coincide with the influent and sludge monitoring for the priority pollutants.

Table III - A - 5: Surface Water WCR - Semi Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Phenol Single Compound	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Pentachlorophenol	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Pentachlorobenzene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Guthion	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December

MONITORED LOCATION:	RECEIVING STREAM:	STREAM CLASSIFICATION:	DISCHARGE CATEGORY(IES):
040A CSO	Delaware River	Mainstem Delaware-Zone 3	CSM - Combined Sewer Management (IP)

Location Description

The permittee is authorized to discharge combined sewage from Outfall 040A located at 32nd & Farragut Street into the Delaware River at Latitude 39° 57' 54" N and Longitude 75° 05' 28" W.

Contributing Waste Types

Sanitary, Storm Water Runoff

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: within twenty-five days after the end of every month beginning from the effective date of the permit (EDP).

Comments:

For this outfall, Precipitation may be reported from a rain gauge representative of the area, and Solids/Floatables may be reported when the solid waste is measured for disposal. Duration of Discharge shall be reported as whole day for any day when a discharge occurs.

Table III - B - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Solids/Floatables	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Total	*****	CU YARDS	1/Month	Measured
January thru December	QL	***	***		***	***	***			
Precipitation	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Total	*****	# INCHES	1/Month	Measured
January thru December	QL	***	***		***	***	***			
Duration Of Discharge	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Total	*****	# OF DAYS	1/Month	Estimated
January thru December	QL	***	***		***	***	***			

MONITORED LOCATION:	RECEIVING STREAM:	STREAM CLASSIFICATION:	DISCHARGE CATEGORY(IES):
IPPI IPPI INFLUENT SAMPLING	Delaware River	Mainstem Delaware-Zone 3	A - Sanitary Wastewater (IP)

Location Description

Influent monitoring shall be performed before any treatment, other than degritting, and before the addition of any internal waste streams.

Contributing Waste Types

Sanitary

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the influent sample for the priority pollutant scan shall be collected to coincide with the effluent and sludge monitoring for the priority pollutants.

Table III - C - 1: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Molybdenum, Total (as Mo)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Cyanide, Total (as CN)	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Arsenic, Total Recoverable (as As)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Selenium, Total Recoverable	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Thallium, Total Recoverable	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Beryllium, Total Recoverable (as Be)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Nickel, Total Recoverable	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Silver, Total Recoverable	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Zinc, Total Recoverable	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Cadmium, Total Recoverable	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the influent sample for the priority pollutant scan shall be collected to coincide with the effluent and sludge monitoring for the priority pollutants.

Table III - C - 1: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Lead, Total Recoverable	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Chromium, Total Recoverable	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Copper, Total Recoverable	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Antimony, Total Recoverable	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Mercury, Total (as Hg)	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Acenaphthylene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Acenaphthene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Anthracene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Benzo(b)fluoranthene (3,4-benzo)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Benzo(k)fluoranthene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Benzo(a)pyrene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Bis(2-chloroethyl) ether	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Bis(2-chloroethoxy) methane	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Bis (2-chloroiso-propyl) ether	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Butyl benzyl phthalate	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the influent sample for the priority pollutant scan shall be collected to coincide with the effluent and sludge monitoring for the priority pollutants.

Table III - C - 1: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Chrysene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Diethyl phthalate	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Dimethyl phthalate	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
1,2-Diphenyl-hydrazine	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Fluoranthene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Fluorene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Hexachlorocyclo-pentadiene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Hexachloroethane	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Indeno(1,2,3-cd)-pyrene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Isophorone	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
N-nitrosodi-n-propylamine	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
N-nitrosodiphenyl-amine	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
N-nitrosodimethyl-amine	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Nitrobenzene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Phenanthrene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the influent sample for the priority pollutant scan shall be collected to coincide with the effluent and sludge monitoring for the priority pollutants.

Table III - C - 1: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Pyrene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Benzo(ghi)perylene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Benzo(a)anthracene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
1,2-Dichlorobenzene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
1,2,4-Trichloro-benzene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Dibenzo(a,h) anthracene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
1,3-Dichlorobenzene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
1,4-Dichlorobenzene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
2-Chloronaphthalene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
2,4-Dinitrotoluene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
2,6-Dinitrotoluene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
3,3'-Dichloro-benzidine	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
4-Bromophenyl phenyl ether	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Naphthalene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Bis(2-ethylhexyl) phthalate	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the influent sample for the priority pollutant scan shall be collected to coincide with the effluent and sludge monitoring for the priority pollutants.

Table III - C - 1: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Di-n-butyl phthalate	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Benzidine	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Hexachlorobenzene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Hexachlorobutadiene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
1,3-Dichloropropene	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Carbon Tetrachloride	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
1,2-Dichloroethane	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Bromoform	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Chloroform	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Toluene	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Benzene	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Acrolein	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Acrylonitrile	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Chlorobenzene	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Chlorodibromomethane	Raw Sew/influent	REPORT	UG/L	Grab	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the influent sample for the priority pollutant scan shall be collected to coincide with the effluent and sludge monitoring for the priority pollutants.

Table III - C - 1: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Ethylbenzene	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Methyl Bromide	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Methyl Chloride	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Methylene Chloride	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Tetrachloroethylene	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Trichlorofluoro-methane	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
1,1-Dichloroethane	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
1,1-Dichloroethylene	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
1,1,1-Trichloro-ethane	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
1,1,2-Trichloro-ethane	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
1,1,2,2-Tetrachloro-ethane	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
1,2-Dichloropropane	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
1,2-trans-Dichloro-ethylene	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
2-Chloroethyl Vinyl Ether (Mixed)	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Bromodichloromethane	Raw Sew/influent	REPORT	UG/L	Grab	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the influent sample for the priority pollutant scan shall be collected to coincide with the effluent and sludge monitoring for the priority pollutants.

Table III - C - 1: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Vinyl Chloride	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Trichloroethylene	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Chloroethane	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Parachloro-m-cresol	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Phenols	Raw Sew/influent	REPORT	UG/L	Grab	January thru December
Delta BHC, Total (ug/l)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Endosulfan Sulfate	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Beta Endosulfan	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Alpha Endosulfan	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Endrin Aldehyde	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1016 (Arochlor 1016)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
4,4'-DDT(p,p'-DDT)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
4,4'-DDD(p,p'-DDD)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
4,4'-DDE(p,p'-DDE)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Aldrin	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the influent sample for the priority pollutant scan shall be collected to coincide with the effluent and sludge monitoring for the priority pollutants.

Table III - C - 1: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Alpha BHC	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Beta BHC	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Gamma BHC (lindane),	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Chlordane	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Dieldrin	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Endrin	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Toxaphene	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Heptachlor	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Heptachlor Epoxide	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1221 (Arochlor 1221)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1232 (Arochlor 1232)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1242 (Arochlor 1242)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1248 (Arochlor 1248)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1254 (Arochlor 1254)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1260 (Arochlor 1260)	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December

Surface Water WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP) Pursuant to N.J.A.C. 7:14A-19.3(c)7.i, the influent sample for the priority pollutant scan shall be collected to coincide with the effluent and sludge monitoring for the priority pollutants.

Table III - C - 1: Surface Water WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
2-Chlorophenol	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
2-Nitrophenol	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
2,4-Dichlorophenol	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
2,4-Dimethylphenol	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
2,4-Dinitrophenol	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
2,4,6-Trichloro-phenol	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
4-Chlorophenyl phenyl ether	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
4-Nitrophenol	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
4,6-Dinitro-o-cresol	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Phenol Single Compound	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December
Pentachlorophenol	Raw Sew/influent	REPORT	UG/L	24 Hour Composite	January thru December

PART IV

SPECIFIC REQUIREMENTS: NARRATIVE

Notes and Definitions

A. Footnotes

1. These notes are specific to this permit

a. The permit conditions in the CSO section apply only to the combined sewer system owned/operated by the permittee and related CSO discharges.

2. CSO related resources are listed below with a link to the current webpage

a. NJDEP's CSO main website and related links can be found at http://www.nj.gov/dep/dwq/cso.htm

b. EPA's Combined Sewer Overflows Principal Guidance Documents can be found at http://water.epa.gov/polwaste/npdes/cso/Guidance-Documents.cfm

c. The Nine Minimum Control requirements from the National CSO Policy along with EPA's guidance document can be found at N.J.A.C. 7:14A-11.12-Appendix C and http://www.epa.gov/npdes/pubs/owm0030.pdf

d. The Nine elements of a Long Term Control Plan from the National CSO Policy along with EPA's guidance document can be found at N.J.A.C. 7:14A-11.12-Appendix C and http://water.epa.gov/polwaste/npdes/cso/upload/owm0272.pdf.

e. EPA's Post Construction Compliance Monitoring Guidance document can be found at http://www.epa.gov/npdes/pubs/final_cso_pccm_guidance.pdf

f. EPA's Guidance: Coordinating Combined Sewer Overflow (CSO) Long-Term Planning with Water Quality Standards Reviews (PDF)

g. EPA's Capacity, management, operation and maintenance (CMOM) guidance document can be found at http://www.epa.gov/npdes/pubs/cmom_5.pdf

h. Dry-Weather Deposition and Flushing for Combined Sewer Overflow Pollution Control: http://nepis.epa.gov/Adobe/PDF/30000821.PDF

i. Combined sewer overflow control (manual): http://nepis.epa.gov/Adobe/PDF/30004MAO.pdf

j. EPA's Storm Water and Combined Sewer Overflows Publications can be found at http://water.epa.gov/polwaste/wastewater/StormwaterPubs.cfm

B. Definitions

1. These definitions are specific only to this permit

a. “Dry weather overflow (DWO)” means a combined sewer overflow that cannot be attributed to a precipitation event, including snow melt, within the hydraulically connected system. DWOs include the following flows: domestic sewage, dewatering activities, commercial and industrial wastewaters, ground water and tidal infiltration upstream of the regulator, and any other non-precipitation event related flows downstream of the regulator to the outfall pipe.

   Groundwater infiltration and tidal infiltration originating downstream of the regulator are allowable sources of discharges from a CSO during dry weather. On a case-by-case basis, the Department reserves the right to allow temporary use of the CSO outfall structures for other types of discharges to address extraordinary circumstances. Such use must be specifically approved by the Department.

b. "Green Infrastructure" means methods of stormwater management that reduce wet weather/stormwater volume, flow, or changes the characteristics of the flow into combined or separate sanitary or storm sewers, or surface waters, by allowing the stormwater to infiltrate, to be treated by vegetation or by soils; or to be stored for reuse. Green infrastructure includes, but is not limited to, pervious paving, bioretention basins, vegetated swales, and cisterns

c. "Hydraulically connected system" means the entire collection system that conveys flows to one Sewage Treatment Plant (STP). On a case-by-case basis, the permittee, in consultation with the Department, may segment a larger hydraulically connected system into a series of smaller inter-connected systems, based upon the specific nature of the sewer system layout, pump stations, gradients, locations of CSOs and other physical features which support such a sub area. A hydraulically connected system could include multiple municipalities, comprised of both combined and separate sewers

C. NINE MINIMUM CONTROL REQUIREMENTS

1. **Proper operation and regular maintenance programs for the sewer system and the CSOs**
2. **Maximum use of the collection system for storage**
3. **Review and modification of pretreatment requirements to assure CSO impacts are minimized**
4. **Maximization of flow to the POTW for treatment**
5. **Prohibition of CSOs during dry weather**
6. **Control of solid and floatable materials in CSOs**
7. **Pollution prevention**
8. **Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts**
9. **Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls**

D. NINE ELEMENTS OF THE LONG TERM CONTROL PLAN

1. **Characterization, Monitoring, and Modeling of the Combined Sewer Systems**
2. **Public Participation**
3. **Consideration of Sensitive Areas**

4. **Evaluation of Alternatives**
5. **Cost/Performance Considerations**
6. **Operational Plan**
7. **Maximizing Treatment at the Existing POTW Treatment Plant**
8. **Implementation Schedule**
9. **Compliance Monitoring Program**

Sanitary Wastewater (IP)

A. MONITORING REQUIREMENTS

1. Standard Monitoring Requirements

a. Each analysis required by this permit shall be performed by a New Jersey Certified Laboratory that is certified to perform that analysis.

b. The Permittee shall perform all water/wastewater analyses in accordance with the analytical test procedures specified in 40 CFR 136, unless other test procedures have been approved by the Department in writing or as otherwise specified in the permit.

c. When more than one test procedure is approved for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive as defined at 40 CFR 136, 40 CFR 122.21(e)(3), and 40 CFR 122.44(i)(1)(iv).

d. All sampling shall be conducted in accordance with the Department's Field Sampling Procedures Manual, or an alternate method approved by the Department in writing.

e. All monitoring shall be conducted as specified in Part III.

f. All sample frequencies expressed in Part III are minimum requirements. Any additional samples taken consistent with the monitoring and reporting requirements contained herein shall be reported on the Monitoring Report Forms.

g. Annual and semi-annual wastewater testing shall be conducted in a different quarter of each year so that tests are conducted in each of the four permit quarters of the permit cycle. Testing may be conducted during any month of the permit quarters.

h. Monitoring for Wastewater Characterization Report parameters shall be conducted concurrently with the Whole Effluent Toxicity (WET) monitoring, when feasible.

i. Any influent and effluent sampling for toxic pollutant analyses shall be collected concurrently.

j. Flow shall be measured using a meter.

B. RECORDKEEPING

1. Standard Recordkeeping Requirements

a. The permittee shall retain records of all monitoring information, including 1) all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation (if applicable), 2) copies of all reports required by this NJPDES permit and 3) all data used to complete the application for a NJPDES permit, for a period of at least 5 years from the date of the sample, measurement, report, application or record.

b. Records of monitoring information shall include 1) the date, locations, and time of sampling or measurements, 2) the individual(s) who performed the sampling or measurements, 3) the date(s) the analyses were performed, 4) the individual(s) who performed the analyses, 5) the analytical techniques or methods used, and 6) the results of such analyses.

C. SUBMITTALS

1. Standard Submittal Requirements

Sanitary Wastewater (IP)

a. The permittee shall amend the Operation & Maintenance Manual whenever there is a change in the treatment works design, construction, operations or maintenance which substantially changes the treatment works operations and maintenance procedures.

2. Compliance Schedule Progress Reports

a. In accordance with N.J.A.C. 7:14A-6.4(a), a schedule of compliance has been included for CPO, including interim deadlines for annual progress reports that outline the progress towards compliance with the conditions of the permit.

i. Submit a Compliance Schedule Progress Report within 12 months from the effective date of the permit (EDP).

ii. Submit a Compliance Schedule Progress Report within 24 months from the effective date of the permit (EDP).

b. The compliance schedule progress report(s) shall be submitted to the following Departmental entities:

i. NJDEP: Division of Water Quality
Mail Code - 401-02B
Bureau of Surface Water and Pretreatment Permitting
P.O. Box 420
Trenton, New Jersey 08625-0420

ii. NJDEP: Southern Bureau of Water Compliance and Enforcement
One Port Center
2 Riverside Drive, Suite 201
Camden, New Jersey 08103

3. Delaware River Basin PCB Requirements

a. On December 15, 2003, the U.S. EPA, Regions 2 and 3, adopted a Total Maximum Daily Load (TMDL) for PCBs for Zones 2, 3, 4, and 5 of the tidal Delaware River. On December 15, 2006, the U.S. EPA, Regions 2 and 3, adopted a Total Maximum Daily Load (TMDL) for PCBs for Zone 6 (Delaware Bay). The TMDLs require the facilities identified as discharging PCBs to these zones of the Delaware River or to the tidal portions of tributaries to these zones to conduct monitoring for 209 PCB congeners, and prepare and implement a PCB Pollutant Minimization Plan (PMP).

b. Subsequent monitoring required by DRBC in 2005 confirmed the presence of PCBs, and indicates that this facility contributes to 99% of the cumulative loadings from all point sources. Therefore, the permittee shall collect two samples annually during a wet weather flow and two samples annually during a dry weather flow. The samples shall be collected from Outfall DSN 001A for dry weather and wet weather sampling.

c. All sample analyses shall be performed using EPA Method 1668A, Revision A: Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by HRGC/HRMS. EPA-821-R-00-002, December 1999 as supplemented or amended, and results for all 209 PCB congeners shall be reported. Project-specific, sample collection protocols, analytical procedures, and reporting requirements at https://www.state.nj.us/drbc/programs/quality/pcb-monitoring.html shall be followed.

d. In accordance with the U.S. EPA Regions 2 and 3 Total Maximum Daily Loads (TMDLs) for PCBs for Zones 2-6 of the Tidal Delaware River, the permittee submitted a Pollutant Minimization Plan (PMP) for PCBs which was approved on June 23, 2007. The permittee shall continue to comply with the requirements of Section 4.30.9 of DRBC's Water Quality Regulations. Therefore, the permittee shall:.

   i. Continue to implement the PMP to achieve PCB loading reduction goals, and;

   ii. Submit an Annual Report on the yearly anniversary of the commencement of the PMP to DRBC and the Department consistent with the guidance specified at http://www.state.nj.us/drbc/programs/quality/pmp.html.

e. The PMP Annual Report (pdf*) and PCB data shall be submitted together to the DRBC. The permittee shall send only the PMP Annual Reports to the Department.
PCB data submitted to the DRBC shall be submitted digitally in accordance with Electronic Data Deliverable (EDD) format protocols (specified at https://www.state.nj.us/drbc/library/documents/PCB-EDD.pdf) along with analytical result summaries from the laboratory showing individual congener results. The full laboratory data package shall be retained for five years and made available upon request. PCB data and reports shall be submitted as follows. PCB reports containing maps greater than 11" x 17" shall also be submitted in hardcopy to DRBC at the address below:.

   i. For PCB data and Annual Reports to the DRBC: PCB_PMP@drbc.gov; or delivery (flash drive) to:
   Delaware River Basin Commission
   Science and Water Quality Management
   25 Cosey Road, P.O. Box 7360
   West Trenton, NJ 08628-0360

   ii. drbcpcbreports@dep.nj.gov

D. FACILITY MANAGEMENT

1. Discharge Requirements

a. The permittee shall discharge at the location(s) specified in PART III of this permit.

b. The permittee shall not discharge foam or cause foaming of the receiving water that 1) forms objectionable deposits on the receiving water, 2) forms floating masses producing a nuisance, or 3) interferes with a designated use of the waterbody.

c. The permittee's discharge shall not produce objectionable color or odor in the receiving stream.

d. The discharge shall not exhibit a visible sheen.

2. Delaware River Basin Commission (DRBC)

a. The permittee shall comply with the Delaware River Basin Commission (DRBC) "Water Quality Regulations."

b. The Delaware River Basin Commission (DRBC) 20-day Carbonaceous Biochemical (first-stage) Oxygen Demand (CBOD 20) wasteload allocation of 24,200 pounds per day as a monthly average value, (equivalent to the monthly average CBOD5 mass effluent limit, in Part III) shall not be exceeded. The CBOD 20 effluent value may be calculated by multiplying the measured effluent CBOD5 by a CBOD 20/CBOD5 default mass ratio of 1.7.

c. Except as otherwise authorized by this permit, if the permittee seeks relief from any limitation based upon a Delaware River Basin Commission water quality standard or minimum treatment requirement, the permittee shall apply for approval from the Delaware River Basin Commission Executive Director and NJDEP for a permit revision.

d. The permittee may conduct a study to determine if specific conductance may be substituted for TDS in the permit. The study should include effluent specific data to be used to determine a correlation between TDS and specific conductance. Upon review, the Delaware River Basin Commission will determine if the permit may be modified to allow the substitution of specific conductance for TDS monitoring. The TDS limit would then be supplanted by a specific conductance limit in the permit.

e. In accordance with DRBC regulations, the permittee is permitted to treat and discharge wastewater as established in the approved sewer service area as set forth in the permittee's application, to the extent consistent with all conditions of the permit. Prior to accepting for treatment and discharge 6.5 million gallons per day (as a daily average) of wastewater that is imported from outside the Delaware River Basin, the permittee shall first apply to and obtain approval from the DRBC.

f. Based upon the written recommendation of the DRBC staff, when the discharge is operated in accordance with the provisions and conditions established by this permit, then with respect to effluent quality and stream quality objectives, the project does not substantially impair or conflict with the Commission's Comprehensive Plan.

3. Applicability of Discharge Limitations and Effective Dates

a. Surface Water Discharge Monitoring Report (DMR) Form Requirements

i. This permit includes multiple phases for DSN 001A.
The 1-Initial limitation and monitoring conditions are effective from the effective date of the permit (EDP) until EDP + 3 years. 2-Interim limitation and monitoring conditions become effective on EDP + 3 years.

This permit also includes requirements for when bypass operations begin as the 3-Final Phase. Before the 3-Final can be activated, a Treatment Works Approval (TWA) is required and any necessary construction must be completed.
The application forms and a checklist for a TWA can be found on the Department's website at https://www.nj.gov/dep/dwq/forms_twa.htm. The permittee shall submit a request to the Department's Bureau of Surface Water and Pretreatment Permitting at least 30 calendar days prior to commencing bypass operations in order to activate the 3-Final Phase.

b. Wastewater Characterization Report (WCR) Form Requirements

i. The final effluent monitoring conditions contained in PART III for DSN 001A apply for the full term of this permit action.

4. Operation, Maintenance and Emergency conditions

a. The permittee shall operate and maintain treatment works and facilities which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit as specified in the Operation & Maintenance Manual.

b. The permittee shall develop emergency procedures to ensure effective operation of the treatment works under emergency conditions in accordance with N.J.A.C. 7:14A-6.12(d).

5. Toxicity Testing Requirements - Chronic Whole Effluent Toxicity

a. The permittee shall conduct toxicity tests on its wastewater discharge in accordance with the provisions in this section. Such testing will determine if appropriately selected effluent concentrations adversely affect the test species.

b. Chronic toxicity tests shall be conducted using the test species and method identified in Part III of this permit.

c. Any test that does not meet the specifications contained in the Department's "Chronic Toxicity Testing Specifications for Use in the NJPDES Program" document must be repeated within 30 days of the completion of the initial test. The repeat test shall not replace subsequent testing required in Part III.

d. The permittee shall collect and analyze the concentration of ammonia-N in the effluent on the day a sample is collected for WET testing. This result is to be reported on the Biomonitoring Report Form.

e. IC25 - Inhibition Concentration - Concentration of effluent which has an inhibitory effect on 25% of the test organisms for the monitored effect, as compared to the control (expressed as percent effluent).

f. Test results shall be expressed as the IC25 for each test endpoint. Where a chronic toxicity testing endpoint yields IC25's from more than one test endpoint, the most sensitive endpoint will be used to evaluate effluent toxicity.

g. The permittee shall resubmit a Chronic Methodology Questionnaire within 60 days of any change in laboratory.

h. Submit a chronic whole effluent toxicity test report within twenty-five days after the end of every semi-annual monitoring period beginning from the effective date of the permit (EDP).

i. Test reports shall be submitted to:

   i. biomonitoring@dep.nj.gov

   ii. Toxicity@drbc.gov

6. Toxicity Reduction Implementation Requirements (TRIR)

a. The permittee shall initiate a tiered toxicity investigation if two out of six consecutive WET tests demonstrate that the effluent does not comply or will not comply with the toxicity limit or action level specified in Part III of this permit.

   i. If the exceedance of the toxicity limit or action level is directly caused by a documented facility upset, or other unusual event which has been identified and appropriately remedied by the permittee, the toxicity test data collected during the event may be eliminated when determining the need for initiating a TRIR upon written Department approval.

b. The permittee shall begin toxicity characterization within 30 days of the end of the monitoring period when the second toxicity test exceeds the toxicity limits or action levels in Part III. The monitoring frequency for toxicity testing shall be increased to monthly. Up to 12 additional tests may be required.

   i. The permittee may return to the toxicity testing frequency specified in Part III if four consecutive toxicity tests conducted during the Toxicity Characterization do not exceed the toxicity limit or action level.

   ii. If two out of any six consecutive, acceptable tests again exceed the toxicity limit or action level in Part III, the permittee shall repeat the Toxicity Reduction Implementation Requirements.

c. The permittee shall initiate a preliminary toxicity identification (PTI) upon the third exceedance of the toxicity limit or action level specified in Part III during toxicity characterization.

   i. The permittee may return to the monitoring frequency specified in PART III while conducting the PTI. If more frequent WET testing is performed during the PTI, the permittee shall submit all biomonitoring reports to the DEP and report the results for the most sensitive species on the DMR.

   ii. As appropriate, the PTI shall include:
      (1) treatment plant performance evaluation,
      (2) pretreatment program information,
      (3) evaluation of ammonia and chlorine produced oxidants levels and their effect on the toxicity of the discharge,
      (4) evaluation of chemical use and processes at the facility, and
      (5) an evaluation of incidental facility procedures such as floor washing, and chemical spill disposal which may contribute to effluent toxicity.

   iii. If the permittee demonstrates that the cause of toxicity is the chlorine added for disinfection or the ammonia concentration in the effluent and the chlorine and/or ammonia concentrations are below the established water quality based effluent limitation for chlorine and/or ammonia, the permittee shall identify the procedures to be used in future toxicity tests to account for chlorine and/or ammonia toxicity in their preliminary toxicity identification report.

   iv. The permittee shall submit a Preliminary Toxicity Identification Notification within 15 months of triggering TRIR. This notification shall include a determination that the permittee intends to demonstrate compliance OR plans to initiate a CTI.

d. The permittee must demonstrate compliance with the WET limitation or action level in four consecutive WET tests to satisfy the requirements of the Toxicity Reduction Investigation Requirements. After successful completion, the permittee may return to the WET monitoring frequency specified in PART III.

e. The permittee shall initiate a Comprehensive Toxicity Investigation (CTI) if the PTI does not identify the cause of toxicity and a demonstration of consistent compliance with the toxicity limit or action level in Part III can not be made.

   i. The permittee shall develop a project study plan identifying the party or parties responsible for conducting the comprehensive evaluation, establish a schedule for completing the study, and a description of the technical approach to be utilized.

ii. If the permittee determines that the PTI has failed to demonstrate consistent compliance with the toxicity limit or action level in Part III , a Comprehensive Toxicity Investigation Workplan must be prepared and submitted within 90 days.

iii. The permittee shall summarize the data collected and the actions taken in CTI Quarterly Reports. The reports shall be submitted within 30 calendar days after the end of each quarter.

iv. The permittee shall submit a Final CTI Report 90 calendar days after the last quarterly report. The final CTI report shall include the corrective actions identified to reduce toxicity and a schedule for implementing these corrective actions.

f. Upon receipt of written approval from the Department of the corrective action schedule, the permittee shall implement those corrective actions consistent with that schedule.

i. The permittee shall satisfy the requirements of the Toxicity Reduction Implementation Requirements and return to the original toxicity monitoring frequency after corrective actions are implemented and the permittee demonstrates consistent compliance with the toxicity limit or action level in Part III in four consecutive toxicity tests.

ii. If the implemented corrective measures do not result in consistent compliance with the toxicity limit or action level in Part III, the permittee shall submit a plan for resuming the CTI.

iii. Documents regarding Toxicity Investigations shall be sent to the following:
New Jersey Department of Environmental Protection
Mail Code 401-02B
Division of Water Quality
Bureau of Surface Water & Pretreatment Permitting
401 East State Street
P.O. Box 420
Trenton, New Jersey 08625-0420

7. Introduction to RWBR Requirements

a. The following RWBR sections contain the conditions for the permittee to beneficially reuse treated effluent or Reclaimed Water for Beneficial Reuse (RWBR), provided the effluent is in compliance with the criteria specified for the particular use specified below.

b. There are two levels of RWBR uses. Public Access and Restricted Access.

8. Inactive RWBR Requirements

a. The following RWBR sections are included in this permit for various reuse applications. For any RWBR category where a reuse application does not show a status of Approved in Appendix B, these sections are inactive and not effective until a permit action where Appendix B shows that an application under this category is approved. Any specific RWBR category not approved in the Appendix, may be approved at a later date by a minor modification permit action once the appropriate submittal requirements have been received and approved by the Department. Those sections related to a RWBR category where an application in Appendix B shows a status of Approved are effective on the effective date of the permit.

9. RWBR Requirements for Public Access

a. The Public Access reuse types authorized by this permit are those approved in Appendix B. Other Public Access reuse types may be added by minor modification of this permit.

b. The hydraulic loading rate for land application of RWBR shall not exceed 2 inches per week.

c. Any water diverted for RWBR shall be monitored and comply with the high level treatment requirements listed below and the operational requirements in the approved Operations Protocol. If any of these requirements are not achieved, the effluent shall not be diverted for RWBR.

   i. Total Suspended Solids (TSS): Instantaneous maximum of 5.0 mg/L prior to disinfection.

   ii. Nitrogen, Total (NO3 + NH3): Daily maximum of 10.0 mg/L. This requirement only applies when RWBR is land applied.

   iii. Fecal Coliform: 7-day median maximum of 2.2 colonies per 100 mL and an instantaneous maximum of 14 colonies per 100 mL.

   iv. Chlorine Produced Oxidants (CPO): If the permittee disinfects utilizing chlorine, an instantaneous minimum of 1.0 mg/L after fifteen minutes contact time at peak hourly flow must be met.

d. Monitoring of the diverted public access RWBR shall be conducted in the following manner:

   i. Sampling for TSS shall be immediately prior to disinfection. Monitoring for TSS shall be a grab sample once per week.

   ii. Sampling for Turbidity in systems shall be sampled immediately prior to disinfection. The permittee shall establish a correlation between Turbidity and TSS in their effluent as detailed in the Reuse Technical Manual. A statistically significant correlation between Turbidity and TSS shall be established prior to commencement of the RWBR program and shall be incorporated into the Operations Protocol and updated annually. The initial correlation should be done as part of a daily monitoring program for at least 30 days. To ensure continuous compliance with the 5.0 mg/L TSS level, Turbidity must be monitored continuously and achieve the level established in the Operations Protocol.

   iii. For chlorine disinfection, monitoring for CPO shall be continuous and shall be monitored after the appropriate contact time is achieved.

   iv. Monitoring for Fecal Coliform shall be a grab sample, taken in accordance with Part III, at least a minimum of once per week taken immediately after disinfection. Fecal coliform shall be monitored immediately after disinfection.

   v. Monitoring for Total Nitrogen (NO3 + NH3) shall be a composite sample, taken in accordance with Part III, at least once per week taken prior to RWBR diversion. Total Nitrogen (NO3 + NH3) shall be monitored after the appropriate disinfection treatment is achieved.

e. All monitoring results of the RWBR shall be reported each month on Wastewater Characterization Reports (WCR). Unless noted otherwise, the highest of all measured values for diverted RWBR shall be reported.

   i. If chlorine is used for disinfection, the lowest sampling result obtained during the reporting month shall be reported for CPO.

10. RWBR Requirements for Restricted Access--Land Application and Non Edible Crops

a. The Restricted Access--Land Application and Non Edible Crops reuse types authorized by this permit are those approved in Appendix B. Other Restricted Access--Land Application and Non Edible Crops reuse types may be added by minor modification of this permit.

b. The hydraulic loading rate for land application of RWBR shall not exceed 2 inches per week.

c. Any water diverted for RWBR shall be monitored and comply with the high level treatment requirements listed below and the operational requirements in the approved Operations Protocol. If any of these requirements are not achieved, the effluent shall not be diverted for RWBR.

d. Nitrogen, Total (NO3 + NH3): Daily maximum of 10 mg/L. Frequency of sampling for Total Nitrogen shall be at a minimum monthly. The sample shall be collected as a composite sample taken prior to diversion for RWBR. Nitrogen, Total (NO3 + NH3) shall be monitored after the appropriate disinfection treatment time is achieved. This requirement only applies when RWBR is land applied, however, this requirement does not apply to spray irrigation within a fenced perimeter or otherwise restricted area.

e. Fecal Coliform: 200 colonies per 100 ml monthly average Geometric Mean, 400 colonies per 100 ml maximum in any one sample. Frequency of sampling for Fecal Coliform shall be in accordance with Part III of this permit. The sample shall be collected as a grab sample taken immediately after disinfection.

f. Chlorine Produced Oxidants (CPO): For chlorine disinfection, instantaneous minimum of 1.0 mg/L after fifteen minutes contact time at peak hourly flow. Frequency of sampling for CPO shall be in accordance with Part III of this permit. The sample shall be collected as a grab sample taken immediately after disinfection. The value reported for CPO shall be the minimum sampling result obtained during the reporting month for diverted RWBR. Chlorine Produced Oxidants (CPO) shall be monitored after the appropriate contact time is achieved.

g. All monitoring results of the RWBR shall be reported each month on Wastewater Characterization Reports (WCR). Unless noted otherwise, the highest of all measured values for diverted RWBR shall be reported.

11. RWBR Requirements for Restricted Access--Construction and Maintenance Operations

a. The Restricted Access--Construction and Maintenance Operations reuse types authorized by this permit are those approved in Appendix B. Other Restricted Access--Construction and Maintenance Operations reuse types may be added by minor modification of this permit.

b. Fecal Coliform: 200 colonies per 100 ml monthly average Geometric Mean, 400 colonies per 100 ml maximum in any one sample. Frequency of sampling for Fecal Coliform shall be in accordance with Part III of this permit. Fecal coliform shall be monitored immediately after disinfection. This requirement does not apply to sanitary sewer jetting.

12. RWBR Requirements for Restricted Access--Industrial Systems

a. The Restricted Access--Industrial Systems reuse types authorized by this permit are those approved in Appendix B. Other Restricted Access--Industrial Systems reuse types may be added by minor modification of this permit.

13. RWBR Submittal Requirements

a. For Public Access RWBR, the permittee shall submit and receive approval of an Operations Protocol or modify the existing Operations Protocol as detailed in the most recent version of the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse" (Reuse Technical Manual) prior to the commencement of this/these type/s of RWBR activity. A copy of the approved Operations Protocol shall be maintained onsite. Specific requirements for the Operations Protocol are identified in the Reuse Technical Manual.

b. For all types of Restricted Access RWBR, the permittee shall submit and receive approval of a Standard Operations Procedure or modify an existing Standard Operations Procedure as detailed in the most recent version of the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse" (Reuse Technical Manual) prior to the commencement of this/these type/s of RWBR activity. A copy of the approved Standard Operations Procedure shall be maintained onsite. Specific requirements for the Standard Operations Procedure are identified in the Reuse Technical Manual. This requirement does not apply to sanitary sewer jetting and STP washdown water.

c. The permittee shall submit a copy of the Reuse Supplier and User Agreement with each request for authorization to distribute RWBR in which the user is a different entity than the supplier. Specific requirements for the Reuse Supplier and User Agreement are identified in the Reuse Technical Manual.

d. For Public Access RWBR on Edible Crops, the permittee shall submit an annual inventory of edible crop irrigation with the Beneficial Reuse Annual Report. Specific requirements for the annual inventory are identified in the Reuse Technical Manual.

e. Submit a Beneficial Reuse Annual Report: by February 1 of each year beginning from the effective date of the permit (EDP).

f. The permittee shall submit and receive approval of an Engineering Report in support of RWBR authorization requests for new or expanded RWBR projects as detailed in the most recent version of the Department's "Technical Manual for Reclaimed Water for Beneficial Reuse" (Reuse Technical Manual) prior to the commencement of this/these type/s of RWBR activity. A copy of the approved Engineering Report shall be maintained onsite. Specific requirements for the Engineering Report are identified in the Reuse Technical Manual.

g. All submittals shall be mailed or delivered to: New Jersey Department of Environmental Protection, Division of Water Quality, Mail Code 401-02B, Bureau of Surface Water and Pretreatment Permitting , P.O. Box 420, Trenton, New Jersey 08625-0420.

14. RWBR Operational Requirements

a. Effluent that does not meet the requirements for RWBR established in Part III, Part IV and the operational requirements specified in the facility's approved Operations Protocol or Standard Operations Procedure, as applicable, shall not be diverted for RWBR.

b. The land application of RWBR shall not produce surface runoff or ponding.

c. All setback distances shall be consistent with the distances outlined in the Reuse Technical Manual.

d. Land application sites shall not be frozen or saturated when applying RWBR.

e. A daily log noting the volume of RWBR distributed to each approved application site shall be maintained on-site by the permittee and made available to the Department upon request. The volume of RWBR to be distributed shall be determined through the use of a totalizing flow meter, or other means of accurate flow measurement.

f. Any vehicle used to transport and/or distribute RWBR shall be appropriately marked. The vehicle shall not be used to transport water or other fluid that does not meet all limitations and requirements as specified in this permit for water diverted for RWBR, unless the tank has been emptied and adequately cleaned prior to the addition of the RWBR.

g. The permittee shall post Access Control and Advisory Signs in accordance with the requirements of the Reuse Technical Manual.

h. There shall be no cross-connections to potable water systems.

i. All RWBR piping, pipelines, valves, and outlets shall be appropriately color coded, tagged or labeled to warn the public and employees that the water is not intended for drinking. Worker contact with RWBR shall be minimized.

j. The issuance of this permit for the use of RWBR shall not be considered as a waiver of any applicable federal, state or local rule, regulation or ordinance.

E. INDUSTRIAL PRETREATMENT PROGRAM REQUIREMENTS

1. General Requirements

a. The Permittee has developed an industrial pretreatment program pursuant to the General Pretreatment Regulations 40 CFR Part 403 and N.J.A.C. 7:14A-1 et seq. The Permittee shall implement and enforce its approved pretreatment program to prevent the introduction of pollutants into its system which would:

i. interfere with attainment of the effluent limitations contained in the permittee's NJPDES permit;

ii. pass through the treatment works and impair the water quality of the receiving stream; or

iii. affect sludge quality so as to interfere with the use or management of the municipal sludge.

b. The Permittee shall comply with the public participation and notification requirements, including but not limited to, those specified in N.J.A.C. 7:14A-19.10, and 40 CFR Part 25.

c. The Permittee shall secure and maintain sufficient resources and qualified personnel to carry out the program implementation procedures described in this permit.

2. Identify and Locate Industrial Users

a. The Permittee shall update its inventory of indirect users at a frequency and diligence adequate to ensure proper identification of indirect users subject to pretreatment standards, appropriate characterization of the nature of their discharges, and correct designation of indirect users as categorical, significant/major, or other regulated. At a minimum, this inventory shall be updated annually and shall be included in the Pretreatment Program 40 CFR Part 403 Annual Report.

b. The Permittee shall notify an indirect user of pretreatment standards and requirements within thirty (30) days of the determination of the indirect user being subject to regulation under the pretreatment program.

3. Program Modifications

a. The Permittee shall notify the Bureau of Surface Water and Pretreatment Permitting (BSWPP) of all substantial industrial pretreatment program (IPP) modifications, as defined under 40 CFR 403.18(b), and comply with the program modification requirements under N.J.A.C. 7:14A-19.9. The Permittee must await formal approval from the BSWPP before implementing substantial program modifications.

b. For non-substantial program modifications, the Permittee shall provide to the BSWPP the information required under N.J.A.C. 7:14A-19.9(b). The Permittee, as required by 40 CFR 403.18(d)(1), must submit this information to the BSWPP at least 45 days prior to implementation. Modifications that are not considered substantial are deemed approved unless the Department notifies the Permittee within 45 days that the modifications are not approved.

4. Develop Local Limits

a. The Permittee has developed and shall enforce local limits as required by N.J.A.C. 7:14A-19.7.

b. The Permittee shall submit a written technical evaluation of the need to revise local limits as required under N.J.A.C. 7:14A-19.7(f).

c. The written technical evalulation required in b. above shall be submitted: within 6 months from the effective date of the permit (EDP).

5. Issue IPP Permits

a. The Permittee must issue an individual IPP Permit to those facilities which are classified as Significant Industrial Users as defined in the Camden County Municipal Authority's Sewer Use Ordinance.

b. These individual IPP Permits must contain the minimum requirements as specified under N.J.A.C. 7:14A-19.8(b).

c. The Permittee shall issue a draft IPP Permit to a newly identified (i.e. currently discharging) Significant Industrial User within 180 days of identifying that IU.

d. New Significant Industrial Users shall receive an IPP Permit prior to commencement of discharge.

e. The Permittee shall issue or reissue the IPP Permits, in absence of litigation and/or enforcement action(s) initiated by the Permittee, within one hundred and eighty (180) days of the expiration date of the IPP Permit previously issued to an existing industrial user.

6. Perform Compliance Monitoring and Inspections

a. The Permittee shall randomly inspect indirect users and randomly sample and analyze indirect user effluents at a frequency commensurate with the character, consistency, and volume of the contribution. However, the frequency of sampling shall be adequate to determine the compliance status of the indirect user exclusive of self-monitoring data submitted by the user. Specifically, the frequency of inspection and sampling of all Significant Industrial Users, as defined by Camden County Municipal Utilities Authority's Sewer Use Ordinance, shall be no less than once per year for inspection and no less than once per year for sampling. Also, in accordance with N.J.A.C. 7:14A-19.6(a)1, facilities which have an IPP permit from the POTW but do not meet the POTW's definition of Significant Industrial User, and are not CIUs, must be inspected by the POTW once per year and must be sampled by the POTW at least once every three (3) years.

b. Sample collection and analysis and the gathering of other compliance data shall be performed with sufficient care to produce evidence admissible in judicial enforcement proceedings.

7. Take Enforcement Actions

a. The permittee shall take enforcement actions based upon indirect users' noncompliance in accordance with its approved enforcement response plan.

8. Perform Data Management and Record Keeping

a. The Permittee shall develop and maintain a data management system which includes industrial user inventory, characterization of discharge, compliance status, IPP permit status, and enforcement actions.

b. The Permittee shall retain for a minimum of five (5) years all records of monitoring activities and results (whether or not such activities are required by this permit) and shall make such records available to EPA and the State upon request.

9. Notification Requirements

a. The Permittee shall notify its significant industrial users in writing of their obligation to comply with applicable requirements under Subtitles C and D of the Resource Conservation and Recovery Act (RCRA).

10. Pretreatment Annual Report

a. The Permittee shall submit a report annually to the Bureau of Surface Water and Pretreatment Permitting describing the Permittee's pretreatment activities for the twelve (12) month period from July 1 through June 30. In the event that the Permittee is not in compliance with any conditions or requirements of the approved industrial Pretreatment program, the Permittee shall also include the reason for noncompliance and state how and when the Permittee shall comply with such conditions and requirements.

b. Submit the Annual Pretreatment Program Report: by August 1 of each year beginning from the effective date of the permit (EDP) This report shall contain the following:.

i. a summary of analytical results of the pollutants molybdenum (Mo), ammonia (NH3), phosphorus (P), and the priority pollutant scans performed on the Delegated Local Agency's (DLA) influent, effluent, and sludge during the annual reporting period noted in (a) above.

ii. a discussion of upset, interference, or pass through incidents, if any, at the DLA treatment plant(s) which the Permittee knows or suspects were caused by indirect users of the DLA system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken, and, if known, the name and address of the indirect user(s) responsible;

iii. an updated list of the Permittee's industrial users including their names and addresses, and a list of deletions and additions. The Permittee shall provide a brief explanation for each deletion. The list shall identify the industrial users subject to Federal categorical standards and which set(s) of standards are applicable; significant/major non-categorical IUs (as defined by the DLA); and other regulated non-categorical industries. The Permittee shall characterize the compliance status of each industrial user with respect to the discharge limitations and reporting requirements;

iv. a summary of the inspection and sampling activities conducted by the Permittee during the period covered by the annual report to gather information and data regarding industrial users;

v. a summary of the compliance and enforcement activities during the period covered by the annual report. The summary shall include administrative and legal/judicial actions initiated by the permittee during the period noted;

vi. a description of any significant changes in operating the pretreatment program which differ from the information in the Permittee's approved DLA pretreatment program including, but not limited to, changes concerning:
(1) the program's administrative structure
(2) local industrial discharge limitations
(3) monitoring program or monitoring frequencies
(4) Legal authority or enforcement policy
(5) funding mechanisms
(6) resource requirements
(7) staffing levels;

vii. a summary of the annual pretreatment funding, including salaries (as a lump sum), analytical costs for both in-house and contract analyses, equipment costs, and other expenditures associates with implementation of the pretreatment program. The Permittee must also provide a manpower estimate in full-time equivalents (FTEs);

viii. a summary of public participation activities to involve and inform the public. This shall include a copy of the annual publication of significant non-compliance, if such publication was needed to comply with N.J.A.C. 7:14A-19.10(b); and

ix. other information as required and described in the NJDEP 403 Annual Report Guidance.

x. Two copies of the Pretreatment Program Annual Report shall be submitted to the BSWPP in the form prescribed in that guidance. The reports shall be submitted to:
NJDEP, Mail Code - 401-02B
Bureau of Surface Water and Pretreatment Permitting
401 E. State Street
P.O. Box 420
Trenton, N.J. 08625-0420.

11. CWEA Annual Report

a. The Permittee must submit information required by N.J.A.C. 7:14A-19.6(c), (d) and (e) pertaining to the implementation of the DLA's approved pretreatment program.

b. Submit the CWEA Annual Report: by February 1 of each year beginning from the effective date of the permit (EDP).

c. Two copies of this report shall be submitted to:
NJDEP, Mail Code 401-02B, Bureau of Surface Water and Pretreatment Permitting
401 E. State Street
P.O. Box 420
Trenton, N.J. 08625-0420.

12. Grace Period Annual Report

a. The permittee must submit the information required by N.J.A.C. 7:14A-19.6(h) and (i) pertaining to implementation of the DLA's approved pretreatment program.

b. Submit the Grace Period Annual Report: by March 1 of each year beginning from the effective date of the permit (EDP).

c. Two copies of this report shall be submitted to:
NJDEP, Mail Code 401-02B, Bureau of Surface Water and Pretreatment Permitting
401 E. State Street
P.O. Box 420
Trenton, N.J. 08625-0420.

F. CONDITIONS FOR MODIFICATION

1. Notification requirements

a. The permittee may request a minor modification for a reduction in monitoring frequency for a non-limited parameter when four consecutive test results of "not detected" have occurred using a sufficiently sensitive quantification level as defined at 40 CFR 136, 40 CFR 122.21(e)(3), and 40 CFR 122.44(i)(1)(iv).

2. Causes for modification

a. The Department may modify or revoke and reissue any permit to incorporate 1) any applicable effluent standard or any effluent limitation, including any effluent standards or effluent limitations to control the discharge of toxic pollutants or pollutant parameters such as acute or chronic whole effluent toxicity and chemical specific toxic parameters, 2) toxicity reduction requirements, or 3) the implementation of a TMDL or watershed management plan adopted in accordance with N.J.A.C. 7:15-7.

b. The permittee may request a minor modification to eliminate the monitoring requirements associated with a discharge authorized by this permit when the discharge ceases due to changes at the facility.

3. Removal or Modification of Final WQBELs or Criteria End-of-Pipe Effluent Limitations for Chemical Specific Toxic Pollutants

a. The Department will consider proposing to remove or modify a toxic pollutant's newly imposed final effluent limitation from the permit if any or all of the information in item "b" below is submitted for Departmental review and consideration.

b. Items that will be considered include, but are not limited to:

i. Submission of additional effluent data (minimum of 2.5 consecutive years of monthly data) using a sufficiently sensitive quantification level as defined at 40 CFR 136, 40 CFR 122.21(e)(3), and 40 CFR 122.44(i)(1)(iv).

ii. Acceptable site-specific ambient data (e.g. hardness, pollutant specific data) collected in accordance with a NJDEP approved work plan.

iii. Acceptable site-specific translator values developed in accordance with a NJDEP approved work plan.

iv. Acceptable site-specific criteria developed in accordance with a NJDEP approved work plan.

v. Updated 1Q10, 7Q10, 75th percentile, and/or other appropriate stream flow values where applicable.

vi. Updated regulatory mixing zone dilution factors where applicable.

c. All studies require a NJDEP approved workplan that shall be submitted to the Department for approval on or before the effective date of the permit (EDP) + 6 months.

i. It is recommended that all ambient monitoring associated with the establishment of hardness values, pollutant concentrations, and site specific translator values be conducted under the confines of a single work plan.

d. All final study reports and/or additional information shall be submitted to the Department on or before EDP + 30 months.

e. The Department will review all submitted information and will either propose a permit action to remove/modify the final effluent limitation(s) or deny the modification request.

G. Custom Requirement

1. Acceptance of Wet Weather Flow in Excess of Permitted Flow

a. The permittee is authorized to accept wet weather flows in excess of the NJPDES permitted flow of 80 MGD up to the hydraulic capacity of the treatment plant (185 MGD) in order to maximize the treatment of wet weather flows as well as to reduce the frequency and volume of combined sewer overflow discharges to the affected receiving waterbodies while also reducing flooding in the City of Camden. These excess flows must receive full treatment and bypass of any treatment is not authorized by this permit.

2. Bypass as a CSO Measure

a. This permit renewal serves to concur with the selection of CSO related bypass as a CSO control measure. As such, effluent limitations that apply to a bypass of secondary treatment are included in the final phase of Part III. In addition, the following conditions shall be met:.

i. Bypass is prohibited unless and until a Treatment Works Approval is issued for the construction and operation of the bypass line. If issued, operation of the bypass must comply with the terms and conditions of this NJPDES permit and the Treatment Works Approval.

ii. As part of the use of the bypass line, bypassing of the secondary treatment is prohibited except during wet weather events when influent flows exceed 185 MGD as an instantaneous flow. All bypassed flows shall receive at least screening, primary clarification and then disinfection. All bypassed flows shall be combined with fully treated effluent flow prior to discharge.

iii. All applicable effluent limitations and monitoring conditions included in this permit for DSN 001A are required to be met at all times including during wet weather bypassing events using the TWA approved bypass line.

iv. At any time that this bypass occurs during a calendar day, whether for the entire day or a portion of that day, the Duration of Discharge shall be reported as one day for outfall DSN 001A. In the event that the bypass line is utilized sporadically throughout a 24-hour period, that shall also be reported as one day for outfall DSN 001A.

v. The permittee shall continuously meter flow for any flows into the plant and report it on the DMR form under the parameter "Flow, In Conduit or Thru Treatment Plant" as "Raw Sew/Influent" for DSN 001A.

vi. Total Flow (Bypass) serves to represent an approximate amount of volume that would otherwise be discharged via Combined Sewer Overflows (CSOs) but now receives primary treatment and must be reported on the DMR.

vii. Approval of the bypass and the conditions on the use of the bypass may be modified or terminated by the Department via a subsequent permit action under N.J.A.C. 7:14A-16.4 for cause such as if there is a substantial increase in the volume or character of pollutants being introduced to the WWTP.

3. Notification of Bypass

a. The permittee shall notify the Department of bypass events by submission of Discharge Monitoring Reports. Such notification serves to meet the intent of the notice requirements of 40 CFR 122.41(m)(3). By granting this approval through a permit action, the permittee is not required to notify the Department of every individual bypass event if it complies with the notification requirements contained in this NJPDES permit.

Combined Sewer Management (IP)

A. MONITORING REQUIREMENTS

1. CSO Monitoring Requirements

a. All monitoring shall be conducted as specified in Part III.

b. All monitoring frequencies expressed in Part III are minimum requirements. Any additional samples taken consistent with the monitoring and reporting requirements contained herein shall be reported on the Monitoring Report Forms.

c. Discharges shall be directly monitored or predicted using a DEP approved up-to-date model.

B. RECORDKEEPING

1. Recordkeeping Requirements

a. The permittee shall identify the Combined Sewer System (CSS) complaint, maintenance, inspection, and repair documentation forms and related tracking forms and/or systems and the Permittee shall also specify how, where and when this documentation will be maintained.

b. The permittee shall retain records of all monitoring information for a period of at least 5 years, or longer as required by N.J.A.C. 7:14A-20, from the date of the sample, measurement, report, application or record, including:

i. all calibration and any other methods of monitoring which may be employed, maintenance records and all original strip chart recordings for continuous monitoring instrumentation (if applicable),

ii. copies of all reports required by this NJPDES permit,

iii. all data used to complete the application for a NJPDES permit, and

iv. monitoring information required by the permit related to the permittee's residual use and/or disposal practices, for a period of at least 5 years, or longer as required by N.J.A.C. 7:14A-20, from the date of the sample, measurement, report, application or record.

c. Records of monitoring information shall include the following:

i. the date, locations, and time of sampling or measurements,

ii. the individual(s) who performed the sampling or measurements,

iii. the date(s) the analyses were performed,

iv. the individual(s) who performed the analyses,

v. the analytical techniques or methods used, and

vi. the results of such analyses.

d. The permittee shall retain records to document implementation of the Nine Minimum Controls (NMC) and Long Term Control Plan (LTCP) requirements in Sections F and G. The permittee shall utilize this information when preparing and submitting progress reports required in Section D, including residential complaints, inspection records, and maintenance records. This information shall be made available to the Department upon request.

C. REPORTING

1. Reporting Requirements

a. The permittee shall submit all required monitoring results to the Department on the forms provided by the Department. The Monitoring Report Forms (MRFs) are provided to the permittee in an electronic file format.

b. The permittee shall summarize the information for the total quantity of solids/floatables removed from ALL outfalls on the MRF for the first CSO outfall only. This information needs to be reported on the MRF only when the solids/floatables solid waste is measured for disposal. For the months when no solids/floatables are disposed of, the permittee shall report 'CODE = N'.

c. The permittee shall report Precipitation from a rain gauge representative of the area on the MRF for the first CSO outfall only.

d. The permittee shall report Duration of Discharge on the MRF for each CSO outfall as a whole day for any calendar day when a discharge occurs.

e. Electronic data submissions shall be in accordance with the guidelines and provisions outlined in the Department's Electronic Data Interchange (EDI) agreement with the permittee.

f. All MRFs shall be certified by the highest ranking official having day-to-day managerial and operational responsibilities for the combined sewer system.

g. The highest ranking official may delegate responsibility to certify the MRFs in his or her absence. Authorizations for other individuals to sign shall be made in accordance with N.J.A.C. 7:14A-4.9(b).

h. Monitoring results shall be submitted in accordance with the current Monitoring Report Form Manual and any updates thereof.

i. If there are no CSO discharges during an entire monitoring period, the permittee must notify the Department when submitting the monitoring results. This is accomplished by placing a check mark in the "No Discharge this monitoring period" box on the electronic version of the monitoring report submittal form.

D. SUBMITTALS

1. CSO Submittal Requirements

a. The permittee shall respond to all deficiencies cited by the Department within 30 days of notification. With adequate justification provided by the permittee, the Department may extend this deadline an additional 30 days.

b. All reports submitted to the Department pursuant to the requirements of this permit shall comply with the signatory requirements of N.J.A.C. 7:14A-4.9., and contain the following certification (or such revised form as previously approved in writing by the Department):

i. I certify under penalty of law that those portions of this document relating to the treatment and collection system owned and operated by the permittee and all attachments related thereto 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 owned and operated by the permittee, 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 purposely, knowingly, recklessly, or negligently submitting false information.

c. Since multiple municipalities own separate portions of the hydraulically connected sewer system, the permittee shall work cooperatively with all other appropriate municipalities/permittees in the hydraulically connected sewer system to ensure that the Nine Minimum Controls (NMC) & Long Term Control Plans (LTCP) activities are being developed and implemented consistently. The permittee shall identify their joint and separate responsibilities with all other appropriate municipalities in the hydraulically connected sewer system regarding implementation of the NMCs and LTCPs. This information shall be provided/updated in the Progress Reports.

d. The permittee shall summarize on a semiannual basis its CSO construction related activities, as well as those reported to them by the other CSO entities, in their system. Notification through the TWA process is sufficient for this purpose. The permittee shall make these construction related activities available publicly on their website or other acceptable means.

e. The permittee shall submit all information required by this permit via email or other electronic format acceptable to the Department to NJCSOProgram@dep.nj.gov.

2. CSO Progress Report Submittal Requirements

a. The permittee shall submit a progress report on February 1st and August 1st of every year beginning from the effective date of the permit. The Progress Reports shall be prepared in accordance with the following requirements:.

i. The Progress Report shall include a summary of all CSO control measures implemented to date and the effectiveness of those control measures.

ii. Each Progress Report must include a verification that the Operation and Maintenance Manual, including the SOPs, Asset Management Plan and Emergency Plan, have been updated in accordance with this permit and amended annually, as necessary. Detail shall also be provided regarding the System Cleaning Program.

iii. A discussion of the continued implementation of the NMCs including maintenance of the telephone hotline/website pursuant to Section F.8.

iv. Each Progress Report shall include a list of any complaints received by the permittee regarding CSO related flooding including location and duration.

E. FACILITY MANAGEMENT

1. CSO Discharge Requirements

a. The permittee shall discharge at the location(s) specified in PART III of this permit.

b. The permittee shall not discharge foam or cause foaming of the receiving water that 1) forms objectionable deposits on the receiving water, 2) forms floating masses producing a nuisance, or 3) interferes with a designated use of the waterbody.

c. The permittee's discharges shall not produce objectionable color or odor in the receiving stream.

d. The permittee's discharges shall not exhibit a visible sheen.

2. Delaware River Basin Commission (DRBC)

a. The permittee shall comply with the Delaware River Basin Commission's (DRBC) “Water Quality Regulations”, where applicable.

F. NINE MINIMUM CONTROL REQUIREMENTS

1. Proper Operation and Maintenance Programs for the Sewer System and CSOs

a. The permittee shall operate the treatment works using a licensed operator in accordance with N.J.S.A. 58:11-66(a), N.J.A.C. 7:14A-6.12(b) and N.J.A.C. 7:10A.

b. The permittee shall provide adequate operator staffing for the treatment works.

c. The permittee shall continue to implement and review annually, and update as needed, an Operations & Maintenance (O&M) Program and corresponding Manual, including an Emergency Plan, in accordance with N.J.A.C. 7:14A-6.12, to ensure that the treatment works, including but not limited to collection system, the CSO outfalls, solids/floatables facilities, regulators, and related appurtenances including any green infrastructure which are owned/operated by the permittee are operated and maintained in a manner to achieve compliance with all terms and conditions of this permit.

d. The permittee shall provide documentation that demonstrates that employees were provided with appropriate training to perform the operation and maintenance duties required and to follow the Standard Operating Procedures (SOPs) in the O&M Program and corresponding Manual. This shall include a current training program for the purpose of informing new employees and maintaining training levels for current employees in regards to the CSO O&M Program and corresponding Manual, including safety related concerns.

e. The permittee shall implement an O&M Program & Manual that includes, at a minimum the following:

i. A directory of appropriate O&M staff, including a description of their individual responsibilities and emergency contact information.

ii. A description of the permittee's Fats, Oils and Greases (FOG) Program (if applicable).

iii. Details regarding operations for the treatment works owned/operated by the permittee as set forth in SOPs as described in Part IV.F.1.f, Part IV.F.1.g and Part IV.F.1.h.

iv. An Emergency Plan as described in Part IV.F.1.i.

f. The permittee shall include in the O&M Program and corresponding Manual, a System Cleaning Program to address the following:

i. The System Cleaning Program shall be designed to ensure the entire collection system, including, but not limited to, tide gates, outfalls and regulators, is sufficiently clean in order to function properly and minimize CSO-related street flooding.

ii. The System Cleaning Program shall be designed to ensure that the entire collection system is sufficiently clean which can be accomplished through regular inspection and, if necessary, cleaning. Such inspection and cleaning should be done, such that within five years, the entire system has been covered. Specifically, for CCMUA the total system is 135 miles long.

iii. The System Cleaning Program shall include an annual certification that a minimum of 20% of the system (by linear feet/miles) shall have been inspected and, if necessary, cleaned, within the last year. Alternatively, if less than 20% of the system has been completed within the last year, the certification shall include a statement of how much of the system was inspected and, if necessary, cleaned, within the last year and a plan to ensure that 100% of the system is inspected and if necessary cleaned, by the expiration date of the permit. This is an annual requirement based on the calendar year, due February 1 of the following year and is part of the Operation and Maintenance Manual. The total length of the system in linear/feet shall also be defined. Updates on the System Cleaning Program shall also be provided in Progress Reports.

g. The permittee shall also include SOPs in the O&M Program and corresponding Manual for the operation, inspections, and scheduled preventative maintenance in accordance with the appropriate manufacturer's recommendations and equipment manuals at a minimum, to ensure that the entire collection system that is owned/operated by the permittee that conveys flows to the treatment works will function properly.

h. At a minimum, the SOPs shall contain detailed instructions for system operations, such as frequency of inspections, regular maintenance, and the timely repair, and documentation of such information, of the entire collection system that conveys flows to the treatment works. These SOPs shall include procedures to address the following items:

i. SOPs shall be designed to ensure that the entire collection system owned/operated by the permittee that conveys flows to the treatment works functions in such a way as to not result in sewage overflows (except from designated CSO outfalls) including to basements, streets and other public and private areas, or bottlenecks/constrictions that limit flow in specific areas and prevent the downstream STP treatment capacity from being fully utilized, in accordance with Section F.4.

ii. SOPs shall be designed to ensure that the storage and conveyance of combined sewage to the STP is maximized in accordance with Sections F.2 and F.4.

iii. SOPs shall be designed to ensure that the impacts from SIUs contributing to the CSOs that are owned/operated by the permittee are minimized in accordance with Section F.3.

iv. SOPs shall be designed to ensure there will be no dry weather overflows from any CSO that is owned/operated by the permittee in accordance with Section F.5.

v. SOPs to conduct a visual inspection program of sufficient scope and frequency of the CSS that is owned/operated by the permittee to provide reasonable assurance that unpermitted discharges, obstructions, damage, and DWOs will be discovered.

vi. SOPs shall be designed to ensure the solids/floatables appurtenances that are owned/operated by the permittee will be maintained and the solids/floatables will be removed from the CSO discharge and disposed of properly at such frequency so as not to cause obstructions of flow for any future CSO discharges, in accordance with Part II of this permit and Section F.6.

vii. SOPs designed to prevent the Intrusion upstream due to high tides and/or receiving water flooding into the entire collection system owned/operated by the permittee that conveys flows to the treatment works through proper operation and maintenance.

viii. SOPs designed to provide a gravity sewer and catch basin inspection schedule and clean as necessary for the collection system that is owned/operated by the permittee.

ix. SOPs shall be designed to provide a system for documenting, assessing, tracking, and addressing residential complaints regarding blockages, bottlenecks, flow constrictions, sewer overflows including to basements, streets and other public and private areas, or related incidents for the collection system that is owned/operated by the permittee.

x. Unless written extension is granted by the Department for extraordinary circumstances, the SOP shall be designed to ensure removal within seven (7) calendar days of the permittee becoming aware of any obstructions within the collection system that is owned/operated by the permittee that are directly causing any CSO overflows due to debris, Fats, Oils and Greases and sediment buildup, or other foreign materials.

    The SOP shall be designed to ensure removal of any other obstructions that are contributing to overflows due to debris, Fats, Oils and Greases and sediment buildup, or other foreign materials in the collection system owned/operated by the permittee on a scheduled basis as necessary for the proper operation of the system.

xi. Require immediate steps to take corrective action(s) to repair damage and/or structural deterioration, address unpermitted discharges, and eliminate DWOs of the entire collection system owned/operated by the permittee that conveys flows to the treatment works.

xii. Provide reduction strategies to resolve excessive I/I through the identification of I/I sources and the prioritization and implementation of I/I reduction projects within the collection system that is owned/operated by the permittee.

xiii. Provide procedures whereby wet weather flows are maximized for conveyance to the STP.

i. The O&M Manual shall specifically address, at a minimum, the following details for the treatment works' infrastructure owned/operated by CCMUA:
- Normal and Alternate operating positions;
- Start-up, shut-down, and draining procedures;
- Process control;
- Fail-safe features;
- Emergency operating procedures;
- Common operating and control problems;
- Out-of-service procedures;
- Alternate operating procedures;
- Instrumentation and controls;
- Engineering design information;
- Bypass operation procedures; and
- Schedules and procedures of the preventative maintenance program and corrective maintenance procedures, or references to these procedures in the manufacturer's maintenance manuals for the treatment works' infrastructure.

j. The permittee shall also include an Emergency Plan (https://www.nj.gov/dep/dwwq/erp_home.htm) in the O&M Program and corresponding Manual in accordance with N.J.A.C. 7:14A-6.12(d). The Emergency Plan shall provide for, to the maximum extent possible, uninterrupted treatment works operation during emergency conditions using in-house and/or contract based including those emergencies caused by natural disaster; extreme weather events, including those due to climate change; civil disorder; strike; sabotage; faulty maintenance; negligent operation or accident. At a minimum, the Emergency Plan shall include:
- SOPs which ensure the effective operation of the treatment works under emergency conditions, such as extreme weather events and extended periods of no power.
- A Vulnerability Analysis" that estimates the degree to which the treatment works would be adversely affected by each type of emergency situation which could reasonably be expected to occur. A Vulnerability Analysis shall include, but is not limited to, an estimate of the effects of such an emergency upon the following: power supply; communication equipment; supplies; personnel; security and emergency procedures to be followed."

k. The permittee shall review annually the O&M Program & Manual and update it as needed to reflect updated information and changes in the characterization, design, construction, operations, maintenance, Emergency Plan, and SOPs as listed in Section F.1, and include verification that the O&M Program and corresponding Manual has been prepared and updated in accordance with Section D.

l. The permittee shall continue to update an Asset Management Plan (https://www.nj.gov/de/assetmanagement/pdf/asset-management-plan-guidance.pdf), as part of the overall O&M strategy, which shall be updated on an annual basis. The Asset Management Plan shall include the following, at a minimum:
- Five basic components: asset inventory/mapping and condition assessment; level of service; criticality/prioritization assessment; life-cycle costing; and long-term funding strategy of the treatment works.
- Infrastructure inventory with infrastructure repair/replacement needs listed and scheduled according to priority/criticality, that demonstrates the entire collection system owned/operated by the permittee that conveys flows to the treatment works is perpetually and proactively managed with the appropriate resources (capital, staffing, training, supplies, equipment).

2. Maximum use of the collection system for storage

a. The permittee shall continue to use the entire collection system owned/operated by the permittee for in-line storage of sewage for future conveyance to the STP when sewer system flows subside by ensuring that the sewage is retained in the sewer system to the extent practicable to minimize CSO discharges (i.e. volume, frequency and duration), while not creating or increasing sewage overflows, including to basements, streets and other public and private areas.

b. The permittee shall minimize the introduction of sediment and obstructions in the entire collection system owned/operated by the permittee that conveys flows to the treatment works pursuant to Sections F.1. and F.7.

c. The permittee shall operate and maintain the entire collection system owned/operated by the permittee that conveys flows to the treatment works pursuant to Section F.1.

d. The permittee shall identify and implement minor modifications, based on the ongoing evaluations, to enable appropriate segments of the collection system owned/operated by the permittee to store additional wet weather flows to reduce any CSOs until downstream sewers and treatment facilities can adequately convey and treat the flows.

3. Review and modification of pretreatment requirements to assure CSO impacts are minimized

a. For the SIU dischargers upstream of any CSO outfall which is owned/operated by the permittee, the permittee shall: (1) determine the locations of the SIUs; (2) identify the CSO outfalls associated with each of the SIUs; and (3) determine the discharge volume and loading of SIU-permitted parameters for each SIU. In the case of a municipal permittee or non-delegated STP permittee, information to satisfy (1) and (3) shall be obtained from the delegated local agency that regulates the SIU or, if there is no delegated local agency, from the Department. This information shall be used to prioritize O&M activities in portions of the CSS affected by SIU discharges.

b. The permittee shall require SIUs upstream of any CSO outfall which is owned/operated by the Permittee to investigate ways to minimize their discharges during wet weather and report their findings to the permittee.

c. The permittee shall establish agreements with SIUs upstream of any CSO outfall which is owned or operated by the permittee or ordinances specifying that the SIUs (especially for batch discharges, non-continuous dischargers) should restrict discharges to the extent practical during wet weather periods.

4. Maximization of flow to the POTW for treatment

a. The permittee shall continue to operate and maintain the entire collection system owned/operated by the permittee that conveys flows to the treatment works to maximize the conveyance of wastewater to the STP for treatment subject to existing capacity.

b. The permittee shall continue to implement alternatives for increasing flow to the STP.

i. Capacity evaluations of the entire collection system owned/operated by the permittee that conveys flows to the treatment works in accordance with Section F.1.f to determine the maximum amount of flow that can be stored and transported.

ii. Identification of other activities conducted and/or planned to further maximize flow to the POTW.

5. Prohibition of CSOs during dry weather

a. Dry weather overflows (DWOs) are prohibited from any CSO outfall in the entire collection system owned/operated by the permittee.

b. All DWOs must be reported to the Department as incidents of non-compliance in accordance with the requirements at N.J.A.C. 7:14A-6.10(c) and (e), along with a description of the corrective actions taken.

c. The permittee shall inspect the combined sewer system as required under Section F.1 to minimize the potential of DWOs and to abate DWOs that occur.

d. The permittee shall prohibit any connections, including but not limited to construction dewatering, remediation activities or similar activities, downstream of a CSO regulator, that will convey flow to the CSO during dry weather. On a case-by-case basis, the Department reserves the right to allow temporary use of the CSO outfall structures for other types of discharges to address extraordinary circumstances. Any use under this provision must be specifically approved by the Department.

6. Control of Solids/Floatables in CSOs

a. The permittee shall continue to implement measures to capture and remove solids/floatables which cannot pass through a bar screen having a bar or netting spacing of 0.5 inches from all CSOs.

b. The permittee shall not utilize treatment, including mechanical measures used to reduce the particle size of the solids/floatables in the wastewater collection system prior to discharge to the waters of the state to achieve compliance with paragraph F.6.a.

c. The captured debris shall be removed from each solids/floatables control system as necessary to ensure that there will be no flow restrictions during the next CSO discharge event.

d. All captured debris removed from the solids/floatables control system must be disposed of properly at a permitted solid waste facility authorized to accept grit and screening materials from wastewater treatment facilities in accordance with N.J.A.C. 7:14A and Part II of this permit.

7. Implementation of Pollution Prevention Measures

a. The permittee shall continue to encourage municipalities to implement and upgrade pollution prevention measures necessary to prevent and limit contaminants from entering the entire collection system owned/operated by the permittee that conveys flows to the treatment works. Unless demonstrated to the Department to be impracticable measures, shall include, but not be limited to, the following:.

i. Implementation of a regular street cleaning program.

ii. Retrofitting of existing storm drains to meet the standards in Appendix C, where such inlets are in direct contact with repaving, repairing (excluding repair of individual potholes), reconstruction, resurfacing (including top coating or chip sealing with asphalt emulsion or a thin base of hot bitumen) or alterations of facilities owned/operated by the permittee. For exemptions to this standard see "Exemptions" listed in Appendix C.

iii. Implementation of stormwater pollution prevention rules and ordinances.

iv. Implementation of solid waste collection and recycling ordinances.

v. Implementation of public education programs.

b. The permittee shall enforce rules and regulations on illegal connections and unauthorized discharge(s) into the POTW.

8. Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts

a. The permittee shall ensure that CSO Identification Signs are posted and maintained at every CSO outfall location identified in Part III of this permit. The signs shall conform to the following specifications unless alternatives have been approved by the Department.

i. Signs shall be installed in such a manner as to have the same information visible from both the land and from the water, within 100' from the outfall pipe along the shoreline.

ii. Signs shall be at least 18" x 24" and printed with reflective material.

iii. Signs shall be in compliance with applicable local ordinances.

iv. The signs shall depict the following information below:
- Warning, possible sewage overflows during and following wet weather. Contact with water may also cause illness.
- Report dry weather discharge to NJDEP Hotline at 1 (877) 927-6337 (WARN-DEP).
- Report foul odors or unusual discoloration to NJDEP Hotline or (Permittee) at (phone number).
- NJPDES Permit Number NJ0026182.
- Discharge Serial No. (eg. DSN 040A).
- www.state.nj.us/dep/dwq/cso.htm
- Signs that depict symbols prohibiting swimming, fishing and kayaking.

b. The permittee shall continue to employ measures to provide reasonable assurance that the affected public is informed of CSO discharges in a timely manner. These measures shall include, but are not limited to, the items listed below:

i. Posting leaflets/flyers/signs with general information at affected use areas such as beaches, marinas, docks, fishing piers, boat ramps, parks and other public places (within 100 feet of outfall) to inform the public what CSOs are, the location(s) of the CSO outfall(s) and the frequency and nature of the discharges and precautions that should be undertaken for public health/safety and web sites where additional CSO/CSS information can be found.

ii. Notification to all residents by either US Postal Service or email, (with copies sent to the NJDEP) in the permittee's sewer service area. This notification shall provide additional information as to what efforts the permittee has made and plans to continue to undertake to reduce/eliminate the CSOs and related threat to public health. Updated notifications shall be mailed on an annual basis.

iii. The permittee shall maintain on a daily basis a CSO Notification System website to inform interested citizens of CSO discharges that are occurring or have occurred.

9. Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls

a. The permittee shall monitor the CSO discharge events and record the date, "duration of discharge", rainfall, location of rain gauge and quantity of solids/floatables removed for each CSO and discharge event through appropriate modeling or by an appropriately placed flow meter/totaling device, level sensor, or other appropriate measuring device, and report the required information on the MRF as required by Part III of this permit.

G. LONG TERM CONTROL PLAN REQUIREMENTS

1. Characterization Monitoring and Modeling of the Combined Sewer System

a. As required by the 2015 NJPDES CSO permit, CCMUA submitted the "System Characterization Report Work Plan" dated October 2015 and the "System Characterization Report" dated June 2018. The work plan and the System Characterization Report were approved by the Department on August 3, 2016 and January 19, 2019, respectively.

b. The major elements of the sewer system characterization are noted below where additional detail is included on these topics within the report:

i. Rainfall Records;

ii. Combined Sewer System Characterization;

iii. CSO Monitoring; and

iv. Modeling

2. Public Engagement

a. The permittee shall conduct a public engagement process to inform, educate and engage members of the hydraulically connected communities. The goal of this process is to generate participation and collect input from the affected community and interested public.

b. The permittee shall develop a CSO Supplemental Team to serve as a liaison between the affected community, interested public and the decision makers for the permittee regarding the implementation of the CSO control alternatives. The CSO Supplemental Team shall be reconstituted with the goal of including members of the following groups, at a minimum, where possible: mayor's office, local planning board, local community groups and residents from the affected areas and from any affected areas that are also overburdened communities. The permittee shall solicit members of its community to join the CSO Supplemental Team through various outreach and public notice activities. The permittees efforts to recruit CSO Supplemental Team members shall be documented on the permittee's website.

c. The permittee is required to hold regular public meetings (virtual, in person or a combination of both) in order to:

i. Inform the affected community and interested public of the ongoing process of implementing the LTCP including reports of project status and its present impact on the local community including consideration of locating specific meetings in the affected neighborhood.

ii. Continue to identify areas of combined sewer-related flooding.

iii. Allow the affected community and interested public an opportunity to provide input on the siting of GI as required by the permit.

iv. Engage the affected community and interested public in solutions they can implement to reduce CSOs. Examples may include an adopt-a-catch-basin program, rain barrels, water conservation, the removal of impervious surfaces, and the installation of green infrastructure projects.

v. Neighborhood specific information on construction of CSO control projects throughout the process including before and during construction in order to receive feedback from the community. This should include the posting of information on scheduling of street closures as well as any potential impacts to the residents in the vicinity of any CSO mitigation projects.

d. The frequency of meetings shall be determined by the milestones in the Implementation Schedule (See G.8.) and by input from the affected community and interested public. Meeting frequency may subsequently be adjusted based on documented attendance. Meetings should be held with accessibility for the interested public in mind. This may include varying start times and attendance options (availability of public transit or parking and virtual meetings), as fits the needs of interested public and affected community.

e. The permittee shall engage with overburdened communities (OBC) within combined sewer service areas in order to solicit representation and engagement, ensure the OBCs' awareness of the meeting schedule, and encourage participation. The Department published a list of overburdened communities in the State and associated electronic mapping available at https://www.nj.gov/dep/ej/communities.html.

f. The permittee must designate one LTCP outreach coordinator. This coordinator (or any another person designated by the permittee) should be available to maintain regular communication with the affected community and interested public including, but not limited to.

i. Maintain a website that acts as a clearinghouse for information regarding implementation of the LTCP.
- The website shall contain public engagement information and include a platform for the interested public to sign up and attend any meetings.
- The website shall contain any progress reports required to be submitted by this permit.
- The website shall also list the construction status of any project identified in the Implementation Schedule in Section G.8. below.

ii. Engage the affected community and interested public in order to solicit individuals who are willing to become involved.

iii. Post meeting invitations (including dates and times) on the website at least one month in advance.

iv. Post handouts or other meeting materials on the website within one week after the meeting.

v. Make data available on the amount of public feedback received including the number of meeting attendees.

vi. Any project identified in the Implementation Schedule in Section G.8. below must display signage indicating that the project is required by the LTCP.

g. The Department's Office of Environmental Justice (see https://dep.nj.gov/ej/) shall be given 30 days advance notice of the meeting schedule so that it can be shared with Environmental Justice community leaders.

h. Public meetings shall be live streamed and made available to the affected community and interested public for viewing afterwards including materials in the language(s) appropriate to the majority of community demographics.

i. Outreach materials, including physical handouts and websites, should be produced in the language(s) appropriate to the majority of community demographics.

3. Consideration of Sensitive Areas

a. This renewal permit action requires that the CSO outfalls identified in the Identification of Sensitive Areas Report as discharging to a Sensitive Area be given priority with respect to controlling overflows through the implementation of CSO control projects to meet the minimum 85% wet weather capture requirement consistent with the Presumption Approach.

4. Evaluation of Alternatives

a. The "Presumption" Approach, in accordance with N.J.A.C 7:14A-11 Appendix C provides:
A program that meets any of the criteria listed below will be presumed to provide an adequate level of control to meet the water quality-based requirements of the CWA, provided the Department determines that such presumption is reasonable in light of the data and analysis conducted in the characterization, monitoring, and modeling of the system and the consideration of sensitive areas described above.
Combined sewer flows remaining after implementation of the NMCs and within the criteria specified in this Section at G.4.f.i. and ii. shall receive minimum treatment in accordance with the items below:
- Primary clarification (removal of floatables and settleable solids may be achieved by any combination of treatment technologies or methods that are shown to be equivalent to primary clarification),
- Solids and floatables disposal, and
- Disinfection of effluent, if necessary, to meet WQS, protect designated uses and protect human health, including removal of harmful disinfection chemical residuals/by-products (e.g. chlorine produced oxidants), where necessary.
The permittee must demonstrate any of the following three criteria below:

i. No more than an average of four overflow events (see below) per year from a hydraulically connected system as the result of a precipitation event that does not receive the minimum treatment specified below. The Department may allow up to two additional overflow events per year. For the purpose of this criterion, an ‘event' is:
- In a hydraulically connected system that contains only one CSO outfall, multiple periods of overflow are considered one overflow event if the time between periods of overflow is no more than 24 hours.
- In a hydraulically connected system that contains more than one CSO outfall, multiple periods of overflow from one or more outfalls are considered one overflow event if the time between periods of overflow is no more than 24 hours without a discharge from any outfall.

ii. The elimination or the capture for treatment of no less than 85% by volume of the combined sewage collected in the CSS during precipitation events on a hydraulically connected system-wide annual average basis.

iii. The elimination or removal of no less than the mass of the pollutants, identified as causing water quality impairment through the sewer system characterization, monitoring, and modeling effort, for the volumes that would be eliminated or captured for treatment under Section G.4.f.ii.

b. This renewal permit action identifies that adequate and effective CSO control measures are required to be implemented that are consistent with the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C. These permit conditions are included in Part IV.G.8.

c. This permit renewal includes an implementation schedule as well as specific requirements to track and assess compliance with the attainment of wet weather percent capture. In order to evaluate the performance of the CSO control measures, the permittees are required to demonstrate percent reduction through the use of the H&H model to attain greater than 85% wet weather capture.

d. To supplement these measures, as a condition of the NJPDES permit as issued to CCMUA, influent flow is required to be reported under "Flow, In Conduit or Thru Treatment Plant" as "Raw Sew/Influent". The number of bypass events is also required to be reported as "Duration of discharge" namely the number of calendar days per month that a bypass event occurs. These reporting requirements are included to serve as a means to track increased flows to the plant, number of bypass events and will serve as an indication of any reduction in CSOs.

5. Cost Performance Considerations

a. This renewal permit action identifies that adequate and effective CSO control measures are being implemented consistent with the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C. This renewal permit sets forth an implementation schedule in Part IV.G.8.

6. Operational Plan

a. Throughout implementation of the LTCP as appropriate, the permittee shall update the Operational Plan, including Operation & Maintenance (O&M) Manual, Emergency Plan, and Asset Management Plan in accordance with F.1, to address the LTCP CSO control facilities and operating strategies, including but not limited to: the implementation, operation, maintenance of green infrastructure; staffing and budgeting; and I/I. Climate change resilience requirements shall also be considered in the update of these plans.

7. Maximizing Treatment at the Existing STP

a. The permittee shall continue to operate and maintain the entire collection system owned/operated by the permittee that conveys flows to the treatment works to maximize treatment at the hydraulically connected STP.

8. Implementation Schedule

a. The permittee shall implement CSO control projects in accordance with the LTCP construction schedule

b. Implementation Schedule is as follows:.

i. Year One (EDP to EDP + 1 year): Conduct Alternatives Analysis for C-32 CSO controls.

ii. Year Two (EDP + 1 year to EDP + 2 years): Begin new flow monitoring to assess flow levels in the in the CCMUA, Camden & Gloucester systems; Design and permitting for C-32 controls.

iii. Year Three (EDP + 2 years to EDP + 3 years): Design and permitting for C-32 controls; Separation of Pennsauken combined sewer area; Complete new flow monitoring in the CCMUA, Camden & Gloucester systems; Update the Hydrologic/Hydraulic model as a result of new flow monitoring.

iv. Year Four (EDP + 3 years to EDP + 4 years): Evaluate structural control alternatives to capture of a minimum of 85% of the annual average combined sewage collected in the system during wet weather; Implementation of C-32 controls.

v. Year Five (EDP + 4 years to EDP + 5 years): Complete evaluation of structural control alternatives to capture a minimum of 85% of the annual average combined sewage collected in the system during wet weather and submit to the NJDEP for review; Implementation of C-32 controls; Develop Cooper River Water Quality Strategy.

9. Compliance Monitoring Program (CMP) – Post Construction Compliance Monitoring Plan (PCCMP)

a. The permittee shall implement a Compliance Monitoring Program (CMP) adequate to: verify baseline and existing conditions, the effectiveness of CSO control measure, compliance with water quality standards, and protection of designated uses. The CMP shall be conducted before, during and after implementation of the LTCP. The "Baseline Compliance Monitoring Report" dated June 2018 was submitted and subsequently approved by the Department on February 7, 2019.

b. The portion of the CMP conducted during and after implementation of the LTCP is referred to as the Post Construction Compliance Monitoring Plan (PCCMP). The main elements of the PCCMP shall include:

i. A process to determine whether the CSO control measures are meeting the interim required percent capture milestone set forth in the LTCP or the final required percent capture of no less than 85% by volume of the combined sewage collected in the CSS during precipitation events is eliminated or captured for treatment on a system-wide annual average basis as defined in the Federal CSO Policy. The PCCMP shall provide data to evaluate the effectiveness of the CSO control measures constructed during and after the implementation of the LTCP.

ii. A monitoring schedule, regulator monitoring locations, receiving water sampling locations, and rain gauge locations.

iii. The approach for analysis of the PCCMP data for assessing the performance of CSO control measures and for reporting progress to regulatory agencies and the general public. The PCCMP shall evaluate the incremental reduction in overflow rates and volumes as the CSO control measures are placed into operation.

iv. A Public Notification System to notify the public of the occurrence of combined sewer overflows for each receiving water body.

c. The PCCMP shall include the implementation of a rainfall and hydraulic monitoring program, as well as a detailed analysis and evaluation of the CSO control measures' efficacy. Through a calibrated/validated H&H model, a continuous simulation on the system-wide annual average shall be run to compare the remaining CSO discharge volume to baseline conditions and determine whether the CSO control measures have achieved the interim required percent capture or the final required percent capture.

d. During and after the implementation of the LTCP, the PCCMP shall use the following steps to determine if the CSO control measures are meeting the interim required percent capture or the final required percent capture:.

i. Collect flow monitoring for a 1-year period and rainfall data for a 1-year period during the effective NJPDES permit. Perform QA/QC on the data. Note that this is separate from the monthly monitoring form data;

ii. At the end of the effective NJPDES permit, update the H&H model to include all completed CSO control measures and any other modifications to the CSS since the H&H model was calibrated for the LTCP;

iii. Calibrate and/or validate the updated H&H model, if needed, using the flow and rainfall data collected during the effective NJPDES permit. Any recalibration of the H&H model shall be approved by the Department; and

iv. Perform continuous simulation using the updated H&H model on the system-wide annual average and calculate the percent capture to determine if the interim required percent capture or the final required percent capture is being achieved.

e. The permittee shall conduct interim post-construction compliance monitoring every five years as established in the LTCP. Such monitoring shall assess the projects and implementation schedule including attainment of percent capture milestones set forth in the LTCP. These projects shall be monitored and analyzed to determine if they are operating as intended and whether the implementation of projects under the LTCP are achieving the interim required percent capture milestones set forth in the LTCP. If the PCCMP determines that the implemented CSO control measures do not meet the interim required percent capture or the final required percent criteria, an evaluation must be included in the Adaptive Management Plan in accordance with H. below.

f. The permittee shall submit an Interim PCCMP Report on or before 54 months from the effective date of the permit (EDP). The report shall include:

i. A statement setting forth the deadlines and other terms that the permittees were required to meet in the effective NJPDES permit;

ii. A summary of principal contacts with the Department during the effective NJPDES permit relating to CSOs or implementation of the LTCP;

iii. NJPDES permit violations, including but not limited to dry weather overflows;

iv. A summary of flow and hydraulic monitoring data collected by the permittees during the effective NJPDES permit;

v. A description of the CSO control measures completed within the effective NJPDES permit and a projection of CSO control measure work to be performed during the subsequent renewal NJPDES permit;

vi. An evaluation of the effectiveness of the CSO control measures constructed in the effective NJPDES permit to determine if the interim required percent capture is achieved; and

vii. A summary of any proposed adjustments to the components of the LTCP.

g. Upon implementation of all the LTCP CSO control measures, the monitoring information collected from the ambient baseline monitoring phase of the BCMP shall be compared to the post-construction compliance monitoring to evaluate the effectiveness of CSO control measures implemented to verify that the remaining CSOs are not precluding the attainment of water quality standards for pathogens.

h. The PCCMP must include pathogen data collected by the DRBC as part of the DRBC Boat Run Program as performed under an approved Quality Assurance Project Plan (QAPP). This data is collected from the Delaware River, Cooper River and Newton Creek.

i. A Final PCCMP Report shall be submitted to the Department within 30 months after the last LTCP project has been constructed and is in operation. The single Final PCCMP Report shall evaluate and document the system-wide performance of the LTCP CSO control measures. The Report shall include an assessment of whether the control measures are meeting the final required percent capture and complying with water quality standards. The report shall include:
   i. A complete post-construction compliance monitoring period data summary and analysis;
   ii. A reporting of all of the CSO control measures that have been constructed, implemented, and that are in operation;
   iii. An evaluation of the CSO control measures' performance, and whether the controls meet the final required percent capture;
   iv. A description of any actions that were needed to be implemented to meet the interim required percent capture or the final required percent capture; and.
   v. An assessment of whether the control measures are complying with water quality standards.

10. Permittee's LTCP Responsibilities

a. The permittee is responsible for implementing CSO control measures to ensure compliance with the Federal CSO Control Policy and N.J.A.C. 7:14-11, Appendix C as outlined in the Implementation Schedule located in Section G.8. Since multiple permittees own/operate different portions of a hydraulically connected CSS, the permittee is required to work cooperatively and provide the necessary information with all other CSO permittees to ensure overall compliance. In addition, each permittee is required to institute necessary measures in accordance with the Implementation Schedule for only the portion of the hydraulically connected system that the permittee owns/operates and provide this information to the other permittees for compliance with the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C.

H. Custom Requirement

1. Precipitation Trends

a. The following information shall be submitted to the Department as part of the NJPDES permit renewal application:
   i. The permittee shall analyze and submit the annual precipitation depth obtained by the National Oceanic Atmospheric Administration (NOAA) at the Philadelphia International Airport in order to determine the annual precipitation depth during the effective period of the permit.
   ii. The permittee shall determine and submit the annual precipitation depth for each calendar year, such that by the end of the permit, the most recent five calendar years of data has been collected. The permittee shall compare this data to assumptions utilized in the development of the LTCP.
   iii. This information shall be submitted to the Department with the NJPDES renewal application with an assessment of any change in precipitation trends.

2. Adaptive Management Plan

a. An Adaptive Management Plan shall be submitted on or before 54 months from the effective date of the permit (EDP) if any of the following occurs:

i. An Interim or the Final PCCMP Report determines that the implemented CSO control measures do not meet the interim required percent capture or the final required percent capture as per Part IV.G.9.e. above;.

ii. A permittee requests to modify the implementation schedule and/or CSO control measures in the implementation schedule; and/or

iii. The precipitation trends required in Part IV.H.1 above demonstrates a change in the assumptions used in the development of the LTCP.

b. If an Interim or the Final PCCMP Report determines that the implemented CSO control measures do not meet the interim required percent capture or the final required percent capture, the Adaptive Management Plan shall include:.

i. Modified or additional CSO control measures that will be to achieve the interim required percent capture or the final required percent capture;.

ii. A detailed analysis and a modified implementation plan and schedule of the CSO control measures; and

iii. Inclusion of any adaptive management modifications based on an Interim or the Final PCCMP Report.

c. If a permittee requests to modify the implementation schedule and/or CSO control measures in the implementation schedule by incorporating new technologies, group similar control measures to reduce cost, increase wet weather, change the order of the control measures and/or accelerate the schedule. If such a request, the Adaptive Management Plan shall include:

i. A detailed analysis of the modified and/or new CSO control measures including verification that the interim required percent capture or the final required percent capture will be achieved; and.

ii. A modified implementation plan and schedule of the CSO control measures.

APPENDIX A:

CHRONIC TOXICITY TESTING SPECIFICATIONS

FOR USE IN THE NJPDES PERMIT PROGRAM

Version 3.0

May 2017

TABLE OF CONTENTS

Notice: Mention of trade names or commercial products do not constitute endorsement or recommendation for use.

I. AUTHORITY AND PURPOSE

These methods specifications for the conduct of whole effluent chronic toxicity testing are established under the authority of the NJPDES permitting program, N.J.A.C. 7:14A-6.5(a)2 and 40 CFR 136, for discharges to waters of the State. The methods referenced herein are included by reference in 40 CFR 136, Table 1.A. and, therefore, constitute approved methods for chronic toxicity testing. The information contained herein serves to clarify testing requirements and outline and implement the interlaboratory Standard Reference Toxicant Program until specific chronic requirements are incorporated into the laboratory certification regulations under N.J.A.C. 7:18. As such these methods are intended to be used to determine compliance with discharge permits issued under the authority of the NJPDES permit program. Tests are to be conducted in accordance with the general conditions and method specifications (test organism specific) contained in this document. All other conditions and specifications can be found in 40 CFR 136 and USEPA methodologies.

Until a subchapter on chronic toxicity testing within the regulations governing the certification of laboratories and environmental measurements (N.J.A.C. 7:18) becomes effective, tests shall be conducted in conformance with the methodologies as designated herein and contained in 40 CFR 136. The laboratory performing the testing shall possess certification for the applicable chronic methodologies incorporated by reference through the laboratory certification program established under N.J.A.C. 7:18, as required by N.J.A.C. 7:9B-1.5(c)5.

These methods are incorporated into discharge permits as enforceable permit conditions. Each discharge permit will specify in Parts III&IV of the permit, the test species specific methods from this document that will be required under the terms of the discharge permit. Although the test species specific methods for each permit are determined on a case-by-case basis, the purpose of this methods document is to assure consistency among dischargers and to provide certified laboratories with information on the universe of tests to be utilized so that they can make the necessary preparations, including completing the required Standard Reference Toxicant testing. Please note that these methodologies are required for compliance testing only. Facilities and/or laboratories conducting testing under the requirements of a Toxicity Identification Evaluation or for informational purposes are not bound by these methods.

This document constitutes the fifth version of the NJDEP's interim chronic methodologies. This version contains no significant changes to the test methods themselves.

II. GENERAL CONDITIONS

A. LABORATORY SAFETY, GLASSWARE, ETC.

All safety procedures, glassware cleaning procedures, etc., shall be in conformance with 40 CFR 136 and USEPA's "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," "Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms" and N.J.A.C. 7:18.

B. TEST CONCENTRATIONS / REPLICATES

All testing is to be performed with a minimum of five effluent concentrations plus a dilution water control. A second reference water control is optional when a dilution water other than culture water is used. The use of both a 0.5 or 0.75 dilution factor is acceptable for the selection of test concentrations. The Department recommends the use of the 5 standard dilutions plus a dilution water control to cover the entire range of effluent test concentrations e.g. 0%, 6.25%, 12.5%, 25%, 50%, 100%.

The number of replicates used in the test must, at a minimum, satisfy the specifications of the applicable methods contained herein. Increased data sensitivity can be obtained by increasing the number of replicates equally among test concentrations and thus an increased number of replicates is acceptable. Further, the use of nonparametric statistical analysis requires a minimum of four replicates per test concentration. If the data for any particular test is not conducive to parametric analyses and if less than four replicates were included, the test may not be considered acceptable for compliance purposes.

The use of single concentration tests consisting of the permit limitation as a concentration and a control is not permitted for compliance purposes, but may be used by a permittee in the conduct of a Toxicity Investigation Evaluation (TIE) or for information gathering purposes. Such a test would be considered a "pass" if there was no significant difference in test results, using hypothesis testing methods.

C. DILUTION WATER

1. Marine and Estuarine Waters

A high quality natural water, such as the Manasquan River Inlet is strongly recommended as the dilution water source for chronic toxicity testing with marine and estuarine organisms. The use of the receiving water as the dilution water source is not required. Saline waters prepared with hypersaline brine and deionized water may also be used as dilution water. Hypersaline brines shall be prepared from a high quality natural seawater and shall not exceed a concentration of 100 ppt. The type of dilution water for a permittee may not be changed without the prior approval of the Department.

The standard test salinity shall be 25 ppt. Since most effluents are freshwater based, in most cases it will be necessary to adjust the salinity of the test concentrations to the standard test salinity.

2. Fresh Waters

A high quality natural water, such as Round Valley Reservoir (if access is allowed) or Lake Hopatcong, is recommended as the dilution water source for chronic toxicity testing with freshwater organisms. It is not required to perform the toxicity testing with the receiving water as dilution water. Tests performed with reconstituted water or up to 20% Diluted Mineral Water (DMW) as dilution water is acceptable. For testing with *Ceriodaphnia dubia*, the addition of 5 µg/l selenium (2 µg/l selenium with natural water) and 1 µg/l vitamin B12 is recommended (Keating and Dagbusan, 1984: Keating, 1985 and 1988). The source of a dilution water for a permittee may not be changed without the prior approval of the Department through the completion of a Whole

Effluent toxicity testing methodology questionnaire. Reconstituted water and DMW should be prepared with Millipore Super Q^{R} or equivalent, meet the requirements of N.J.A.C. 7:18-6 and should be aerated a minimum of 24 hrs prior to use, but not supersaturated.

D. EFFLUENT SAMPLE COLLECTION

Effluent samples shall be representative of the discharge being regulated. For each discharge serial number (DSN), the effluent sampling location shall be the same as that specified in the NJPDES permit for other sampling parameters unless an alternate sampling point is specified in the NJPDES discharge permit. For continuous discharges, effluent sampling shall consist of 24 hour composite samples consisting either of equal volumes taken once every hour or of a flow-proportionate composite sample, unless otherwise approved by the Department. Unless otherwise specified, three samples shall be collected as specified above, preferably one every other day. The first sample should be used for test initiation and the first renewal. The second sample for the next two renewals. The third sample should be used for the final three renewals. For the *Selenastrum* test, a single sample shall be collected not more than 24 hours prior to test initiation. In no case, shall more than 36 hours' elapse between collection and first use of the sample. It is acceptable to collect samples more frequently for chronic WET testing and if samples are collected daily for acute toxicity testing conducted concurrently, available samples may be used to renew the test solutions as appropriate.

For all other types of discharges, effluent sampling shall be conducted according to specifications contained within the discharge permit, methodology questionnaire, or as otherwise specified by the Department. The use of grab samples or other special sampling procedures may be approved by the Department based on time of occurrence and duration of intermittent discharge events.

If a municipal discharger has concerns that the concentrations of ammonia and/or chlorine in an effluent are adequate to cause violations of the permit limit for chronic toxicity testing, the permittee should conduct analyses, as specified in USEPA's toxicity investigation methods documents, to illustrate the relationship between chronic effluent toxicity and chlorine and/or ammonia as applicable. This data may then be submitted to the Department as justification for a request to use modified test procedures, which account for ammonia and/or chlorine toxicity, in future chronic toxicity tests. The Department may, where adequate justification exists, permit the adjustment of these pollutants in the effluent sample if discharge limits for these pollutants are contained in the NJPDES permit and those permit limitations are adequate for the protection of water quality. Any proposed modified test procedures to adjust effluent chlorine and/or ammonia shall be approved by the Department prior to use of those test procedures for any compliance testing.

Except for filtration through a 2 mm or larger screen or an adjustment to the standard test salinity, no other adjustments to the effluent sample shall be made without prior written approval by the Department. When a laboratory adjusts a freshwater effluent salinity and the pH of the test concentration changes more than 0.5 pH units from the initial pH, the laboratory shall readjust the pH of the test concentration to within 0.5 pH units of the original test concentration. Aeration of samples prior to test start shall be minimized where possible and samples shall not be aerated where adequate saturation exists to maintain dissolved oxygen.

E. PHYSICAL CHEMICAL MEASUREMENTS

At a minimum, the physical chemical measurements shall be as follows unless more stringent criteria is required by the method:

- pH and dissolved oxygen shall be measured at the beginning and end of each 24 hour exposure period, in at least one chamber, of each test concentration and the control. In order to ensure that measurements for these parameters are representative of the test concentrations during the test, measurements for these parameters should be taken in an additional replicate chamber for such concentrations which contains no test organisms, but is subject to the same test conditions.

- Temperature shall either be monitored continuously, measured daily in at least two locations in the environmental control system, or measured at the beginning and end of each 24 hr exposure period in at least one replicate for each treatment.

- Salinity shall be measured in all salt water tests at the beginning and end of each 24 hour exposure period, in at least one replicate for each treatment.

- For all freshwater tests, alkalinity, hardness and conductivity shall be measured in each new sample (100% effluent) and control.

- When natural salt water is used; nitrite, nitrate, and ammonia shall be measured in the control before each renewal in the mysid test only.

- For samples of discharges where concentrations of ammonia and/or chlorine are known or are suspected to be sufficient to cause toxicity, it is recommended that the concentrations of these pollutants be determined and submitted with the standardized report form. The laboratory is advised to consult with the permittee to determine if these parameters should be measured in the effluent. Where such measurements are deemed appropriate, measurements shall be conducted at the beginning of each 24 hour exposure period. Also, since a rise in the test pH can affect the toxicity of ammonia in the effluent, analysis of ammonia during the test may be appropriate if a rise in pH is accompanied by a significant increase in mortality.

F. STATISTICS

Special attention should be given to the omission and inclusion of a given replicate in the analysis of mysid fecundity data (USEPA 1994, p. 275) and *Ceriodaphnia* reproduction data (USEPA 1994, page 174).

Determination of acceptability criteria and average individual dry weight for the growth endpoints must follow the specifications in the applicable documents (e.g., p.84 for saltwater methods document.)

Use of nonparametric statistical analyses requires a minimum of four replicates per test concentration. If the data for any particular test are not conducive to parametric analyses and if less than four replicates were included, the test may not be acceptable to the Department.

For point estimate techniques, statistical analysis must follow the protocol contained in the approved testing method. The linear interpolation estimate ICp values and not the bootstrap mean ICp, shall be reported for permit compliance purposes. The ICp value reported on the Discharge Monitoring Report shall be rounded off as specified in the Department's “NJPDES Monitoring Report Form Reference Manual", updated December 2007, and available on the web at http://www.state.nj.us/dep/dwq/pdf/MRF_Manual.pdf for further information.

If the result reported by the ICp method is greater than 100% effluent, the test result is reported as ">100%"

If separate IC25's can be calculated from multiple test endpoints, for example a reproductive and/or growth endpoint and a survival endpoint, the lowest IC25 value expressed in units of "% effluent" will be used to determine permit compliance and should, therefore, be reported as the IC25 value for the test. If the IC25 value for growth and/or reproduction is not lower than that for survival, the IC25 value reported for the test shall be as survival. For saltwater tests, where additional controls are used in a test (i.e. brine and/or artificial sea salt control), a T-test shall be used to determine if there is a significant difference between the original test control and the additional controls. If there is a significant difference between any of the controls, the test may be deemed unacceptable and if so, will not be used for permit compliance.

III. TEST ACCEPTABILITY CRITERIA

Any test that does not meet the test acceptability criteria of the chronic toxicity method will not be used by the Department for any purpose and must be repeated as soon as practicable, with freshly collected samples.

1. Tests must be performed by a laboratory approved for the conduct of chronic toxicity tests and certified for chronic toxicity testing under N.J.A.C. 7:18.

2. Test results may be rejected due to inappropriate sampling, including the use of less than three effluent samples in a test and/or use of procedures not specified in a permit or methodology questionnaire, use of frozen samples, not refrigerating samples upon collection, or unapproved pretreatment of an effluent sample.

3. Controls shall meet, at a minimum, the applicable performance criteria specified in the Table 2.0 and in the individual method specifications contained herein.

4. Acceptable and applicable Standard Reference Toxicant Data must be available for the test.

5. No unapproved deviations from the applicable test methodology may be present.

6. When using hypothesis testing techniques, a deviation from the dose response as explained in the statistical portion of this document shall not be present in the data.

7. If more stringent criteria are required within the chronic toxicity test method or rule, the more stringent criteria must be met.

Table 2.0: CONTROL PERFORMANCE

TEST ORGANISM	MINIMUM SURVIVAL	MINIMUM WEIGHT GAIN	MINIMUM FECUNDITY/ REPRODUCTION
Pimephales promelas	80%	0.25 mg avg	N/A
Ceriodaphnia dubia	80%	N/A	Average of $\geq$15 young per surviving female
Selenastrum capricornutum	Density $\geq 2x10^5$cells/ml	N/A	Variability in controls not to exceed 20%.
Cyprinodon variegatus	80%	0.60 mg (unpreserved) avg 0.50 mg (preserved) avg	N/A
Menidia beryllina	80%	0.50 mg (unpreserved) avg 0.43 mg (preserved) avg	N/A
Mysidopsis bahia	80%	0.20 mg per mysid avg	egg production by 50% of control females if fecundity is used as an endpoint.

THE DETERMINATION OF A TEST AS UNACCEPTABLE DOES NOT RELIEVE THE FACILITY FROM MONITORING FOR THAT MONITORING PERIOD

IV. STANDARD REFERENCE TOXICANT TESTING

All chronic testing shall be accompanied by testing with a Standard Reference Toxicant (SRT) as a part of each laboratory's internal quality control program. Such a testing program must be consistent with the quality assurance/quality control protocols described in the USEPA chronic testing manuals. Laboratories may utilize the reference toxicant of their choice and toxicants such as cadmium chloride, potassium chloride, sodium dodecyl sulfate and copper sulfate are all acceptable. However, Potassium chloride has been chosen by several laboratories and is recommended by the Department. The concentration of the reference toxicant shall be verified by chemical analysis in the low and high test concentrations once each year or every 12 tests, whichever is less. It is not necessary to run SRT tests, for all species using the same SRT.

A. INITIAL STANDARD REFERENCE TOXICANT (SRT) TESTING REQUIREMENTS

At a minimum, this testing shall include an initial series of at least five SRT tests for each test species method. Acceptable SRT testing for chronic toxicity shall be performed utilizing the short term chronic toxicity test methods as specified herein. Reference toxicant tests utilizing acute toxicity testing methods, or any method other than those contained in this document are not acceptable. The laboratory should forward results of the initial SRT testing, including control charts, the name of the reference toxicant utilized, the supplier and appropriate chemical analysis of the toxicant to the Department's laboratory certification program prior to obtaining certification for chronic toxicity testing. Certification for the applicable chronic toxicity method must be obtained prior to the conduct of any chronic toxicity testing for compliance purposes.

B. SUBSEQUENT SRT TESTING REQUIREMENTS

After receiving the initial approval from the Department to conduct chronic toxicity tests for compliance purposes, subsequent SRT testing shall be conducted as follows:

1. Where organisms used in testing are cultured at the testing laboratory, SRT testing must be conducted at least once per month for each species/method.

2. Where the laboratory purchases organisms for the conduct of chronic toxicity testing for the test organism in question, the testing laboratory must conduct a concurrent SRT per lot of organisms, unless the supplier provides at least the most recent five monthly SRT's using the same toxicant and control conditions. SRT data provided by the supplier for each lot of organisms purchased is acceptable as long as the SRT test result falls within the control limits of the control chart established by the supplier for that organism. The laboratory using purchased organisms is responsible for the results of any compliance tests they perform.

3. A testing laboratory purchasing organisms from a supplier laboratory must still perform SRT testing on a monthly basis at a minimum, for each species they test with, in order to adequately document their own interlaboratory precision.

4. If a testing laboratory purchasing organisms elects not to use the SRT data from a "supplier laboratory" or such data is unavailable or where organisms are purchased from another organism supplier, the testing laboratory must conduct SRT testing on each lot of organisms purchased.

5. If a testing laboratory conducts testing for a species/method less frequently than monthly, then an SRT shall be run concurrent with the toxicity test.

   NOTE: Based on these requirements, SRT data are considered applicable to a compliance test when the SRT test results are acceptable and the SRT test is conducted within 30 days of the compliance test, for the test species and SRT in question. Therefore, it is not necessary for an approved laboratory to run an SRT test every month if the laboratory is not conducting compliance tests for a particular species.

C. CHANGING OF AN ESTABLISHED REFERENCE TOXICANT

The SRT used for any species by a laboratory may be changed at any time provided that the following conditions have been satisfied:

1. A series of at least three reference toxicant tests are conducted with the new reference toxicant and the results of those tests are identified as satisfactory, in writing, by the Department.

2. Laboratories must continue using the already approved SRT in their ongoing QA/QC program, until such time as the letter referenced above, is received by the laboratory.

D. CONTROL CHARTS

Control charts shall be established from SRT test results in accordance with the procedures outlined in the USEPA methods documents. Control charts shall be constructed using IC25's using the following methods:

1. The upper and lower control limits shall be calculated by determining +/- two standard deviations above and below the mean.

2. SRT test results which exhibit an IC25 that is greater than the highest concentration tested or less than the lowest concentration tested (i.e. a definitive endpoint cannot be determined), shall not be used to establish control charts.

3. SRT tests which do not meet the acceptability criteria for a specific species shall not be used to establish control charts.

4. All values used in the control charts should be as nominal concentrations. However, the control charts shall be accompanied by a chart tabulating the test results as measured concentrations.

5. An outlier (i.e. values which fall outside the upper and lower control limits) should be included on the control chart unless it is determined that the outlier was caused by factors not directly related to the test organisms (e.g., test concentration preparation) as the source of variability would not be directly applicable to effluent tests. In such case, the result and explanation shall be reported to the Department within 30 days of the completion of the SRT test.

The control chart established for the initial series of SRT data submitted will be used by the laboratory and the Department to determine outliers from SRT test results reported in the "NJPDES Biomonitoring Report Form - Chronic Toxicity Test" submitted by the permittees for the test species. These initial control limits will remain unchanged until twenty SRT tests have been completed by the laboratory.

The following procedures shall be used for continually updating control charts after twenty acceptable SRT tests have been completed:

1. Once a laboratory has completed twenty acceptable SRT tests for a test species, the upper and lower control limits shall be recalculated with those twenty values.

2. For each successive SRT test conducted after these first twenty tests, a moving average shall be calculated and the control limits reevaluated using the last twenty consecutive test results.

3. The upper and lower control limits shall be reported on the "NJPDES Biomonitoring Report Form - Chronic Toxicity Tests" along with the SRT test result.

E. UNACCEPTABLE SRT TEST RESULTS

If a laboratory produces any SRT test results which are outside the established upper and lower control limits for a test species at a frequency greater than one test in any twenty tests, the laboratory shall investigate sources of variability, take corrective actions to reduce identified sources of variability, and perform an additional SRT during the same month. The Department may not accept or may require repeat testing for any toxicity testing that may have been affected by such an occurrence.

If a laboratory produces two consecutive SRT test results or three out of any twenty test results which are outside the established upper and lower limits for a specific test species, the laboratory shall cease to conduct chronic toxicity tests for compliance purposes for that test species until the reason(s) for the outliers have been resolved. Approval to resume testing may be contingent upon the laboratory producing SRT test results within the established upper and lower control limits for that test species in two consecutive SRT tests. If one or both of those test results again fall outside the established control levels, the laboratory is unapproved for that test species until five consecutive test results within the established upper and lower control limits are submitted and approved by the Department.

F. ANNUAL SUBMITTALS

The Department may request, at any time, any information which is essential in the evaluation of SRT results and/or compliance data.

V. TEST CANCELLATION / RESCHEDULING EVENTS

A lab may become aware of QA problems during or immediately following a test that will prevent data from being submitted or a lab may be unable to complete a tests due to sample collection or shipping problems. If for any reason a chronic toxicity test is initiated and then prematurely ended by the laboratory the laboratory shall submit the form entitled "Chronic Whole Effluent Toxicity Testing Test Cancellation / Rescheduling Event Form" contained herein. This form shall be used to detail the reason for prematurely ending the test. This completed form and any applicable raw data sheets shall be submitted to the biomonitoring program at the address below within 30 days of the cessation of the test.

Tests are considered to be initiated once test organisms have been added to all test chambers.

Submission of this form does not relieve the facility from monitoring for that monitoring period.

VI. REPORTING

The report form entitled "NJPDES Biomonitoring Report Form - Chronic Toxicity Tests" should be used to report the results of all NJPDES chronic compliance biomonitoring tests. Laboratory facsimiles are acceptable but must contain all information included on any recent revisions of the form by the Department. Statistical printouts and raw data sheets (including chain of custody documents) for all endpoints analyzed shall be included with the report submitted to the Department. All chronic toxicity test report forms shall be submitted to the following email addresses as applicable:

biomonitoring@dep.nj.gov

Toxicity@drbc.gov

In addition, the results of all chronic toxicity tests conducted must be reported on the DMR form under the appropriate parameter code in the monitoring period in which the test was conducted.

VII. METHOD SPECIFICATIONS

The following method specifications shall be followed as specified in the NJPDES permit. Any changes to these methods will not be considered acceptable unless they are approved in writing by the Department, prior to their use.

A. Fathead Minnow (*Pimephales promelas*), Larval Survival and Growth Test, method 1000.0
B. *Ceriodaphnia dubia*, Survival and Reproduction Test, method 1002.0
C. Algal, (*Selenastrum capricornutum*), Growth Test, method 1003.0
D. Sheepshead Minnow (*Cyprinodon variegatus*), Larval Survival and Growth Test, method 1005.0
E. Inland Silverside (*Menidia beryllina*), Larval Survival and Growth Test, method 1006.0
F. *Mysidopsis bahia*, Survival, Growth, and Fecundity Test, method 1007.0

VIII. REFERENCES

1. NJPDES Monitoring Report Form Reference Manual October 2007 http://www.state.nj.us/dep/dwq/pdf/MRF_Manual.pdf

2. USEPA. 2002. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. EPA-821-R-02-014. October 2002. Third Edition.

3. USEPA. 2002. Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. EPA-821-R-02-013. October 2002. Fourth Edition.

New Jersey Department of Environmental Protection
Water Pollution Management Element
Bureau of Surface Water & Pretreatment Permitting
biomonitoring@dep.nj.gov

CHRONIC WHOLE EFFLUENT TOXICITY TESTING
TEST CANCELLATION / RESCHEDULING EVENT FORM

THIS FORM IS TO BE COMPLETED AND SUBMITTED TO THE DEPARTMENT DIRECTLY BY THE LABORATORY CONDUCTING CHRONIC TOXICITY TESTS WHENEVER A CHRONIC TOXICITY TEST IS PREMATURELY ENDED FOR ANY REASON

NJPDES No.: _____

FACILITY NAME: _____

LOCATION: _____

CONTACT: _____ PHONE: _____

CANCELLATION EVENT:

LABORATORY NAME / NUMBER: _____

CONTACT: _____

TEST START DATE: _____/_____/_____ TEST END DATE: _____/_____/_____

REASON FOR CANCELLATION: _____

_____

_____

_____

When is retest scheduled to be performed?

EFFLUENT SAMPLING:

SAMPLING POINT / DESCRIPTION OF SAMPLING SITE: _____

_____

SAMPLING INITIATED: DATE: ____/____/____ TIME: _____

SAMPLING ENDED: DATE: ____/____/____ TIME: _____

NUMBER OF EFFLUENT SAMPLES COLLECTED: _____

SAMPLE TYPE (GRAB/COMPOSITE): _____

RECEIVED IN LAB BY/FROM: _____

_____

METHOD OF SHIPMENT: _____

(ALL APPLICABLE RAW DATA SHEETS MUST BE ATTACHED)

c: Permittees authorized agent.

Masterfile #: 14667 **PI #:** 46168

RWBR Approval Status List

The permittee is only authorized to utilize RWBR for the specific category, type and location that has been approved in the table below.

RWBR Category	Specific RWBR Type	Location	Status
PA	Spray Irrigation (Golf Course)	None	Not Approved
PA	Spray Irrigation (Athletic Fields, Playgrounds)	None	Not Approved
PA	Spray Irrigation (Residential Lawns)	None	Not Approved
PA	Vehicle Washing	None	Not Approved
PA	Hydroseeding/Fertilizing	None	Not Approved
PA	Decorative Fountains	None	Not Approved
PA	Toilet Flushing	None	Not Approved
RA-LA	Sod Irrigation	None	Not Approved
RA-LA	**Spray Irrigation within a fenced perimeter or otherwise restricted area**	**CCMUA**	**Approved**
RA-LA	Spray Irrigation within a fenced perimeter or otherwise restricted area (Without NH3 + NO3)	None	Not Approved
RA-LA	Spray Irrigation (not fenced or restricted area)	None	Not Approved
RA-CM	**Street Sweeping**	**CCMUA Sewer Service Area**	**Approved**
RA-CM	Dust Control	None	Not Approved
RA-CM	**Fire Protection**	**CCMUA**	**Approved**
RA-CM	Vehicle Washing (at STP or DPW)	None	Not Approved
RA-CM	Composting	None	Not Approved
RA-IS	**Sanitary Sewer Jetting**	**CCMUA Sewer Service Area**	**Approved**
RA-IS	Non-Contact Cooling Water	None	Not Approved
RA-IS	Boiler Makeup Water	None	Not Approved
RA-IS	Road Milling	None	Not Approved
RA-IS	Hydrostatic Testing	None	Not Approved
RA-IS	Parts Washing	None	Not Approved
RA-IS	**STP Washdown**	**CCMUA**	**Approved**

Categories:

PA	Public Access
RA-LA	Restricted Access-Land Application and Non-Edible Crops
RA-CM	Restricted Access--Construction and Maintenance Operations
RA-IS	Restricted Access--Industrial Systems

Abbreviations:

NH3 -	Ammonia
NO3 -	Nitrate
STP -	Sewage Treatment Plant
DPW -	Dept. of Public Works

Annual Reuse Report

Any facility that has received an RWBR authorization is required to submit an Annual Reuse Report. The following information, at a minimum, shall be included in the report, due on February 1st of each year.

(1) The total wastewater reused (R) by the facility in the previous calendar year. If no wastewater was reused in the previous calendar year, report R as zero and skip to (6) below;

R = _____ gallons

(2) The total wastewater discharged (D) by the facility in the previous calendar year;

D = _____ gallons

(3) The percent of wastewater reused (%R) by the facility in the previous calendar year, calculated as follows:

%R = R/(R+D), expressed as a percent;

%R = _____ percent

(4) The total wastewater that was reused for **each reuse type** in the previous calendar year. This information should be provided in the chart format utilized in the RWBR Usage Table below;

RWBR Usage Table

RWBR Category	Specific RWBR Type	Location	Flow (gallons)

Attach additional pages as necessary.

(5) An update to the correlation between Total Suspended Solids and Turbidity, if necessary;

Correlation = _____

(6) Submit a completed copy of this form to:

For paper copies:
ATTN: RWBR Review Team
Mail Code 401 – 02B
Division of Water Quality
Bureau of Surface Water & Pretreatment
Permitting
P.O. Box 420
Trenton, NJ 08625-0420

For electronic copies:
DWQRWBR@dep.nj.gov

Annual Reuse Report - SAMPLE

Any facility that has received an RWBR authorization is required to submit an Annual Reuse Report. The following information, at a minimum, shall be included in the report, due on February 1st of each year.

(1) The total wastewater reused (R) by the facility in the previous calendar year. If no wastewater was reused in the previous calendar year, report R as zero and skip to (6) below;

R = _____ gallons

(2) The total wastewater discharged (D) by the facility in the previous calendar year;

D = _____ gallons

(3) The percent of wastewater reused (%R) by the facility in the previous calendar year, calculated as follows:

%R = R/(R+D), expressed as a percent;

%R = _____ percent

(4) The total wastewater that was reused for **each reuse type** in the previous calendar year. This information should be provided in the chart format utilized in the RWBR Usage Table below;

RWBR Usage Table

RWBR Category	Specific RWBR Type	Location	Flow (gallons)
	For Example:		
RA-CM	*Street Sweeping*	*Local Township*	*42,000*
RA-IS	*Sanitary Sewer Jetting*	*Facility Sewer Service Area*	*15,000*
RA-IS	*STP Washdown*	*Sewage Treatment Plant*	*43,000*
		Grand Total (R)	*100,000*

Attach additional pages as necessary.

(5) An update to the correlation between Total Suspended Solids and Turbidity, if necessary;

Correlation = _____

(6) Submit a completed copy of this form to:

For paper copies:
ATTN: RWBR Review Team
Mail Code 401 – 02B
Division of Water Quality
Bureau of Surface Water & Pretreatment
Permitting
P.O. Box 420
Trenton, NJ 08625-0420

For electronic copies:
DWQRWBR@dep.nj.gov

Appendix C

Design Standards for Storm Drain Inlets

Grates in pavement or other ground surfaces, such as roads (including bridges), driveways, parking areas, bikeways, plazas, sidewalks, lawns, fields, open channels and stormwater basin floors used to collect stormwater from the surface into a storm drain or surface water body, shall meet the following standards:

1. The New Jersey Department of Transportation (NJDOT) bicycle safe grate standards described in Chapter 2.4 of the NJDOT Bicycle Compatible Roadways and Bikeways Planning and Design Guidelines (April 1996).

2. A grate where each individual clear space in that grate has an area of no more than seven (7.0) square inches, or is not greater than 0.5 inches across the smallest dimension.

3. For curb-openings inlets, including curb-opening inlets in combination inlets, the clear space in the curb opening, or each individual clear space if the curb opening has two or more clear spaces, shall have an area of no more than seven (7.0) square inches or be no greater than two (2.0) inches across the smallest dimension.

The following exemptions apply:

1. Where each individual clear space in the curb opening in existing curb-opening inlets do not have an area of more than nine (9.0) square inches.

2. Where the review agency determines that the standards would cause inadequate hydraulic performance that could not practicably be overcome by using additional or larger storm drain inlets.

3. Where flows from the water quality design storm as specified in N.J.A.C. 7:8 are conveyed through any device (e.g., end of pipe netting facility, manufactured treatment device, or a catch basin hood) that is designed, at a minimum, to prevent delivery of all solid and floatable materials that could not pass through one of the following:

    a. A rectangular space four and five-eighths inches long and one and one-half inches wide (this option does not apply for outfall netting facilities); or

    b. A bar screen having a bar spacing of 0.5 inches.

4. Where flows are conveyed through a trash rack that has parallel bars with one inch (1") spacing between the bars, to the elevation of the water quality design storm as specified in N.J.A.C. 7:8.

5. Where the Department determines, pursuant to the New Jersey Register of Historic Places Rules at N.J.A.C. 7:4-7.2(c), that action to meet the standard is an undertaking that constitutes an encroachment or will damage or destroy the New Jersey Register listed historic property.