State of New Jersey

PHIL MURPHY
Governor

SHEILA OLIVER
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Mail Code – 401-02B
Water Pollution Management Element
Bureau of Surface Water & Pretreatment Permitting
P.O. Box 420 – 401 E State St
Trenton, NJ 08625-0420
Phone: (609) 292-4860 / Fax: (609) 984-7938

SHAWN M LATOURETTE
Commissioner

Via Email Only
March 6, 2023

Richard J. Wolff, Executive Director
North Hudson Sewerage Authority
1600 Adams Street
Hoboken, NJ 07030

Re: Draft Surface Water Renewal Permit Action
Categories: A – Sanitary Wastewater
CSM – Combined Sewer Management
NJPDES Permit No. NJ0025321
River Road Wastewater Treatment Plant (WWTP)
West New York Town, Hudson County

Dear Mr. Wolff:

Enclosed is a draft NJPDES permit action identified above which has been issued in accordance with N.J.A.C. 7:14A. The existing facility discharges treated and disinfected domestic wastewater into the Hudson River classified as SE2 (C2) waters. The existing facility has a NJPDES permitted flow value of 10 million gallon per day (MGD) for the Initial Phase and 15 MGD for the Interim and Final Phases through outfall Discharge Serial Number (DSN) 001A. This existing facility also owns/operates two (2) combined sewer overflow (CSO) outfalls which are equipped with solids/floatables controls. These CSO outfalls discharge into the Hudson River which is classified as SE2 (C2) waters.

This renewal permit serves to assess the permittees' 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 prepared by NHSA River Road WWTP dated October 1, 2020.

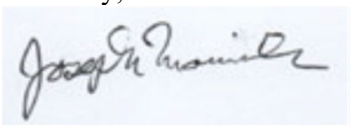
Notice of this draft permit action will appear on the Division of Water Quality's website at www.nj.gov/dep/dwq, in the *Jersey Journal* and in the March 15, 2023, *DEP Bulletin*. The *DEP Bulletin* is available on the internet at http://www.state.nj.us/dep/bulletin. In accordance with N.J.A.C. 7:14A-15.10(c)1i, the public comment period will close on May 15, 2023 at 11:59 pm. As detailed in the *DEP Bulletin* and aforementioned newspaper, written comments on the draft document must be submitted in writing to Susan Rosenwinkel, Bureau Chief, 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 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 Jonathan Hanuschik 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 Jonathan Hanuschik either by phone at (609) 292-4860 or email at Jonathan.hanuschik@dep.nj.gov .

Sincerely,



Joseph Mannick
Section Chief
Bureau of Surface Water & Pretreatment Permitting

Enclosures

c: Permit Distribution List
Masterfile #: 6845; PI #: 47081

EXECUTIVE SUMMARY

North Hudson Sewerage Authority-River Road STP
CSO Permit

In 2015, the NJDEP issued an individual NJPDES CSO permit to North Hudson Sewerage Authority for the River Road Sewage Treatment Plant (STP). The permit required creation of a single, coordinated Long Term Control Plan. The LTCP has been reviewed by the NJDEP and is being incorporated into this permit.

Through the LTCP, North Hudson River Road will comply with the regulations 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. Collection system modeling, as required by the 2015 CSO permit and summarized in the LTCP, demonstrate that this system is currently at 60% capture. The projects listed in the LTCP, and proposed in this permit, are projected to further exceed the minimum 85% capture. These projects are projected to achieve 90.1% capture. These projects are projected to be completed within the next twenty-four years.

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 includes specific requirements pertaining to climate change. This includes requirements to comply with the regulations pertaining to construction to address resilience and the required preparation of a Vulnerability Analysis as part of an Emergency Plan to ensure the effective operation of facilities under emergency conditions, including those due to climate change. This also includes a required analysis for annual precipitation over the life of the permit. Finally, upon completion of the projects, the permittee will evaluate compliance with the minimum 85% of the system-wide annual average capture.

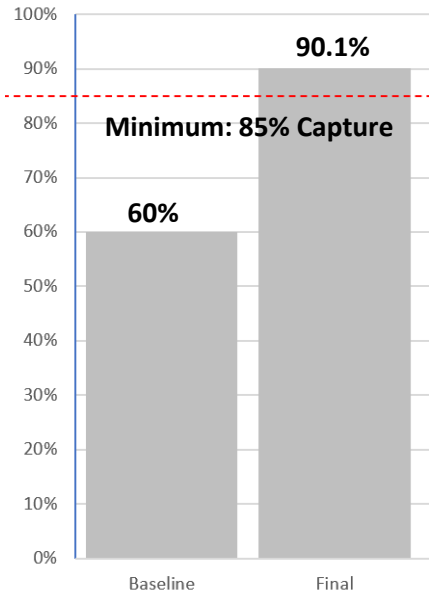


Table of Contents for the Draft Permit

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
STP	Sanitary Treatment Plant
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) Permit NJ0025321 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 disccharges:

Permittee	Facility
North Hudson Sewerage Authority (NHSA) 1600 Adams Street Hoboken, NJ 07030	River Road Wastewater Treatment Plant (WWTP) 6400 Anthony M Defino Way West New York, Hudson County, NJ 07093

Combined Sewer Overflows (CSOs) are discharges from Combined Sewer Systems (CSS). 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. NHSA owns and operates a combined sewer system which is hydraulically connected to the River Road WWTP. The River Road WWTP serves West New York and portions of Weehawken and Union City. The CSS for NHSA River Road includes two (2) CSO outfalls. When the conveyance capacity of the collection system and/or the STP is exceeded, excess combined sewage flows pass through both outfalls. This subject permit renewal is issued to NHSA and serves to assess compliance with the Federal CSO Control Policy and N.J.A.C. 7:14A-11, Appendix C.

The NHSA River Road WWTP discharges treated and disinfected, domestic wastewater with industrial contribution into the Hudson River, classified as SE2 (C2) waters. The existing facility has a NJPDES permitted flow value of 10 million gallons per day (MGD) for the Initial Phase and 15 MGD for the Interim and Final Phases through outfall Discharge Serial Number (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, Chief, or Attention: Comments on Public Notice NJ0025321, 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 Jonathan Hanuschik at (609) 292-4860 or via e-mail at Jonathan.Hauschik@dep.nj.gov.

Take notice that the Department will be holding a non-adversarial virtual public hearing to solicit public comment on the draft permit on April 17, 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 morning of the hearing. 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 May 15, 2023 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 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 #: 6845 **PI #:** 47081

This fact sheet sets forth the principle 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 28, 2020.

1 Name and Address of the Applicant:

North Hudson Sewerage Authority (NHSA)
1600 Adams Street
Hoboken, NJ 07030

2 Name and Address of the Facility/Site:

River Road Wastewater Treatment Plant (WWTP)
6400 Anthony M Defino Way
West New York, Hudson County, NJ 07030

3 NJPDES CSO Permit and Policy Background:

NHSA owns and operates a combined sewer collection system (CSS) which is hydraulically connected to the River Road WWTP. The River Road WWTP serves West New York and portions of Weehawken and Union City.

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. 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 so 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 STP when certain precipitation conditions (e.g. heavy rain) occur.

The NJPDES permit issued to NHSA – River Road WWTP on March 12, 2015 (2015 NJPDES CSO permit) required submission of a LTCP consistent with the Federal CSO Control Policy and NJPDES Regulations. This permit was subsequently modified for certain conditions as detailed in the Contents of the Administrative Record as identified with this fact sheet. 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.

4 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.

5 Facility Description:

A. WWTP Overview:

The facility is classified as a major discharger by the Department in accordance with the United States Environmental Protection Agency (EPA) rating criteria. The facility's NJPDES flow value is 10 million gallons per day (MGD) for the initial phase and 15 MGD for the interim and final phases. Sanitary wastewater conditions are covered under Category A of this permit.

The permittee is a non-delegated local agency, and the Department will implement the Industrial Pretreatment Program (IPP) requirements as set forth in 40 CFR 403.8(f). However, non-delegated status does not relieve the permittee from the responsibility of controlling the wastewater that it accepts for treatment if that wastewater violates the local sewer use ordinance or regulations or causes the permittee to violate the terms of its NJPDES permit. The IPP in the non-delegated area will be a cooperative effort between the permittee and the Department to resolve problems when they arise.

Sanitary wastewater is processed through the following units:

1. 2 Mechanical Bar Screens & 1 Manual Bar Screen
2. 2 Grit Removal Chambers
3. 6 "Roto Strainer" Filters (Microscreens)
4. 2 Trickling Filters (Artificial Media)
5. 2 Final Clarifiers
6. 1 Chlorine Contact Tank with Dechlorination

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

Sludge is dewatered by belt thickeners before being managed at an approved residuals management site. This is authorized by individual authorization NJG0198251 under the general permit NJ0194921 (Category SG4 – Sludge Quality Category 4 (GP)) and implements the provisions of the Sludge Quality Assurance Regulations (N.J.A.C. 7:14AC) for residual quality and quantity monitoring as well as other general conditions required b N.J.A.C. 7:14A-6 for Domestic Treatment Works that have a permitted flow greater than or equal to 5.0 MGD. If there are questions regarding the SG4 permit, please contact the Bureau of Groundwater, Residuals, and Permit Administration at (609) 984-4428.

B. CSO Description:

The North Hudson Sewerage Authority - River Road WWTP discharges treated effluent via discharge serial number (DSN) 001A to the Hudson River and also owns and operates a CSS including two (2) CSO outfalls designated as DSN 002A and DSN 003A. DSN 002A and DSN 003A discharge combined sewage into the Hudson River during wet weather periods when the combined sewage flows exceed the conveyance capacity of the collection system and/or capacity of STP. Detailed information is as follows:

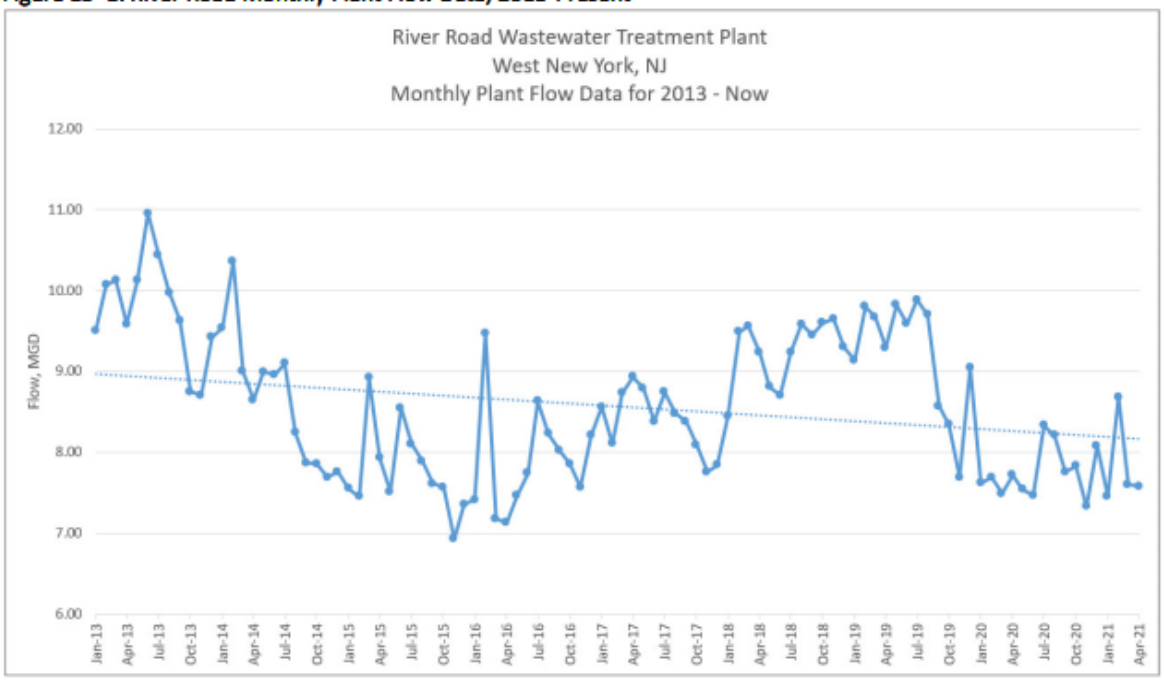
Outfall Number	Outfall Name	Regulators	Municipality	Latitude N	Longitude W	Solids/Floatables Status
002A	WNY-1	River Road / WNY	West New York	40° 47' 12.56"	74° 59' 53.46"	Installed
003A	JOSO	JOSO	Weehawken	40º 46' 15"	74º 00' 53"	Installed

C. Infiltration/Inflow (I/I) Reduction Efforts:

NHSA describes the ongoing efforts that took place as part of the River Road Service Area Leak Detection Program which minimized influent flows to the WWTP as referenced in the LTCP. Specifically, NHSA identified significant I/I within the system largely due to infiltration from water main leaks. This I/I was discovered as a result of the utilization of flow monitoring and closed-circuit television inspections. Upon identification of this issue NHSA conducted quarterly meetings with Suez Water to begin a program to isolate and repair the leaks.

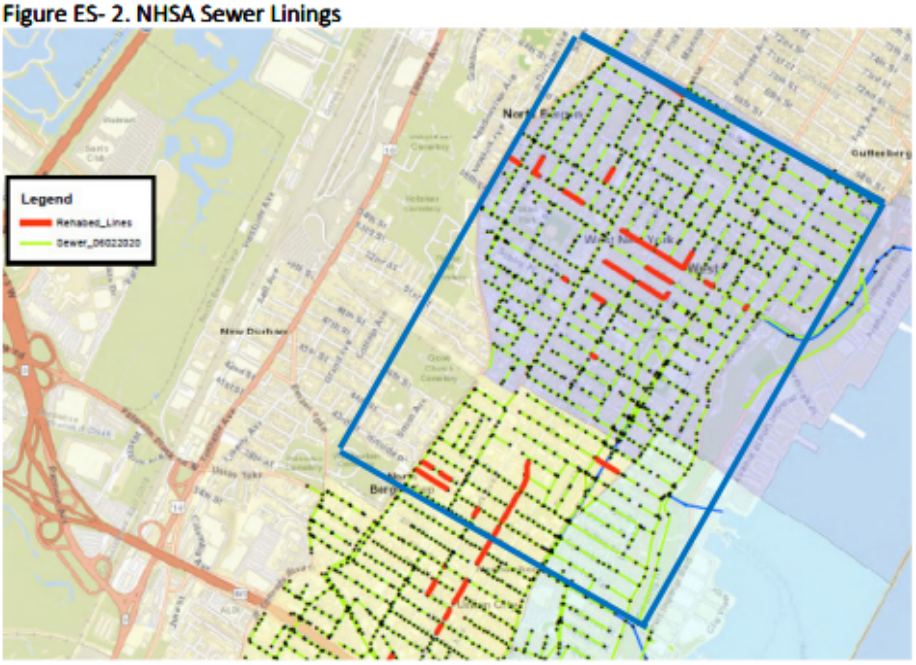
These efforts resulted in a significant decrease in I/I where reduced influent rates to the River Road WWTP decreased from 11 MGD to under 8 MGD. Figure ES-1 from the revised LTCP dated August 2021 shows the trend of monthly flows at River Road from January 2013 to April 2021:

Figure ES- 1. River Road Monthly Plant Flow Data, 2013-Present



As part of NHSA's Operation and Maintenance Plan, efforts have been ongoing towards cleaning and repairing sewers when necessary. In addition to the regularly scheduled cleaning, NHSA has a $1 million budget set aside per year exclusively for sewer cleanings and linings. Based on known information and as conditions change, sewers are cleaned and lined according to priority as described in NHSA's Asset Management Plan. This will continue throughout implementation of the LTCP to supplement the larger projects planned. These efforts are all in addition to the regularly scheduled cleanings conducted on an ongoing basis. Figure ES-2 below (from the LTCP) shows a map of all sewer linings that have been conducted within the River Road service area.

Figure ES- 2. NHSA Sewer Linings



The Department agrees that any reduction of I/I into the collection system can result in a decrease in CSO volumes during wet weather events since this reduction frees up collection system capacity by the removal of I/I. The Department acknowledges NHSA's efforts in this regard which took place in advance of the LTCP submission.

D. <u>Green Infrastructure and Stormwater Management:</u>

As described within the LTCP there are multiple green infrastructure projects in different phases throughout the River Road service area. These projects are in response to help manage the increasing intensity and frequency of severe weather which contributes to CSOs. Current green infrastructure elements that are either in planning or are already constructed are green infrastructure practices at schools in Union City, practices within the confines of the Wet New York Parking Authority, and bioswales along Park Avenue. These elements will work in parallel with the LTCP to further control CSOs.

NHSA has been and continues to implement stormwater management practices. Since 2001, NHSA has required all new sewer connection approval applications to include Stormwater Management. Since the requirement was put into place, there have been over 45 stormwater detention systems installed of various sizes, resulting in over half a million gallons of stormwater storage throughout the system. Since most of these systems were installed before the system characterization was completed, these systems are already accounted for in the baseline characterization. These systems are installed to maximize stormwater capture from new development thereby reducing storm water flow into the combined sewer system during rain events and overflows at the CSOs.

Further, as described within Appendix E of the LTCP, NHSA states that it requires the detention of stormwater runoff from every new development as a condition of the approval of each new or modified sewer connection in its Sewer Use Policies and Procedures (Resolution 20-052). NHSA further provides information on the 160 stormwater detention systems within the four communities served by NHSA. These stormwater detention systems typically consist of reinforced concrete chambers, HDPE tanks, HDPE pipe or infiltration basins. These systems are installed to achieve the maximum possible stormwater capture from new development thereby reducing storm water flow into the combined sewer system during rain events and overflows at the combined sewer outfalls.

6 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.

WWTP Outfall Designator: 001A (DSN 001A is a shared outfall with DSN 002A)

General Information		Watershed Information	
Receiving Water:	Hudson River	Downstream Confluence:	Upper New York Bay
Via :	Outfall pipe	Receiving River Basin:	Passaic, Hackensack and New York Harbor Complex
Classification (a):	SE2 (C2)		
Latitude:	40° 47’ 12.56” N	Watershed Management Area:	05
Longitude:	73° 59’ 53.46” W	Watershed:	Hudson River
County:	Hudson	Subwatershed:	Hudson River (lower)
Municipality:	West New York Town	14 digit Hydrologic Unit Code:	02030101170030
		Water Quality Impairments (b):	Benzo[A]Pyrene (PAHS), Chlordane In Fish Tissue, DDT in Fish Tissue, Dieldrin, Dioxin in Fish Tissue, Hexachlorobenzene, PCBs in Fish Tissue, Phosphorus Total
Outfall Description			
Outfall Configuration:	Submerged pipe with a single-port diffuser	Submerged Pipe Characteristics:	Distance from shore: 1,000 feet Depth below surface: 46 feet
Applicable Receiving Stream Dilution Factors (c)			
Acute:	10.2		
Chronic:	50.1		
Human Health Non-Carcinogen:	50.1		
Human Health Carcinogen:	97.5		

CSO Outfall Designator: 002A (DSN 002A is a shared outfall with DSN 001A)

General Information		Watershed Information	
Receiving Water:	Hudson River	Downstream Confluences:	Upper New York Bay
Via :	Outfall Pipe	Receiving River Basin:	Passaic, Hackensack and New York Harbor Complex
Classification (a):	SE2(C2)		
Latitude:	40º 47’ 12.56” N	Watershed Management Area:	05
Longitude:	73 º 59’ 53.46” W		
County:	Hudson	Watershed:	Hudson River
Municipality:	West New York Town	Subwatershed:	Hudson River (lower)
Outfall Name:	WNY-1	14 digit Hydrologic Unit Code:	02030101170030
		Water Quality Impairments (b):	Benzo[A]Pyrene (PAHS), Chlordane In Fish Tissue, DDT in Fish Tissue, Dieldrin, Dioxin in Fish Tissue, Hexachlorobenzene, PCBs in Fish Tissue, Phosphorus Total
Outfall Description			
Outfall Configuration:	54-inch diameter pipe which extends approximately 450-feet from shore into the Hudson River. It is suspended from a pier and ends in a 51-foot long submerged diffuser section with a multi-port diffuser (eight 20-inch diameter ports).		

CSO Outfall Designator: 003A

General Information		Watershed Information	
Receiving Water:	Hudson River	Downstream Confluences:	Upper New York Bay
Via :	Outfall Pipe	Receiving River Basin:	Passaic, Hackensack and New York Harbor Complex
Classification (a):	SE2(C2)		
Latitude:	40° 46' 15" N	Watershed Management Area:	05
Longitude:	74° 00' 53" W		
County:	Hudson	Watershed:	Hudson River
Municipality:	Weehawken Township	Subwatershed:	Hudson River (lower)
Outfall Name:	JOSO	14 digit Hydrologic Unit Code:	02030101170030
		Water Quality Impairments (b):	Benzo[A]Pyrene (PAHS), Chlordane In Fish Tissue, DDT in Fish Tissue, Dieldrin, Dioxin in Fish Tissue, Hexachlorobenzene, PCBs in Fish Tissue, Phosphorus Total
Outfall Description			
Outfall Configuration:		Tidally submerged 72-inch Pre-stressed Concrete Cylinder Pipe (PCCP) outfall	

Footnotes:

(a) The designated uses for these waterbody classifications can be found at N.J.A.C. 7:9B-1.12.
(b) 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).
(c) Dilution Factors originate from the dilution study titled, "West New York Utilities Authority Effluent Plume Study" submitted by Omni Environmental Corporation, dated January 1993 and subsequently reviewed and updated for the April 2003 draft permit.

As per the Surface Water Quality Standards at N.J.A.C. 7:9B, the designated uses for Saline Estuary 2 (SE2) receiving waters are:

1. Maintenance, migration and propagation of the natural and established biota;
2. Migration of diadromous fish;
3. Maintenance of wildlife;
4. Secondary contact recreation; and
5. Any other reasonable uses.

As noted in the table above, this segment of the Hudson River is impaired for several parameters as shown in the chart above. Effluent monitoring data is available for Outfall 001A for Benzo[A]Pyrene (PAHS), Dieldrin, and Hexachlorobenzene. This permit action requires the facility to continue to monitor for the discharge of Benzo[A]Pyrene (PAHS), Dieldrin, and Hexachlorobenzene for Outfall 001A. This permit action also requires the permittee to reduce the combined sewer overflow volume, frequency and duration at CSO outfalls which should have a corresponding decrease on the discharge of toxic pollutants.

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.

7 Summary of Permit Conditions for WWTP:

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

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 Interstate Environmental Commission (N.J.A.C. 7:9B-1.5(b)2)
5. Existing permit limitations in accordance with N.J.A.C. 7:14A-13.19 and 40 CFR 122.44 (antibacksliding requirements)
6. Permit limitations in accordance with N.J.A.C. 7:9B-1.5(d) (antidegradation requirements)
7. Statewide Water Quality Management Planning Rules (N.J.A.C. 7:15)
8. Pretreatment Program Requirements for Local Agencies (N.J.A.C. 7:14A-19)
9. Federal CSO Control Policy (Published April 19, 1994, at 59 Federal Register 18688)
10. N.J.S.A. 58:25-23 et/ seq., Sewage Infrastructure Improvement Act

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 Clean Water Act, 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.

The loading limitations (kg/day or g/day) are calculated by multiplying the flow value of 10 MGD by the conversion factor of 3.785 (L/gal) and the appropriate concentration limitation (mg/L or µg/L) for all phases.

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.

The Department issued a major modification dated March 19, 2020 which incorporated a Final Phase for a flow of 15 MGD.

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 for the final phase. An action level was included in the modification dated May 1, 2020 for CAP Threshold, which is not being retained in this renewal permit action given that this requirement is contradictory to the requirement to maximize flow to the treatment plant.

The monitoring frequency is **continuous** with a **metered** sample type.

As part of the final phase, this permit action includes required reporting for influent flow to the STP under "Flow, In Conduit or Thru Treatment Plant" as "Raw Sew/Influent" in order to implement CSO related bypass provisions as an LTCP alternative. 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, number of bypass events and will serve as an indication of any reduction in CSOs.

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

The concentration limitations of 25 mg/L and a monthly average and 40 mg/L 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 40 CFR 133.102(a)(4)(i) and (ii) and N.J.A.C. 7:14A-12.2(c)1 and 2. The effluent loading limitations are based on N.J.A.C. 7:14A-13.14 and 13.15.

The percent removal limitation of 85% is carried forward in accordance with N.J.A.C. 7:14A-13.19 and is based on the definition of secondary treatment 40 CFR 133.102(a)(4)(iii) and N.J.A.C. 7:14A-12.2(c)3.

The monitoring frequency is **three per week** with a **24-hour composite** sample type.

3. pH:

The effluent limitations of 6.0 S.U. as an instantaneous minimum and 9.0 S.U. as an instantaneous maximum respectively 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(c) and N.J.A.C. 7:14A-12.2 (f).

The monitoring frequency is **three per day** with a **grab** sample type.

4. Total Suspended Solids (TSS):

The concentration limitations of 30 mg/L as a monthly average and 45 mg/L as a weekly average are carried forward based 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(a) (1) and (2) and N.J.A.C. 7:14A-12.2 (b) 1. and 2. The effluent loading limitations are based on N.J.A.C. 7:14A-13.14 and 13.15.

Percent removal limitations are based on the definition of secondary treatment at 40 CFR 133.102(a)(3) and N.J.A.C. 7:14A-12.2(b) 3.

The monitoring frequency is **three per week** with a **24-hour composite** sample type.

5. Oil and Grease:

The effluent limitations of 10 mg/L as a monthly average and 15 mg/L as an instantaneous maximum are carried forward in accordance with N.J.A.C 7:14A-13.19 and are based on N.J.A.C. 7:14A-12.8(c).

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

6. Ammonia (Total as N):

Ammonia-N in water exists in two forms: NH_3 and NH_4^+. As NH_3, ammonia-N is called "un-ionized"; as NH_4^+, ammonia-N is called "ionized". Generally, the un-ionized fraction is considered more toxic than the ionized fraction. The relative proportion that is found in each fraction is primarily dependent on the temperature and the pH of the solution. At a higher temperature and/or a higher pH, more ammonia-N exists in the un-ionized form as compared to a lower temperature and/or pH. Ammonia-N is usually measured as total ammonia-N, which includes both the ionized and the un-ionized fractions.

The current SWQS set an instream limit on the concentration of un-ionized ammonia that may be allowed in the stream. The water quality criteria can be found at N.J.A.C. 7:9B-1.14. The criteria may be expressed as calculations dependent on instream temperature and pH. Where this is the case the values for temperature and pH used to calculate the un-ionized ammonia criteria are those values that exist after any allowable mixing of the effluent and receiving water. There are criteria values for both acute and chronic toxicity effects. Permit limits to protect against the toxic effects of ammonia instream are based on the more stringent calculated long term average.

Limit Derivation:

The WLA was calculated by solving a series of simultaneous equations for the carbonate and ammonia equilibria according to the following methodology. The input data in the solution of the equilibrium equations were derived from the following:

1) Acute and Chronic dilution factors are based on the dilution study report titled “West New York Utilities Authority Effluent Plume Study” submitted by Omni Environmental Corporation, dated January 1993.

2) Ambient water quality data from July 2006 through June 2011 that was collected in accordance with a NJDEP-approved work plan entitled "Quality Assurance Project Plan - Long-Term Water Quality Monitoring of the New Jersey Portion of the New York/New Jersey Harbor Waters by the New Jersey Harbor Dischargers Group", originally submitted to the Department on May 11, 2005 with revision dates of June 21, 2005 and August 1, 2006 (Station #32). The Department has determined that ambient data from Monitoring Station #32 is the most appropriate to use based on its proximity to the outfall pipe and its listing in the above mentioned NJDEP approved work plan. As the permittee is a current member of the New Jersey Harbor Dischargers Group, the Department has concluded that this information is appropriate for use in this analysis.

3) Conservative effluent and ambient Alkalinity values in lieu of requiring the permittee to conduct an effluent and ambient monitoring program.

The final total ammonia-N WLA is calculated by mass balance from the instream un-ionized ammonia criteria. The effluent limitations are calculated using the procedures in the USEPA TSD in accordance with N.J.A.C. 7:14A-13.6(a).

Carbonate Equilibrium: The simultaneous equilibrium (temperature corrected) for the first and second carbonate equilibrium for each pH value are solved to calculate the carbon species and the hydrogen ion concentrations. This is done separately for each stream, i.e. the effluent and the upstream receiving stream.

The downstream concentrations for the carbon fractions are then calculated by mass balance. The downstream final temperature is also calculated by mass balance.

The final downstream hydrogen ion concentration is then calculated by the carbonate equilibrium equations. The final pH is calculated from the final hydrogen ion concentration.

Equilibrium Equation:

$$\log K = -[A/T] + D - C \times T$$

C = 0.032786
D = 14.8435
A = 3404.71
T = Temperature in Kelvin

Ammonia-N Equilibrium: Using the final pH and the final temperature, the ammonia equilibrium of the final mixed stream is calculated.

Equilibrium Equation:

$$pK_a = 0.09018 + 2729.92/T$$

T= Temperature in Kelvin

The final total ammonia-N WLA is calculated by mass balance from the instream un-ionized ammonia criteria.

A "reserve capacity," or "margin of safety," is considered in setting the WLA in accordance with N.J.A.C. 7:15-7.1 and Section 4.2.1 of the USEPA TSD.

The effluent limitations are calculated using the procedures in the USEPA TSD in accordance with N.J.A.C. 7:14A-13.6(a).

Data Input for Equilibrium Equations and Calculation Results for an Effluent Flow of 10 MGD:

	Summer (a)		Winter (a)	
	Acute	**Chronic**	**Acute**	**Chronic**
Dilution factors	10.20	50.10	10.20	50.10
Amb/upstream NH_3N	0.69	0.51	0.69	0.51
Amb/upstream pH - su	7.27	7.13	7.27	7.13
Amb/upstream Temperature ˚C	27.41	25.99	15.00	15.00
Amb/upstream Alkalinity	89.00	89.00	89.00	89.00
Amb/upstream salinity - ppt	10.04	12.62	10.04	12.62
Facility (design) flow- **MGD**	10.00	10.00	10.00	10.00
Effluent pH - su	7.47	7.47	7.73	7.73
Effluent Temperature ˚C	25.90	25.37	18.61	17.83
Effluent Alkalinity	1.00	1.00	1.00	1.00
Effluent salinity - ppt	0.20	0.20	0.20	0.20
Criteria: unionized NH_3N	**0.115**	**0.030**	**0.115**	**0.030**
Criteria: equiv. total NH_3N	**13.48**	**5.53**	**31.55**	**12.12**
Criteria: equiv. total NH_3N - 20% reserve	**10.78**	**4.42**	**25.24**	**9.70**

WLA (wasteload allocation)	103.62	196.51	251.10	460.76
Max. effluent data value from DMR	15.80	15.10	17.80	17.80
Cause to violate; if Max > WLA: YES & if Max < WLA: NO	**NO**	**NO**	**NO**	**NO**
CV - of effluent ammonia-N	0.40	0.40	0.40	0.40
N - # of samples/month	4.00	4.00	4.00	4.00
LTA (long-term average)	**45.55**	**166.29**	**110.38**	**389.90**
WQBEL -AML -average monthly limit-toxicity-based (kg/d)	**71.00**	**-**	**172.00**	**-**
WQBEL -MDL - max. daily limit -toxicity-based (kg/d)	**104.00**	**-**	**251.00**	**-**

(a) Summer spawning period is from May 1st through October 31st. Winter non-spawning period is from November 1st through April 30th.

Based on the above analysis, the effluent **does not** show cause to violate the SWQS for ammonia. Therefore, no new WQBELs are proposed in this permit action. 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 frequency is **once per month** with a **24-hour composite** sample type.

7. Bacterial Indicator - Fecal Coliform:

The applicable limitations are 200 colonies per 100 milliliters as a monthly geometric average and 400 colonies per 100 milliliters as a weekly geometric average. The permittee discharges to SE2 waters. The limitations are based on N.J.A.C. 7:14A-12.5(b) 1 and 2 and are consistent with the anti-backsliding provisions as cited in N.J.A.C. 7:14A-13.19.

The monitoring frequency is **eight per month** with a **grab** sample type.

8. 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.

The Department has analyzed all available WET effluent data. For this facility, the data set consists of 42 data points dated July 2015 to November 2022. Based on the review of the applicable data set, the Department has concluded the following:

- WET was found in quantifiable amounts in the effluent. Therefore, further analyses have been conducted for WET.

Cause Analysis:

For WET, a cause analysis was conducted in accordance with N.J.A.C. 7:14A-13.5. When the maximum effluent value (in toxic units) exceeds the applicable site specific WLA (in toxic units), the discharge is shown to cause an exceedance of the SWQS.

Using the steady state mass balance equation, acute and chronic WLAs of 3.06 TU_as and 50.1 TU_cs respectively, were developed utilizing the narrative criteria for toxic substances (general) specified in the New Jersey SWQS at N.J.A.C. 7:9B, and acute and chronic dilution factors of 10.2 and 50.1 respectively, from dilution study report titled "West New York Utilities Authority Effluent Plume Study" submitted by Omni Environmental Corporation, dated January 1993. Consistent with the recommendations of section 2.3.3 of the USEPA TSD, values of 0.3 acute toxic unit (TU_a) and 1.0 chronic toxic unit (TU_c) were used to interpret the narrative water quality criteria for WET contained at N.J.A.C. 7:9B-1.14(c) (see Response to Comments 13-74 through 13-89, 29 NJR 1861, (May 5, 1997)).

Review of the acute WET data set indicates the maximum effluent data value to be 5.46 TU_as (i.e. an LC50 = 18.3 %). Since the maximum reported effluent data value exceeds the applicable site specific WLA of 3.06 TU_as, the discharge causes an exceedance of the acute interpretation of the narrative criteria for WET identified in the SWQS.

WQBEL Derivation:

Since the discharge was found to cause an exceedance of the acute interpretation of the narrative criteria for WET identified in the SWQS, a WQBEL has been calculated in accordance with N.J.A.C. 7:14A-13.6(a), 40 CFR 122.44(d), and USEPA's TSD.

To enable a comparison between acute and chronic WET limits, the acute WLA (WLA_a) was translated to equivalent chronic toxic units (WLA_{ac}) by multiplying the WLA_a by a default ACR of 10.

The acute and chronic WLAs were then converted to an acute LTA of 11.22 TU_{ac}s and a chronic LTA (LTA_c) of 26.42 TU_cs, using a site-specific acute CV of 0.51, a default chronic CV of 0.6, and multipliers of 0.367 and 0.527 for the acute and chronic LTAs respectively. Those multipliers are based on the 99th percentile consistent with Response to Comments 13-74 through 13-89, 29 NJR 1861 and are found on Page 102 of the USEPA TSD. The resultant LTA values were evaluated and the more protective (e.g. lower) value selected for translation into a daily maximum WET limit using the applicable 99th percentile multiplier, as found on Page 103 of the USEPA TSD.

The daily maximum acute WET limit of 5.46 TU_{ac}s was then converted to a permit limitation expressed as an LC50. The resultant applicable limitation is a of LC50= 33% effluent. This limit is less stringent than the existing action level and has therefore not been imposed.

On January 5, 2009 the NJPDES Rules were readopted. This readoption repealed N.J.A.C. 7:14A-5.3(a) which contained the state minimum effluent standard for acute WET and instead adopted an acute WET action level of LC50≥50% at N.J.A.C. 7:14A-13.18(f). Therefore, consistent with this requirement, the existing and effective acute action level of LC50≥50% is retained in this renewal. Monitoring and reporting will be required to determine whether the discharge causes, shows a reasonable potential to cause, or contributes to an excursion above the SWQS.

Imposing an action level for acute WET will be equally protective of water quality as an effluent limit in this circumstance, since the violation of either the WET limitation or the action level carries with it the same enforceable permit condition to initiate the TRIR, in order to correct the toxicity problem should this value be exceeded. As a result, the Department anticipates there will be no change in water quality as a result of this change. This change satisfies the antibacksliding provisions at N.J.A.C. 7:14A-13.19, which incorporate Section 402(o)3 of the Federal CWA, because it includes the TRIR provisions. Specifically, Section 402(o)3 prohibits the revision of an effluent limit "if the implementation of such limitation would result in a violation of a water quality standard." In this circumstance, violation of either the numerically identical action level or an effluent limitation will trigger an enforceable permit condition to conduct a TRIR in order to address or prevent a violation of a water quality standard.

The test species method to be used for acute testing shall be the *Mysidopsis bahia* 96 hour definitive test. Such selection is based on the saline characteristics of the receiving stream, the existing permit, N.J.A.C. 7:9B-1.5 and N.J.A.C. 7:18, the Regulations Governing the Certification of Laboratories and Environmental Measurements (N.J.A.C. 7:18).

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 on its effective date 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.

Effluent samples for conducting WET testing are to be collected after the last treatment step, consistent with the collection location for all other parameters.

As authorized by N.J.A.C. 7:14A-6.2(a)14, the monitoring frequency for acute WET is retained at **once per quarter** with a **composite** sample type.

9. Chlorine Produced Oxidants (CPO):

The permittee uses chlorine to disinfect the effluent. The current CPO effluent limits imposed on this facility are based on the applicable NJSWQS and were calculated consistent with the procedures set forth in the USEPA Technical Support Document considering dilution factors developed for the facility's discharge effluent. However, the permittee had requested a site-specific CPO limit that will incorporate the CPO immediate demand in the receiving water. Specifically, the permittee expressed concern about water quality-based CPO effluent limitations being calculated and proposed in their permit based on a calculation procedure that uses the applicable saline water acute and chronic aquatic criteria and the applicable site specific acute and chronic regulatory mixing zone dilution factors only. The permittee contends that CPO demand in the receiving water must also be considered. Note that due to the relative short distance of the outfall pipe, the assessment of CPO decay in the pipe was not evaluated.

Department's Determination Regarding CPO WQBEL Calculations and CPO Demand for DSN 001A

The Department issued a Major Modification to the NJPDES permit in March 2020. Based upon the review of the 2017 Study, "Determination of CPO Immediate Demand and Decay in Hudson River", this major modification served to modify the effluent limitations for Chlorine Produced Oxidants (CPO) in Part III, Limits and Monitoring Requirements for DSN 001A by replacing the existing effluent limitations with a calculated effluent CPO limitation which takes into account chlorine immediate demand in the receiving water of the Hudson River. Based on a review of the 2017 report cited above, the Department concurred that a "CPO demand" factor does occur during the travel time that elapses after the effluent exits the outfall pipe and when it reaches the edge of the acute/chronic aquatic regulatory mixing zones. This is different from, and in addition to, the following described "CPO decay" factor that takes place during the time that the effluent is traveling from the treatment plant (where the chlorine is added) to the diffuser ports where it exits the pipe and begins mixing with the receiving water. As stated above, assessment of chlorine decay within the outfall pipe was not evaluated in the study. It is at the point where the effluent reaches the receiving water that "CPO demand" starts since "CPO demand" occurs during the mixing and interaction of the receiving water with the effluent.

The "CPO demand" equations that were used to calculate the water quality based CPO effluent limitations (using pertinent information such as dilution and travel time in the mixing zone) are described below.

a) Intermediate Dilution Factor

The dilution that occurs between the point of discharge and the edge of the mixing zone is used to determine the concentration of CPO in the plume as it travels from the diffuser to the edge of the mixing zone. These intermediate concentrations affect the immediate CPO demand and the decay rate. The dilution factor at any time/location within the regulatory mixing zone (i.e. the intermediate dilution factor) is calculated using the following equation:

$$D_t = (D_{MZ} - 1)\sqrt{\frac{t}{t_{MZ}}} + 1 \qquad [1]$$

Where:

D_t = dilution at time, t (liters of seawater mixed into one liter of effluent)
D_{MZ} = dilution at edge of mixing zone
t = time of travel, minutes
t_{MZ} = travel time to reach edge of mixing zone, minutes

Equation [1] was derived from the ambient mixing equation provided in the Technical Support Document for Water Quality-based Toxics Control (EPA, 1991; see TSD page 77-78).

b) CPO Demand

The immediate demand is a function of the initial concentration, as follows:

$$0.1326 + Di(Ci) = Ci \qquad [2]$$

where:

0.1326 – acute WLA, mg/L (w/o allowance for immediate demand)
Ci – initial CPO concentration, mg/L
Di(Ci) – immediate demand (a function of Ci), mg/L

Four different scenarios were examined in calculating the initial CPO concentration as a function of the CPO demand: 1.) Slack after ebb based on 10 sec. DI water Demand; 2.) Slack after ebb based on average DI Water Demand; 3.) Slack after flood based on 10 sec. DI water Demand; and 4.) Slack after flood based on average DI Water Demand. Details are as follows:

Slack after ebb based on 10 sec. DI water demand:

$$Di(Ci) = 0.1361*\exp(0.6026*Ci) \qquad [3]$$

Substituting equation [3] into equation [2], yield:

$$0.1326 + 0.1361*\exp(0.6026*Ci) = Ci$$

Solving for Ci above numerically results in Ci equal to 0.295 mg/L.

Repeating the above calculations for the other 3 cases results in Ci of 0.280, 0.281, and 0.289 mg/L.
The lowest, most conservative of the four values, is 0.280 mg/L. In addition, a safety factor of 10% was applied, resulting in a final WLA of 0.252 mg/L.

c) Wasteload Allocation Development

The acute WLA is the effluent concentration that will meet the acute NJSWQS for saline waters (0.013 mg/l) at the edge of the acute aquatic regulatory mixing zone. This is defined at N.J.A.C. 7:9B-1.5(h)(2)(ii)(2) as either a distance of 100 meters from the outfall or the distance the plume will drift with

the current in one hour, whichever is greater. The chronic WLA is the effluent concentration that will meet the chronic standard (0.0075 mg/l) at the edge of the chronic aquatic regulatory mixing zone. The distance to the chronic aquatic mixing zone is defined at N.J.A.C. 7:9B-1.5(h)(2)(ii)(1) as one fourth of the distance between the first outfall diffuser port and the shoreline or 100 meters, whichever is greater. The travel time to reach the edge of the mixing zone (t_{MZ} from equation [1]) is determined from the site-specific current velocities associated with the acute and chronic dilution factors.

The acute and chronic aquatic CPO WLAs are calculated by using the above equations and an iterative process within an Excel spreadsheet. An initial effluent CPO concentration is entered into the spreadsheet (10 to 20 mg/L is the general range). The spreadsheet then performs a pre-selected number of iterations wherein the initial effluent CPO value is gradually decreased until the water quality criteria concentration is attained at the edge of the applicable acute or chronic aquatic regulatory mixing zone. The effluent CPO value at this point is the acute or chronic WLA.

d) WQBEL Calculations

The acute and chronic aquatic CPO WLAs are calculated using the above equations. For acute and chronic calculations, long term average values were developed using the 99th percentile multiplier and the appropriate WLAs. The more stringent LTA result was utilized in calculating the maximum daily limitation (MDL) and average monthly limitations (AML). Consistent with the recommendations set forth in the USEPA Technical Support Document (Section 5.5.2), the Department utilized a site specific Coefficient of Variation (CV) of 0.74 for the analysis. 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.

Data Input and Calculation Results:

	Acute	Chronic
Ambient Concentration, (a) [Cup]	0	0
Regulatory Mixing Zone Dilution Factors (c) [Df]	10.2	50.1
Surface Water Quality Criteria, (a) [Ci]	0.013	0.0075
Wasteload Allocation, (a) [WLA]	0.2520	0.3758
CPO at Edge of the Mixing Zone with Above WLA, (a)	0.013	0.0075
Coefficient of Variation [CV]	0.74	0.74
WLA multiplier for LTA	0.267	0.463
Long Term Average, (a) [LTA]	0.0674	0.1741
More stringent LTA, (a)	0.0674	
Number of Days Where Effluent CPO Samples are Taken / Month	90	
Facility Design Flow, MGD	10	
Maximum Daily Limitation, mg/L(a) [MDL]	0.2520	
Average Monthly Limitation, mg/L(a) [AML]	0.0805	
Maximum Daily Limitation, kg/day (b) [MDL]	9.5382	
Average Monthly Limitation, kg/day(b) [AML]	3.0469	

(a) All units in mg/L.
(b) All units in kg/day.
(c) Acute and Chronic dilution factors based on the 2017 Study, "Determination of CPO Immediate Demand and Decay in Hudson River".

Summary of Limitations Considering CPO Demand

In summary, the Department has carried forward the calculated concentration monthly average limit of 0.08 mg/L and a concentration daily maximum of 0.25 mg/L at DSN 001A consistent with the above referenced major modification. The loading limitations are a monthly average of 3.05 kg/day and a daily maximum of 9.54 kg/day.

The monitoring frequency is **three per day** with a **grab** sample type.

10. 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 to track compliance with the instream un-ionized ammonia criteria at N.J.A.C. 7:9B-1.14(c).

    The monitoring frequency is **three per day** with a **grab** sample type.

11. Dissolved Oxygen (DO):

    The existing permit includes an effluent limitation of 4 mg/L as a weekly average minimum. However, the effluent limitation of 4.0 mg/L as an instantaneous minimum is based on the SWQS at N.J.A.C. 7:9B-1.14(c). Therefore, this permit changes the effluent limitation from a weekly average minimum to an instantaneous minimum of 4.0 mg/L. Monitoring of the daily average minimum is carried forward based on N.J.A.C. 7:14A-12.8(c) and is consistent with the antibacksliding provisions as cited in N.J.A.C 7:14A-13.19.

    The monitoring frequency is **three per week** with a **grab** sample type.

12. Foam:

    The narrative foam permit condition is based on N.J.A.C. 7:14A-12.6.

13. 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.

    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 89 TR Mercury data values reported on the DMRs during the time period of July 2015 to November 2022, and 15 data values for Acid Extractables, Base/Neutrals, Metals, Pesticides, and Volatiles reported on the semi-annual WCRs reported between July 2015 and June 2022. 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, with the exception of 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 **once per six months** monitoring frequency for Acids, Base/Neutrals, Metals, Pesticides, and Volatiles (except for the parameters listed in the detected parameters sections below) is retained from the existing permit with a **grab** sample type for Volatiles and Cyanide and a **24-hour composite** type for Acids, Base/Neutrals, Metals, and Pesticides.

Delta Benzene Hexachloride, Di-n-octyl Phthalate, and Phenols were detected in the effluent on an infrequent basis; however, the Department has eliminated the monitoring requirement for these parameters because there are no SWQS at this time.

- TR Antimony, TR Beryllium, Bromodichloromethane, Butyl benzyl phthalate, TR Cadmium, Chlorodibromomethane, Hexavalent Dissolved Chromium (as Cr), Di-n-butyl phthalate, Gamma BHC (lindane), Nitrobenzene, Phenol Single Compound, TR Silver and Tetrachloroethylene were detected in the effluent on an infrequent basis. However, the detected values for these parameters were below their respective SWQS criteria so cause to violate water quality standards is not demonstrated. Monitoring and reporting requirements have been retained in this permit action on a semi-annual basis 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 recommendations of Section 3.1 of the USEPA TSD). Monitoring and reporting requirements have been retained in this permit action on a **semi-annual** basis.

- At this time, insufficient data exists for 4,4'-DDT(p,p'-DDT), Alpha BHC, Endrin, Heptachlor and Heptachlor Epoxide to determine the need for WQBELs. The monitoring frequency has been increased from **semi-annual** to **quarterly** to better assess any detectable effluent quantities.

- Bis(2-ethylhexyl) phthalate, Chloroform, TR Chromium, TR Copper, TR Lead, TR Manganese, TR Mercury, TR Nickel, TR Selenium, Toluene and TR Zinc were found to be discharged in quantifiable amounts in the effluent. Effluent data for these parameters is found on the DMR and WCR for the time period between July 2015 and November 2022. Therefore, further analyses have been conducted on these pollutants. TR Arsenic, Cyanide Total (as CN) and TR Thallium were detected in the effluent during 3 to 4 sampling events at values above the SWQS criteria. 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 Acute and Chronic dilution factors based on the study entitled "West New York Utilities Authority Effluent Plume Study" submitted by Omni Environmental Corporation, dated January 1993 and subsequently reviewed and updated for the April 2003 draft permit.

For the applicable pollutants (Copper, Lead, Nickel, and Zinc), the applied criteria are based on a 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	Saline Water	
	Translator (acute)	Translator (chronic)
Arsenic	1.0	1.0
Copper	0.83	0.83

Lead	0.951	0.951
Mercury	0.85	0.85
Nickel	0.990	0.990
Selenium	0.998	0.998
Zinc	0.946	0.946

Quantified Pollutant Analysis Results:

Cause analyses were conducted on TR Arsenic, Bis(2-ethylhexyl) phthalate, Chloroform, TR Chromium, TR Copper, Total Cyanide, TR Lead, TR Manganese, TR Mercury, TR Nickel, TR Selenium, Toluene, and TR Zinc. As a result of the cause analyses, none of the parameters were found to cause an excursion of the SWQS. The Department's conclusions and results are listed below.

- Since the discharge of TR Mercury in the permittee's effluent was not found to cause an excursion of the SWQS, a new WQBEL is not proposed in the draft permit for this parameter at this time. However, consistent with the antibacksliding provisions at N.J.A.C. 7:14A-13.9(a) and the antidegradation requirements at N.J.A.C. 7:9B-1.5(d), the existing loading effluent limitations have been retained in this permit action. The effluent limitations are based on the TMDL for the New York/ New Jersey Harbor and the antibacksliding provision of N.J.A.C. 7:14A-13.19. Monitoring requirements for the daily maximum loading and the monthly average and daily maximum concentration have been carried forward in this permit action.

  The monitoring frequency for TR Mercury is retained at **once per month** with a **grab** sample type.

- Since the discharge of TR Arsenic, Bis(2-ethylhexyl) phthalate, Chloroform, TR Chromium, TR Copper, Total Cyanide, TR Lead, TR Manganese, TR Nickel, TR Selenium, TR Thallium, Toluene, and TR Zinc in the permittee's effluent were not found to cause an excursion of the SWQS, new WQBELs are not proposed in the draft permit for these parameters at this time. The monitoring and reporting requirements have been retained for all these parameters 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 TSD).

  The monitoring frequency for TR Arsenic, Bis(2-ethylhexyl) phthalate, TR Chromium, TR Copper, TR Lead, TR Manganese, TR Mercury, TR Nickel, TR Selenium, TR Thallium, and TR Zinc is retained at **once per 6 months** with a **24-hour composite** sample type.

  The monitoring frequency for Total Cyanide, Chloroform and Toluene is retained at **once per 6 months** with a **grab** sample type.

Table A: Effluent limitation analysis for the Toxic pollutants; effluent flow of 10 MGD.

Parameter	Data set time period	Number of data points	Coefficient of variation (CV)	Maximum reported data value (µg/L) ** **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)
Arsenic**	July 2015 to November 2022	(dt) = 4 (nd) = 11	0.45 (ca)	3.8 (max)	(a) = 703.8 (c) = 1803.6 (h)= N/A (hc) = 5.95	(a) = N (c) = N (h)= N (hc) = N	(a) = 284.65 (c) = 1103.45	**(Not Applicable)**
Bis(2-ethylhexyl) phthalate	July 2015 to November 2022	(dt) = 9 (nd) = 6	1.94 (ca)	15.30 (LTAeq)	(a) = N/A (c) = N/A (h) = N/A (hc) = 214.5	(a) = N (c) = N (h) = N (hc) = N	(a) = N/A (c) = N/A	**(Not Applicable)**
Chloroform	July 2015 to November 2022	(dt) = 9 (nd) = 6	0.41 (ca)	1.70 (max)	(a) = N/A (c) = N/A (h) = 105210 (hc) = N/A	(a) = N (c) = N (h) = N (hc) = N	(a) = N/A (c) = N/A	**(Not Applicable)**

Parameter	Data set time period	Number of data points	Coefficient of variation (CV)	Maximum reported data value (µg/L) ** **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)
Chromium**	July 2015 to November 2022	(dt) = 6 (nd) = 9	0.46 (ca)	1.90 (max)	(a) = N/A (c) = N/A (h) = 37575 (hc) = N/A	(a) = N (c) = N (h) = N (hc) = N	(a) = N/A (c) = N/A	**(Not Applicable)**
Copper**	July 2015 to November 2022	(dt) = 12 (nd) = 3	0.68 (ca)	25.40 (max)	(a) = 48.96 (c) = 155.31 (h) = N/A (hc) = N/A	(a) = N (c) = N (h) = N (hc) = N	(a) = 17.10 (c) = 91.95	**(Not Applicable)**
Cyanide	July 2015 to November 2022	(dt) = 3 (nd) = 12	0.43 (ca)	20 (max)	(a) = N/A (c) = N/A (h) =7014 (hc) = N/A	(a) = N (c) = N (h) = N (hc) = N	(a) = N/A (c) = N/A	**(Not Applicable)**
Lead**	July 2015 to November 2022	(dt) =13 (nd) = 2	0.73 (ca)	3.90 (max)	(a) = 2142 (c) = 1202.4 (h) = N/A (hc) = N/A	(a) = N (c) = N (h) = N (hc) = N	(a) =611.81 (c) =592.71	**(Not Applicable)**
Manganese**	July 2015 to November 2022	(dt) = 14 (nd) = 1	0.51 (ca)	121 (max)	(a) = N/A (c) = N/A (h) = 5010 (hc) = N/A	(a) = N (c) = N (h) = N (hc) = N	(a) = N/A (c) = N/A	**(Not Applicable)**
Mercury**	July 2015 to November 2022	(dt) = 5 (nd) = 79	0.23 (ca)	0.07 (max)	(a) = 18.36 (c) = 47.10 (h) = 2.56 (hc) = N/A	(a) = N (c) = N (h) = N (hc) = N	(a) = 13.06 (c) = 42.69	**Not Imposed Existing TMDL Limits Retained**
Nickel**	July 2015 to November 2022	(dt) = 8 (nd) = 7	0.91 (ca)	7.6 (max)	(a) = 652.8 (c) = 1102.2 (h) = 85170 (hc) = N/A	(a) = N (c) = N (h) = N (hc) = N	(a) = 145.82 (c) = 444.53	**(Not Applicable)**
Selenium**	July 2015 to November 2022	(dt) = 6 (nd) = 9	0.62 (ca)	5.5 (max)	(a) = 2958 (c) = 3557.1 (h) = 210420 (hc) = N/A	(a) = N (c) = N (h) = N (hc) = N	(a) =927.23 (c) =1846.93	**(Not Applicable)**
Thallium**	July 2015 to November 2022	(dt) = 3 (nd) = 12	0.32 (ca)	3.70 (max)	(a) = N/A (c) = N/A (h) = 23.55 (hc) = N/A	(a) = N (c) = N (h) = N (hc) = N	(a) =N/A (c) =N/A	**(Not Applicable)**
Toluene	July 2015 to November 2022	(dt) = 8 (nd) = 7	1.01(ca)	11(max)	(a) = N/A (c) = N/A (h) = 751500 (hc) = N/A	(a) = N (c) = N (h) = N (hc) = N	(a) = N/A (c) = N/A	**(Not Applicable)**
Zinc**	July 2015 to November 2022	(dt) = 15 (nd) = 0	0.49 (ca)	298(max)	(a) = 918 (c) = 4058.1 (h) = 1302600 (hc) = N/A	(a) = N (c) = N (h) = N (hc) = N	(a) =365.22 (c) =2509.60	**(Not Applicable)**

Footnotes and Abbreviations:

(dt) = data values detected.
(nd) = data values non-detected.
(a) = acute aquatic
(c) = chronic aquatic
(h) = human health non-carcinogen
(hc) = human health carcinogen
N/A = Not applicable
MR = Monitor and Report
(*) = Dissolved
(**) = Total Recoverable
LTA = Long Term Average
WLA = Waste Load Allocation
MDL = Maximum Daily Limit
AML = Average Monthly Limit

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. Consistent with the intent of 40 CFR 403.5 and 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.

D. 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.

E. 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, the following report 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.

F. 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.

G. 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.

H. 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 Capacity Assurance Program (N.J.A.C. 7:14A-22.16), 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 Sludge Quality Assurance Regulations (N.J.A.C. 7:14C). CAP requirements apply to DSN 001A only for the final phase.

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

I. Pretreatment Conditions:

The pretreatment conditions as specified in this permit are consistent with the requirements under N.J.A.C. 7:14A-19.3.

J. Reclaimed Water for Beneficial Reuse (RWBR):

This draft permit contains conditions allowing the NHSA River Road 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 A of this permit. As specified in Part IV, the permittee must obtain approval from the Department for each 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 A 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. 7:9-6) 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."

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 Department's "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".

K. PCB Sampling Requirements and PMP:

The USEPA and the International Agency for Research on Cancer have concluded that PCBs are carcinogenic to humans. The primary non-occupational source of human PCB exposure is food, especially fish and shellfish from contaminated waters. PCBs persist in the environment, accumulate in the tissue of fish and other animals, and biomagnify through the food chain. The Department has, therefore, adopted rules at N.J.A.C. 7:14A-11.13 and

14.4 on December 18, 2006 to reduce discharges of PCBs to New Jersey's surface waters from industrial facilities and sewage treatment plants. The regulations at N.J.A.C. 7:14A-11.13 outline the PCB monitoring requirements and the regulations at N.J.A.C. 7:14A-14.4 outline the monitoring frequency requirements.

The *New Jersey 2018/2020 Integrated Water Quality Monitoring and Assessment Report (integrated report)* lists pollutants that are currently not meeting the surface water criteria in subwatersheds throughout the state. Since this facility discharges to a subwatershed that is listed as impaired for PCBs under a Fish Advisory in the Integrated Report, more specifically, Sublist 5 of the New Jersey List of Water Quality Limited Waters (also known as the 303(d) List or as the Impaired Waterbodies List), this facility is subject to the rules at N.J.A.C. 7:14A-11.13 and 14.4.

The permittee has completed sampling for PCBs as required in a previous permit action. The Department is currently reviewing the sampling data for this and other facilities to determine which facilities are discharging at more elevated levels. Once the Department completes this review and if the permittee's effluent is discharging PCBs at more elevated levels, the Department will require the permittee to develop and submit a PMP for approval by the date specified in the Department's determination letter consistent with the provisions of N.J.A.C. 7:14A-16.4.

The Department has developed a PMP Technical Manual to help permittees with the development of the PMP, which can be found on the Department's web site at http://www.state.nj.us/dep/dwq/techman.htm. If, based on the monitoring for PCBs, it is determined that the permittee must develop and implement a PCB PMP, the permittee will be required to submit an Annual PMP Progress Report. These reports will be used to update the Department regarding any revisions to the PMP, measures taken to achieve reductions, and changes to the baseline loading.

These conditions have been incorporated into the permit at Part IV, Section C.

8 Variances to Permit Conditions for STP Discharge:

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 for STP Discharge:

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 for 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.

DSN 001A – STP Effluent

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA (1)	EXISTING LIMITS	INITIAL LIMITS (2)	INTERIM LIMITS (2)	FINAL LIMITS (2)	MONITORING	
								Frequency	Sample Type
Flow – Effluent	MGD	Monthly Avg. Daily Max. 12-Mo. Roll. Avg.	8.31 20 7.92	MR MR MR	MR MR MR	MR MR MR	MR MR MR	Continuous	Metered
CAP Threshold	%	12-Mo. Roll. Avg.	79.04	MR (3)	--	--	--	--	--
Duration of Discharge (Bypass conditions)	Monthly Total	# of Days	--	--	--	--	MR (4)	1/Month	Measured
Flow – Raw Sewer/Influent	MGD	Monthly Avg. Daily Max	-- --	-- --	-- --	-- --	MR (4) MR (4)	1/Month	Metered
5 Day Biochemical Oxygen Demand ($CBOD_5$)	kg/d	Monthly Avg. Weekly Avg.	565.95 698.76	950 1500	950 1500	950 1500	950 1500	3/Week	24-Hour Composite
	mg/L	Monthly Avg. Weekly Avg.	18.40 22.44	25 40	25 40	25 40	25 40		
Influent $CBOD_5$	mg/L	Monthly Avg. Daily Max	157.51 314	MR MR	MR MR	MR MR	MR MR	3/Week	24-Hour Composite
$CBOD_5$ Minimum Percent Removal	%	Monthly Avg.	88.13	85	85	85	85	3/Week	Calculated
Influent pH	su	Instant. Min. Instant. Max.	6.80 8.94	MR MR	MR MR	MR MR	MR MR	3/Day	Grab
Effluent pH	su	Instant. Min. Instant. Max.	6.10 7.94	6.0 9.0	6.0 9.0	6.0 9.0	6.0 9.0	3/Day	Grab
Total Suspended Solids (TSS)	kg/d	Monthly Avg. Weekly Avg.	526.80 699.17	1136 1703	1136 1703	1136 1703	1136 1703	3/Week	24-Hour Composite
	mg/L	Monthly Avg. Weekly Avg.	17.13 22.40	30 45	30 45	30 45	30 45		
Influent TSS	mg/L	Monthly Avg. Weekly Avg.	147.55 185.07	MR MR	MR MR	MR MR	MR MR	3/Week	24-Hour Composite
TSS Minimum Percent Removal	%	Monthly Avg.	88	85	85	85	85	3/Week	Calculated
Oil and Grease	mg/L	Monthly Avg. Instant Max.	3.79 18	10 15	10 15	10 15	10 15	1/Month	Grab
Ammonia (Total as N) Summer (May 1 through October 31)	kg/d	Monthly Avg. Daily Max.	240.87 533	MR MR	MR MR	MR MR	MR MR	1/Month	24-Hour Composite
	mg/L	Monthly Avg. Daily Max.	7.82 20.4	MR MR	MR MR	MR MR	MR MR		
Ammonia (Total as N) Winter (November 1 through April 30)	kg/d	Monthly Avg. Daily Max.	350.98 714	MR MR	MR MR	MR MR	MR MR	1/Month	24-Hour Composite
	mg/L	Monthly Avg. Daily Max.	11.16 23	MR MR	MR MR	MR MR	MR MR		

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA (1)	EXISTING LIMITS	INITIAL LIMITS (2)	INTERIM LIMITS (2)	FINAL LIMITS (2)	MONITORING	
								Frequency	Sample Type
Chlorine Produced Oxidants (CPO)	kg/d	Month Avg. Daily Max.	0.90 30.6	3.05 9.54	3.05 9.54	3.05 9.54	3.05 9.54	3/Day	Grab
	mg/L	Month Avg. Daily Max.	0.03 0.89	0.08 0.25	0.08 0.25	0.08 0.25	0.08 0.25		
Fecal Coliform (geometric mean)	# per 100mL	Monthly Avg. Weekly Avg.	15.26 78.22	200 400	200 400	200 400	200 400	8/Month	Grab
Acute Toxicity, LC50 *Mysidopsis bahia*	% effluent	Minimum	18.3	MR (5)	MR (5)	MR (5)	MR (5)	1/Quarter	Composite
Influent Temperature	°C	Instant. Min. Monthly Avg. Instant. Max.	6.5 20.15 28.80	MR MR MR	MR MR MR	MR MR MR	MR MR MR	3/Day	Grab
Effluent Temperature	°C	Instant. Min. Monthly Avg. Instant. Max.	6.9 20.03 29.40	MR MR MR	MR MR MR	MR MR MR	MR MR MR	3/Day	Grab
Dissolved Oxygen (minimum)	mg/L	Weekly Avg. Daily Min. Instant Min.	5.3 8.04 --	4.0 MR --	-- MR 4.0	-- MR 4.0	-- MR 4.0	3/Week	Grab
Mercury, Total Recoverable	g/day	Monthly Avg. Daily Max.	0.002 0.002	20 MR	20 MR	20 MR	20 MR	1/Month	Grab
	µg/L	Monthly Avg. Daily Max.	0.06 0.07	MR MR	MR MR	MR MR	MR MR		

Footnotes and Abbreviations:

MR Monitor and report only

(1) Wastewater data originates from the information submitted on the monitoring report forms July 2015 to November 2022.

(2) "Initial" phase limitations and monitoring conditions are for the flow of 10 MGD; the "Interim" phase limitations and monitoring conditions are for the flow of 15 MGD; and whereas the "Final" phase limitations and monitoring conditions are for the flow of 20 MGD with CSO related bypass. Activation of the interim and final phase are conditional on the issuance of a TWA.

(3) "Duration of discharge" shall be reported as the number of calendar days per month that a bypass event occurs. Continuous flow metering for any flows into the plant shall be reported via the parameter "Flow, In Conduit or Thru Treatment Plant" as "Raw Sew/Influent".

(4) 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 for the final phase. An action level was included in the modification dated May 1, 2020 for CAP Threshold, which is not being retained in this renewal permit action given that this requirement is contradictory to the requirement to maximize flow to the treatment plant.

(5) The permittee shall maintain toxicity levels which attain the Acute WET Action Level of LC50 ≥ 50%.

11 Summary of Permit Conditions for Combined Sewer Management:

A. NJPDES CSO Permit Overview

The existing NJPDES CSO Permit as issued to NHSA River Road WWTP 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 requires 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 and 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 scheduled 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 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 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 WWTP 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. 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 River Road WWTP the total system is 31 miles. 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 is 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 dated September 2016 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 includes 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 backups. 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.

Flow volumes into the River Road WWTP will be tracked via a flow meter and reported on monthly monitoring report forms as shown in Part III of this subject permit. This monitoring is included given that the permittee has expanded the NJPDES permitted flow in part to allow the collection of additional combined sewage. This monitoring will help assess compliance with Part IV.F.2 of the permit.

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.

As per the System Characterization Report dated July 1, 2018, there are two SIUs within the River Road service area, both located in West New York. The first is located at 420 51st Street, in a building operated by Prime Uniform Supply Incorporated (DEP Site ID WNYMUA005), which is a laundering company providing commercial linen, uniform rentals, and cleaning services. The second is located at 543 56th Street, in a building owned by Hill Cross Company (DEP Site ID NJ0145998), which is an electroplating company. The wastewater flow from both of these users is directed to regulator WNY2 and then WNY1 further downstream, and they are tributary to the 001A/002A outfall.

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, 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 requires 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 had 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/I0 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 Pollution Prevention is consistent with the NJPDES MS4 permit, pursuant to N.J.A.C. 7:14A-24, and 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 encourage municipalities to continue 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 A, 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 A.
   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 involves posting CSO Identification Signs at every CSO outfall. The permit specifies 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 notifications 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 sign as specified in the permit at the CSO outfall. 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 the 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 NJ0025321.
- Discharge Serial No. (e.g.. 002A).
- 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 Engagement 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 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.

This condition is included in Part IV.F.9. See also Part IV G.4. for a discussion of improvements that will result in a reduction of CSO discharges.

C. Components of 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 entitled "System Characterization Work Plan" dated December 31, 2015 was submitted to the Department by NHSA. The Work Plan describes work plans for data generation and acquisition, assessment and oversight, data validation and usability, and collections system modeling. The Work Plan was approved by the Department on August 4, 2016.

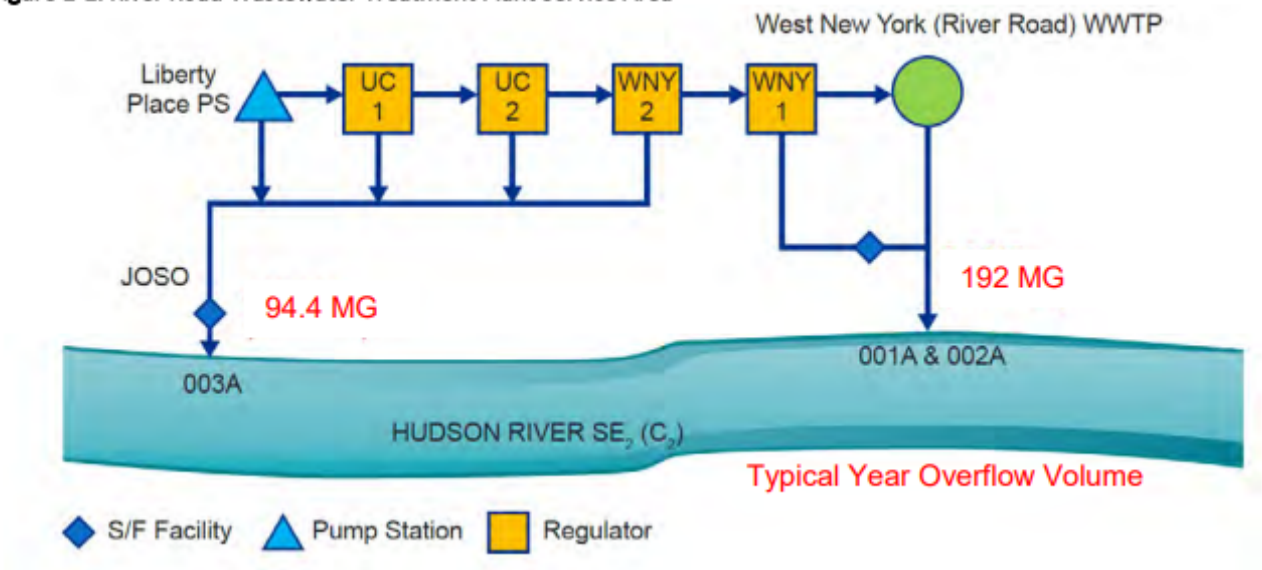
The System Characterization Report entitled "System Characterization Report for the River Road WWTP" dated July 1, 2018 was submitted to the Department. The objective of the System Characterization Report is to provide a comprehensive and empirical understanding of the physical nature and hydraulic performance of the sewerage systems for use in optimizing the performance of the current systems and in the development of CSO control alternatives. The System Characterization Report incorporated the results of the Work Plan for the System Characterization and Landside Modeling Program, a summary of the Baseline Monitoring and Modeling Plan program, and the System Characterization mapping of the combined and separate sewer areas within the River Road WWTP Service Area. The System Characterization Report includes the following elements:

- Characterizes the municipalities that are the subject of the system characterization report and current wastewater treatment facilities within the service area.
- Characterizes the municipal collection sewers, sewer mains, and appurtenances such as pump stations, existing CSO control facilities, regulator structures, and CSO outfalls.
- Documents the precipitation and flow monitoring programs, data analyses, integration of wastewater treatment plant operational data, data validation and QA/QC and presents the results of the analyses.
- Describes the watersheds, physical characteristics, and hydrodynamics of the receiving stream. Also describes the designated uses and current water quality compliance (e.g. 303(d) listings) and achievement of designated use status.
- Documents the regulatory requirements for wastewater and water quality data collection, historic water quality data collection, the CSO and water quality monitoring program and related QAPP and wastewater quality results.
- Documents the requirements for and selection of the typical year and summarizes the hydrologic characteristics of the typical year.

- Documents the development and scope of the hydrologic and hydraulic (H&H) model for the service area as used in the system characterization and to be used in the development of CSO control alternatives. The documentation includes model inputs, sensitivity analyses, model calibration and validation and modeling results.

A schematic of the system as included in the LTCP that documents the system components as a total annual flow is as follows:

Figure 1-1. River Road Wastewater Treatment Plant Service Area



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 permittee has submitted sufficient information to comply with the Characterization, Monitoring, and Modeling of the Combined Sewer System requirement. The Department approved the System Characterization Report on May 6, 2019.

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. To further inform the combined sewer system characterization as well as the effects from any implemented CSO control alternatives related to increased combined sewage volume to the STP, this permit renewal requires effluent flow monitoring. This monitoring 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 from the effective date of the permit, namely July 1, 2018. 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 permittees conducted and participated in a range of activities to comply with Part IV.G.2 to implement a process to include communities within the River Road WWTP Service Area. The CSO municipalities within the River Road WWTP Service area jointly conducted various public outreach activities in order to implement a process that actively involves the public. The permittees submitted a report dated July 1, 2018 as entitled "Public Participation Process Report for the River Road Wastewater Treatment Plant" which outlines public participation activities that were conducted to inform the LTCP. This report was approved by the Department on March 29, 2019.

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

- NHSA formed a Community Advisory Board which consists of leaders for various community activist groups within the service area including members to represent Hoboken, West New York, Weehawken, and Union City. NHSA selected these Community Advisory Board members to include a diverse group representing all aspects of life in the community it serves. Committee members represent the business community, environmental groups, and community citizen action groups. Prior to public meetings, the Authority met with the Community Advisory Board to discuss ongoing activities, important findings during the LTCP, and planned activities.

- As described in the July 1, 2018 "Public Participation Process Report for the River Road Wastewater Treatment Plant", public meetings were conducted for the CSO Supplemental Team on November 14, 2016, March 13, 2017, and September 20, 2017,

- Throughout development of the LTCP, six public meetings were conducted. The dates and focus of the meetings were as follows:

  - February 2019 - discuss the LTCP requirements and how they relate to NHSA facilities
  - May 2019 - introduce the various CSO control strategies and alternatives
  - August-2019 - discuss the evaluation and elimination process for various alternatives
  - November 2019 - introduce possible control scenarios for the LTCP
  - March 2020 - discuss the final selection of CSO control strategies.
  - May 2020 - discuss the final LTCP project selections and implementation schedule to be submitted to the Department.

  At each meeting, a presentation on the subject matter was conducted and handouts were available for review. Minutes were collected during the meetings and the Authority was available to answer any questions. All presentation materials were also posted to NHSA's website.

- Advertorials and newsletters were published and distributed throughout the development of the LTCP to describe the current state of the LTCP and any upcoming meetings. Each one was published in the Hudson County Reporter and mailed to each of NHSA's accounts. The content was as follows:

  - Advertorial and Newsletter 1 discussed what CSOs are the how the goals of the LTCP will help reduce them.
  - Advertorial and Newsletter 2 introduced the System Characterization and explained why it is necessary for the LTCP.
  - Advertorial and Newsletter 3 introduced the various CSO control alternatives that were analyzed for the LTCP.
  - Advertorial and Newsletter 4 discussed potential comprehensive plans for the service area.
  - Advertorial and Newsletter 5 discussed the proposed LTCP, associated construction cost, and implementation schedule.

- NHSA ensured an Online Presence Throughout the LTCP timeline where information on upcoming meetings and current projects within the Authority have been made available at the NHSA's website, www.nhudsonsa.com. The website generally covers the following topics:

  - Brief review of LTCP Program Mission and Goals
  - Highlights on progress towards program goals and objectives
  - Upcoming program activities and meetings
  - Opportunities for more information/ways to provide feedback

- The CSO Waterbody Advisory System pages on the NHSA's website provides the public with real-time information on CSO occurrences and CSO impacts. An interactive map of CSO outfall locations is provided to alert the public when a dry or wet weather CSO discharge occurs at an NHSA outfall to the Hudson River. The system uses level sensors in the sewer system to monitor and report CSO activity in real-time.

- NHSA conducted a wide variety of other public outreach activities such as plant tours, Rebuild by Design meetings, participation in college symposiums etc. A listing of these sessions is provided in Table 5-1 of the LTCP as entitled Public Outreach Activity Log.

- Selected construction project information is currently provided on Public Information website pages. NHSA intends to continue to post CSO-related construction projects on the website before beginning construction which will include the purpose of the project; its value to the community it serves; and the construction schedule. Completed projects will also be listed as part of any future public outreach activities.

As described within the LTCP, NHSA states that the main feedback received from the public included concerns regarding the proposed satellite storage tanks and treatment units, including those proposed on public property and along the Hudson River, and those that involved in-street construction. These concerns were expected because these alternatives can put a strain on community actions. For these reasons, NHSA explains that public input had an effect on selecting the LTCP by placing a focus on expanding the capacity of the WWTP as much as possible, and once the capacity is expanded, increase the volume conveyed to the WWTP.

Renewal Permit Requirements for Public Engagement

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 change. Future public participation should be designed to inform, educate and engage specific to implementation of the CSO control projects included in the Implementation Schedule. Thus, 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. 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 permittee’s 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 and 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 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, the permittee 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 and 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. The permittee, cooperatively with the NJ CSO Group submitted the "Identification of Sensitive Areas Report" dated June 2018. The report included a comprehensive review of online databases, correspondence with regulatory agencies, direct observations, and local environmental organizations to identify potential Sensitive Areas within the Study Area. For the purposes of this report, the Sensitive Areas Study Area (Study Area) includes the combined sewer service areas, including all receiving and adjacent downstream waters that may be potentially affected by CSOs, from the various combined sewer service areas of the NJ CSO Group. Affected waters include the Passaic River, Hackensack River, Newark Bay, Hudson River, Kill Van Kull, Arthur Kill, Raritan River or Raritan Bay as well as their tributaries within the Study Area of this report.

The Department issued findings on this report in technical comment letters on September 20, 2019 and March 1, 2019 which subsequently resulted in revisions to the report on October 19, 2018, January 31, 2019, and March 29, 2019. The Department's findings included concurrence that there are no Outstanding National Resource Waters or National Marine Sanctuaries within the Study Area; there are no active surface water intakes used for drinking water in New Jersey in the vicinity of the CSO outfalls; and there are no operational shellfish beds in the vicinity of the CSO outfalls at this time. In addition, regarding waters with threatened or endangered species and their habitat, the Department identified all of the CSO outfalls for this hydraulically connected system as discharging to Sensitive Areas based on potential habitat for *Atlantic sturgeon* and *Shortnose sturgeon*:

Outfall Number	Outfall Name	Regulator	Municipality
002A	WNY - 1	River Road / WNY	West New York
003A	JOSO	JOSO	Weehawken

The Department determined in its April 8, 2019 approval letter that the Identification 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 there were specified in the 2015 NJPDES CSO permit 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 the 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 as outlined in the NJPDES permit:

- 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.F.1.h. of this section in a major permit modification dated May 1, 2020. Specifically, this condition was modified to clarify 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.

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 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; would be protective of the existing and designated uses; give the highest priority to controlling CSOs in 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. Analyses as provided in the June 2019 DEAR for NHSA-River Road can be summarized as follows:

- Inflow and Infiltration (I/I) is described as having an impact on CSO performance particularly with respect to increasing issues with dry weather flows at the River Road WWTP. NHSA describes that I/I was evaluated in the system by using CCTV data which assisted in indicating the severity of aging infrastructure within the service area.
- Green Infrastructure (GI) technologies are described with a detailed analysis regarding the feasibility of green (vegetated) roofs and bioretention practices including right of way (ROW) placement.
- An analysis for disinfection treatment using the existing outfall pipe at the WNY1 outfall is included; however, it is then concluded that this alternative is not considered feasible since there is insufficient contact time in the pipe.
- The report identifies opportunities to increase in-line storage capacity in the JOSO drainage basin by either raising the regulator weirs at UC1, UC2, and WNY2 or replacing the existing side-flow weirs with bending weirs as discussed in Section 3.3.3 (Replace Existing Joint Overflow Sewer Outlet Sideflow Weirs with Bending Weirs).
- Conceptual storage alternatives for storage tanks are discussed which would be constructed in the water near the two outfalls namely JOSO and WNY1. Another storage option is described as a Linear Storage Tunnel at Anthony M. Defino Way for WNY1 where stored flows would then be subject to high rate treatment and disinfection.
- Potential upgrades are discussed to replace the secondary settling tanks with a high rate treatment system and upsizing the chlorine disinfection tank. Four high rate treatment systems were evaluated, including ActiFLO, CoMag, Cloth Media Filtration, and Compressible Media Filtration including plant schematics as to where these treatment units would be located. The modifications would be sized to allow expansion of the WWTP for a dry weather flow of 20 MGD and an additional wet weather flow utilizing CSO bypass of 15 MGD.

The DEAR provided sufficient analysis of the required CSO technologies and was approved by the Department on March 24, 2020.

Selected Alternatives in the LTCP:

As described in the LTCP the permittee has placed a focus on maximizing the capacity of the WWTP and maximizing the conveyance to the WWTP with existing facilities. Increasing conveyance to the plant to capture additional flows while minimizing public disruption where this strategy can avoid difficult construction and extensive O&M efforts. These alternatives were chosen based on public input and the desire to avoid high costs, and disruptive construction of satellite facilities. Therefore, selected technologies within the LTCP focused on maximizing capacity at the WWTP and maximizing the conveyance to the WWTP with existing facilities.

The following summarizes the major CSO controls included in the LTCP to attain compliance with the Presumption Approach where specified deadlines to implement these requirements have been included in Part IV.G.8:

- Based on modeling results, raising the regulator weirs at UC1, UC2, and WNY2 by 1 foot would have a significant effect on the CSO-controlled volume and minimal effect on infrastructure upstream. However, raising the weirs higher (1.5 feet, 2 feet) produces diminishing returns. It is recommended to implement these changes after increasing capacity downstream at the WNY1 outfall. Modeling results showed that a greater reduction could be seen with raising the existing weirs as opposed to replacing the weirs in regulators UC1, UC2 and WNY2. This does not necessarily eliminate bending weirs from the analysis as during facility planning phase, it could be found that bending weirs are a better selection.

- Storage at the plant (8 MG storage tank in front of the WWTP between Anthony Defino Way and Port Imperial Boulevard near WNY1 outfall). The land north of the River Road WWTP became unavailable subsequent to submission of the LTCP.
- WWTP expansion including an evaluation of the capacity of the unit processes to determine if there is any additional treatment and conveyance capacity within the WWTP. The LTCP states that ActiFLO was selected due to the limited area required for the treatment process which at this high level analysis was a limiting factor. However once design begins, NHSA will select the optimal method of treatment, which may be ActiFLO or another form of treatment, that is able to achieve the treatment goal and comply with permit requirements.
- CSO-related bypass of the secondary treatment portion of the WWTP in accordance with N.J.A.C. 7:14A-11.12 Appendix C, II C.7. Bypass and plant upgrades would be performed simultaneously as blending cannot occur without upgrading the secondary treatment process and bar screens at the plant.

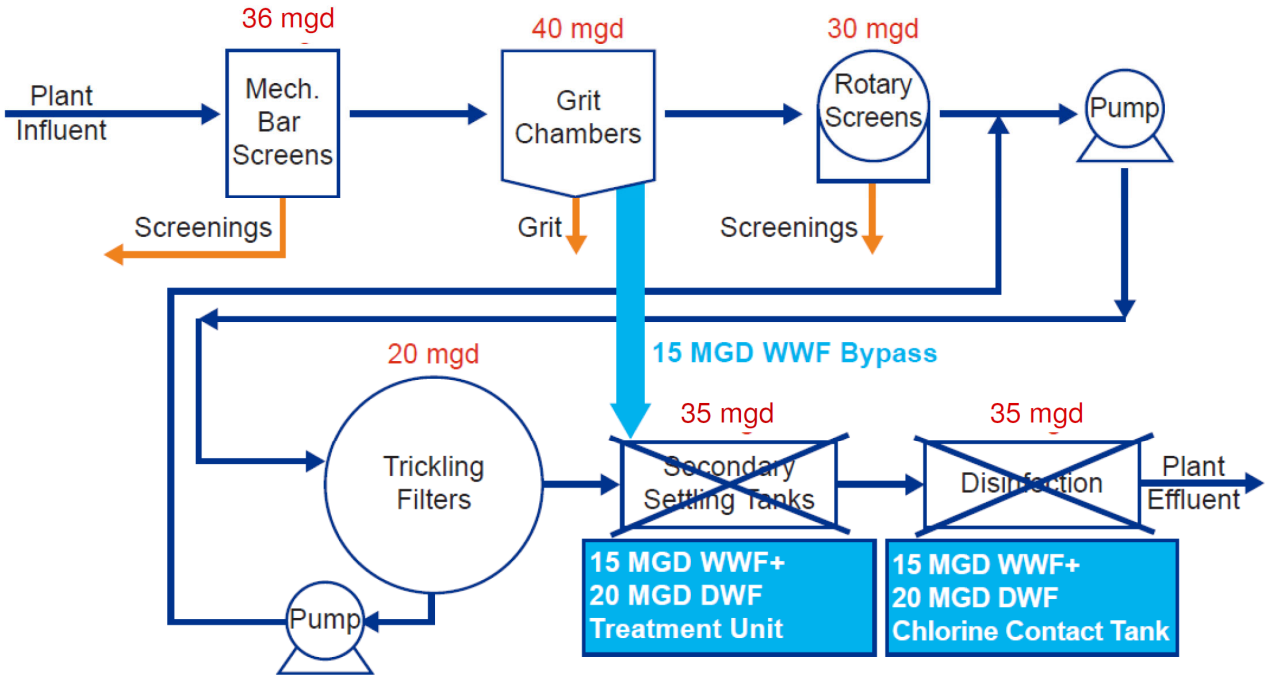
The proposed WWTP expansion will result in the following capacity changes to treatment units:

Treatment Process	Current Capacity*	Upgraded Capacity
Mechanical Bar Screens	20	36
Grit Chambers	40	40
Rotary Screens	30	30
Trickling Filters	20	20
Secondary Tanks	10	N/A**
Bypass Treatment	N/A***	15
High Capacity Treatment	N/A***	35
Disinfection	10	35

* Current capacity is 10 MGD in the Initial phase and 15 MGD in the Final phase (not activated).
** Process to be decommissioned
*** Process to be installed.

A schematic is as follows:

Figure 3-2. Proposed Modifications to Existing Plant Flow



WWTP upgrades must be designed to help address the effects of climate change and sea level rise, and 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.

Federal Regulations for Bypass Provisions:

The federal regulations at 40 C.F.R. 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 the flow from its treatment process under specified limited circumstances. The construction upgrades and incorporation of a CSO related bypass for the NHSA River Road WWTP are key components to the CSO control strategy. 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.

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.

   A flow that exceeds the secondary treatment capacity cannot be conveyed through the WWTP without causing the risk of severe damage to the treatment equipment and processes including damage to or wash out of the secondary treatment system. Any changes to treatment units as a result of this modification is subject to TWA approval.

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

   The peak treatment capacity of the NHSA WWTP is currently limited by the Rotary Screens at 30 MGD and Trickling Filters at 20 MGD. Under the proposed bypass scenario, flows of 20 MGD will receive full treatment and an additional 15 MGD for a total of 35 MGD to be subject to primary settling 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.

   NHSA provided estimated construction cost estimates for numerous CSO alternatives as outlined in the DEAR and LTCP. CSO related bypass was determined to be a key component to the CSO control strategy.

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

   All flows entering the plant will flow through the Mechanical Bar Screens, Grit Chambers, Rotary Screens, Trickling Filters and CSO related bypass flows will receive primary treatment, removal of solids/floatables, and disinfection as required in Part IV.H Category A.

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

NHSA is meeting permit limits for $CBOD_5$ and 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 is also a condition of any CSO related bypass permit provisions. 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.

   NHSA is required to submit a complete analysis as part of a TWA.

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

   Expansion of the secondary treatment components to provide additional wet weather handling capacity is not feasible due primarily to the limited space available at the site.

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 are required to be designed to enable the facility to meet NJPDES permit limits at all times, including for the 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 for DSN 001A are required to be met at all times during wet-weather bypassing events.

Compliance with Wet Weather Percent Capture:

The LTCP states that NHSA has selected the Presumption Approach for the River Road LTCP. 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 percent capture equation showing the calculation is specified in Section 2.2, Existing Percent Capture of the revised LTCP and wet weather volumes for the baseline flows are presented in Table 2-2:

$$\%\ Capture = 1 - \left(\frac{Overflow\ Volume}{Total\ Volume\ in\ System\ During\ Wet\ Weather}\right)$$

$$\%\ Capture = 1 - \left(\frac{286.4}{711.2}\right) = 60\%$$

Table 2-2-Wet Weather Volume at the River Road Wastewater Treatment Plant in the Typical Year

WWTP Flow	Volume Typical Year, MG
Total Sanitary Volume at WWTP in Wet Weather Treated at WWTP	236.9
Total Wet Weather Volume Treated at the WWTP	187.9
Total Overflow Volume	286.4
Total Volume In System During Wet Weather	711.2

For comparison, percent capture after implementation of the CSO control alternatives calculates to be 90%. Table 3-2 shows wet weather volume at the River Road WWTP after LTCP implementation:

Table 3-2. Combined Sewer Overflow Volume by Drainage Basin in the Typical Year

Drainage Basin	CSO Volume Typical Year, MG
JOSO	32.7
WNY1	38

Based on the above, CSO volumes would be significantly reduced based on the proposed LTCP alternatives.

Summary:

Baseline percent capture is 60%. A summary of the selected alternatives from the revised LTCP (as submitted January 26, 2023) submitted by NHSA and the associated percent capture values are as follows where an Implementation Schedule is included in Part IV.G.8:

Table ES-1. North Hudson Sewerage Authority Long Term Control Plan Implementation Schedule

Drainage Basin	Project	Construction Cost	Projected Start Date	Projected Construction End Date	Estimated Percent Capture[1]	Estimated Cumulative Percent Capture[2]
WNY1	Land Purchase for Storage Tank	$4,000,000	2021		-	
River Road WWTP	Increase Capacity to 35 MGD Through Blending and Plant Upgrade	$13,000,000	2025	2025	17%	77%
JOSO	Raise Regulator Weirs at UC1, UC2 and WNY2	$2,000,000	2026	2026	6%	83%
WNY1	Construct 8-MG Storage Tank	$77,000,000	2043	2045	7%	90%
	TOTAL	**$96,000,000**				

1) The percent capture listed is the estimated percent capture with the practice implemented alone

2) The cumulative percent capture listed is the estimated percent capture as the projects are implemented; the difference between the independent percent capture is due to the interconnection and hydraulics within the service area.

A revised schedule was sent on January 26, 2023:

Project	Schedule
Increase Capacity of River Road WWTP to 35 MGD Through Blending and Plant Upgrade	**Basis of Design Engineering:** Mar. 2023 – Sep. 2023 **Engineering:** Sept. 2023 – Sept. 2024 **Bid Phase:** Sept. 2024 – Dec. 2024 **Construction:** Jan. 2025 – Dec. 2025
Raise JOSO Weirs	**Engineering:** Sept. 2024 - Sept. 2025 **Bid Phase:** Sept. 2025 – Dec. 2025 **Construction:** Jan. 2026 – Dec. 2026
Construct 8-MG Storage Tank at River Road WWTP	**Engineering:** Sept. 2041 - Sept. 2042 **Bid Phase:** Sept. 2042 – Dec. 2042 **Construction:** Jan. 2043 – Dec. 2045

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.

Renewal Permit Requirements for Evaluation of Alternatives

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. The upgrades and expansion to the NHSA – River Road WWTP will have the most significant effect on the reduction in CSO volume for this hydraulically connected system and other CSO control technologies such as storage will have an effect on increasing percent capture. In order to activate the final phase, the following conditions must be met as specified in Part IV Sanitary Wastewater, Section H:

- 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.

- If a TWA is issued allowing construction and operation of the bypass, bypassing will still be prohibited except during wet weather when influent flows exceed approximately 20.0 MGD. All bypassed flows shall receive at least screening, primary clarification, and then disinfection. All bypassed flow shall be combined with fully treated effluent flow prior to discharge.

- 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.

- 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.

- 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.

Based on the Department's review of the LTCP and the selection of a CSO related bypass, this subject renewal permit action hereby authorizes the CSO related bypass as part of the final selected CSO alternatives. While the upgrades and expansion to the NHSA – River Road WWTP will have the most significant effect on the reduction in CSO volume for this hydraulically connected system, other CSO control technologies such as storage will have some effect on increasing percent capture as indicated in the table above. The Department acknowledges that the permittees have selected a suite of CSO controls to attain a targeted goal of 85% which exceeds the minimum wet weather requirement of the Presumption Approach. In order to evaluate the performance of the CSO control measures, the permittees are required to demonstrate a minimum value of 85 percent reduction of wet weather capture through the use of the H&H model. Please refer to Part IV.G.9 for compliance with this performance criteria.

To aid in the evaluation of the attainment of the 85 percent reduction of wet weather capture 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 will 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. 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.

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 within the LTCP, cost estimates were developed for each alternative as part of the DEAR. For the selected alternatives, NHSA applied these cost estimates to the complete program to determine the affordability of the program and utilized these costs to determine when funding would be available and what sources it would be provided from. To finance the LTCP projects, NHSA plans to build year-end balances up to a point that additional debt service on loans or bonds is manageable within the overall debt burden and affordable to the customer base. The implementation schedule assumes New Jersey Infrastructure Bank (NJIB) financing of LTCP projects starting in fiscal year (FY) 2025, with the debt service on each loan beginning in the following year. The NJIB loans in a given year for the LTCP period are assumed to be limited to $25.0 million and, if additional funds are needed in that year, NHSA debt is assumed to finance the remainder of the projects. NHSA states that if the availability of NJIB's loans is more restricted than noted previously, there may be delays in the financing of individual projects within the overall schedule, depending upon conditions in the financial markets and NHSA's ability to borrow funds at reasonable rates of interest.

NHSA states that the implementation schedule as presented assumes that $18.0 million is used in FY 2036 and $60.0 million is used in FY 2045 through FY 2048. Table 7-7 shows the proposed implementation schedule as well as the Class 5 cost estimates for the selected alternatives for the River Road WWTP service area. The $96-million-dollar investment (in January 2020 dollars) achieves 90% CSO capture. It is noted that the schedule has been coordinated with upgrades at the Adams Street WWTP and accounts for the gaps between. The projected construction costs and implementation schedule are as follows:

Table 7-7- Long Term Control Plan Implementation Schedule, River Road

Drainage Basin	Project	Construction Cost	Projected Start Date	Projected Construction End Date	Estimated Percent Capture[1]	Estimated Cumulative Percent Capture[2]
WNY1	Land Purchase for WNY1 Storage Tank	$4,000,000	2021		-	
River Road WWTP	Increase Capacity at River Road WWTP to 35 MGD	$13,000,000	2025	2025	17%	77%
JOSO	Raise Regulator Weirs at UC1, UC2 and WNY2 Weirs	$2,000,000	2026	2026	6%	83%
WNY1	Construct 8-MG Storage Tank	$77,000,000	2043	2045	7%	90%
	TOTAL	**$96,000,000**				

1) The percent capture listed is the estimated percent capture with the practice implemented alone

2) The cumulative percent capture listed is the estimated percent capture as the projects are implemented; the difference between the independent percent capture is due to the interconnection and hydraulics within the service area.

NHSA has proposed a 24-year timeline for construction to ensure that adequate funds are available for implementation of the plan. As described within the LTCP, NHSA's financing schedule is limited by the Clean Stormwater and Flood Reduction Act (P.L. 2019 C 42). Within Section C.40:14A-4.2(a)(a), the act states that the percentage of growth in the fee-funded appropriations in the annual budget of a regional sewerage authority shall not exceed the fee in the previous year by 2%. The limitation is consistent throughout the service area. NHSA's debt service will end in 2045 which will allow for large investments like the storage tank. As a result, the selection of a 24-year timeline for construction has been selected to ensure adequate funds are available for implementation of the plan.

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. EPA's contractor from Industrial Economics, Incorporated assisted with this portion of the LTCP review where the objectives of the review were as follows:

- The evaluation should describe whether the information provided by the permittee is in accordance with EPA's applicable FCA guidance documents.
- The evaluations should describe whether the information submitted supports the schedule for implementing the relevant LTCP.
- The evaluation may involve use and analysis of additional information that is publicly available or obtained by the Department or EPA to fill in portions of the financial capability assessment which were performed incompletely or unsatisfactorily.

IEc's findings can be summarized as follows:

- NHSA assumes $505 million in total capital improvements and calculates a Cost per Household as a Percent of Median Household Income (MHI) of 1.43 percent (Mid-Range). Combined with a Financial Capability Indicator score of 2.5 (borderline Mid-Range/Strong), NHSA calculates a borderline Low/Medium Burden FCA result.

- Using NHSA's $505 total capital cost and a 2 percent interest rate on bond financing (roughly consistent with State SRF rates), the contractor calculated a Cost per Household as a Percent of MHI of 0.86 percent (Low). The contractor also included an RI scenario where NHSA finances debt at a 4 percent interest rate—approximately the current interest rate in the municipal bond market. In this scenario, the contractor's Residential Indicator (RI) result increases from 0.86 percent to 0.92 percent. The contractor did not review NHSA's Financial Capability Indicator.

- The Residential Factor substantially drives the contractor's lower RI result. A lower Residential Factor results in a lower Residential Share of Wastewater Costs and a lower ultimate RI result, all else equal. NHSA calculates an 87 percent Residential Factor based on residential share of FY 2020 wastewater revenues. EPA's 1997 FCA Guidance (see Final EPA guidance is located here Combined Sewer Overflows Guidance for Financial Capability Assessment and Schedule Development (Final) (epa.gov)) and Proposed 2021 FCA Guidance (see 2021 Financial Capability Assessment Guidance (epa.gov)) instructs to calculate Residential Share of Wastewater Costs based on billed flow for residential households as a percentage of total billed flow, rather than residential wastewater revenues as a percentage of total wastewater revenues. The contractor assumed a 65 percent Residential Factor based on typical residential share of total billed flow in prior case work. In addition to Residential Factor, the following inputs drive the lower RI result: 1) lower current wastewater costs, 2) lower annual debt service on projects to be funded, 3) greater number of households in service area, and 4) higher weighted-average service area MHI.

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

These conditions are included in Part IV.G.5.

6. Operational Plan

Background of 2015 Permit Requirements

The 2015 NJPDES CSO permit renewal includes 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 4 of the LTCP as entitled "Operational Plan" specifies that NHSA 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.

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, 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 to address the LTCP CSO control facilities and operating strategies, including but not limited to: the implementation, operation, and maintenance of CSO related bypass, 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.

In order to reduce CSOs, NHSA has selected a project to increase the treatment capacity of the NHSA River Road WWTP. These improvements will serve to significantly increase treatment quantity at the River Road WWTP such that percent capture will be increased.

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 new facility 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 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. Upon Department approval of the LTCP, 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 an LTCP with an Implementation Schedule.

Renewal Permit Requirements for Implementation Schedule

The implementation schedule as included in this permit with interim milestones for minimum wet weather percent capture are as follows:

Project	Schedule	Interim Requirements for Wet Weather % Capture
Baseline	**N/A**	**60%**
Increase Capacity of River Road WWTP to 35 MGD Through Blending and Plant Upgrade	**Basis of Design Engineering:** Mar. 2023 – Sep. 2023 **Engineering:** Sept. 2023 – Sept. 2024 **Bid Phase:** Sept. 2024 – Dec. 2024 **Construction:** Jan. 2025 – Dec. 2025	**77%**
Raise JOSO Weirs	**Engineering:** Sept. 2024 - Sept. 2025 **Bid Phase:** Sept. 2025 – Dec. 2025	**83%**

	Construction: Jan. 2026 – Dec. 2026	
Construct 8-MG Storage Tank at River Road WWTP	**Engineering:** Sept. 2041 - Sept. 2042 **Bid Phase:** Sept. 2042 – Dec. 2042 **Construction:** Jan. 2043 – Dec. 2045	**90%**

This renewal permit requires that the permittee complete the above referenced projects based on the Implementation Schedule. Consistent with the LTCP and Part IV.G.8, 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%.

These conditions are 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 31, 2015, revised February 19, 2016 and May 10, 2016, and was approved by the Department on February 24, 2016. This report utilized the existing data from the New Jersey Harbor Discharges Group (NJHDG) which is a consortium of nine sewerage authorities representing eleven wastewater treatment plants which all discharge their treated effluent to the waters of New York/New Jersey Harbor Estuary. Regarding the report, the permittee, cooperatively with the NJ CSO Group submitted the "NJCSO Group Compliance Monitoring Program Report" dated June 30, 2018. The report included three parallel data collection efforts:

1) Baseline Sampling - modeled after and intended to supplement the approved routine sampling program of the NJHDG which is a long-standing sampling effort;
2) Source Sampling - targets the major influent streams within the study area to establish non-CSO loadings, and coincides with the NJHDG and Baseline Sampling); and
3) Event Sampling - timed to coincide with rainfall to capture three discrete wet weather events over the course of the year on each segment of the NY-NJ Harbor complex impacted by CSOs.

A total of 23 baseline and source sampling events were completed. The goal of the event sampling was to capture three significant wet weather events (precipitation >0.5 inches in 24 hours) at each targeted location, which was completed across four sampling events (one set of samples was collected across two precipitation events because of sampling logistics). All samples collected were analyzed for fecal coliform and enterococcus; freshwater samples were also analyzed for E. coli.

The Department issued findings in the technical comment letter dated September 7, 2018 which subsequently resulted in a revision to the report on October 5, 2018. However, the primary goal of the baseline monitoring

was to provide a snapshot to characterize the water quality conditions in the NY/NJ Harbor Area to represent baseline and existing conditions. The Department approved the CMP report on March 1, 2019. Specifically, in that letter, the Department determined that the data collection effort, in concert with the ongoing NJHDG Monitoring Network, provided sufficient information for the purposes of data characterization for baseline and existing conditions. In addition, the Department's March 1, 2019 approval letter indicated that the report is not intended to assess attainment of the waterbody against water quality standards at N.J.A.C. 7:9B. 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. Note that this is separate from the monthly monitoring report form 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.

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.

Implementation of the projects in the LTCP will occur over five years. 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 Newark Liberty 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 for the CSO Outfalls:

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:

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. Progress Reports:

This renewal permit includes a compliance schedule for the submission of progress reports. Beginning on the effective date of the permit (EDP) and 25 days after the end of every semi-annual period, the permittee must submit a progress report to the Department 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.

12 Permit Summary Table for DSN 002A and DSN 003A

DSN 002A – WNY							
PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA (**1**)	EXISTING LIMITS	FINAL LIMITS	MONITORING	
						Freq.	Sample Type
Duration of Discharge	Days	Monthly Total	5.02	MR	MR	1/Month	Estimated
Precipitation, Total	Inches	Monthly Total	3.66	MR	MR	1/Month	Measured
Solids/Floatables **(2)**	Cu. Yd.	Monthly Total	67.03	MR	MR	1/Month	Measured

DSN 003A - JOSO							
PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA (**1**)	EXISTING LIMITS	FINAL LIMITS	MONITORING	
						Freq.	Sample Type
Duration of Discharge	Days	Monthly Total	4.61	MR	MR	1/Month	Estimated

Footnotes and Abbreviations:
MR Monitor and report only
(1) Wastewater data originates from the information submitted on the monitoring report forms July 2015 to November 2022.
(2) Solids/floatables are reported system wide on the first outfall only.

13 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 *Jersey Journal* and in the *DEP Bulletin* available at https://dep.nj.gov/bulletin/.

14 Contact Information

If you have any questions regarding this permit action, please contact Jonathan Hanuschik (Jonathan.Hanuschik@dep.nj.gov) of the Bureau of Surface Water & Pretreatment Permitting who can be reached at (609) 292-4860.

15 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. [C]
2. 40 CFR Part 131, Federal Water Quality Standards. [A] [C]
3. 40 CFR Part 122, National Pollutant Discharge Elimination System. [C]
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] [B]
9. N.J.A.C. 7:14C, Sludge Quality Assurance Regulations. [B]
10. Northeast Water Quality Management Plan.
11. Interstate Environmental Commission Regulations, N.J.S.A. 32:18-1 et seq.
12. N.J.S.A. 58:25-23 et/ seq., Sewage Infrastructure Improvement Act
13. Pretreatment Requirements (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 2016 Integrated Water Quality Monitoring and Assessment Report (includes 305 (b) Report 303(d) List). [A]
5. Draft "Technical Manual for RWBR", published by the Department, January 2005. [A]
6. Compliance Evaluation reports June 15, 2016, April 13, 2017, May, 21, 2018, February 6, 2019, May 7, 2020, May 24, 2021.
7. DMR and WCR Reports July 2015 to November 2022.
8. Review of LTCP Financial Capability Assessment by Industrial Economics Incorporated dated June 17, 2021.

Permits / Applications:

1. NJPDES/DSW Permit Application dated January 30, 2020 and received February 7, 2020.
2. Existing NJPDES/DSW Permit NJ0025321, issued March 12, 2015, and effective July 1, 2015.
3. Minor Modification to NJPDES/DSW Permit NJ0025321, issued October 13, 2015, and effective on July 1, 2015.
4. Major Modification to NJPDES/DSW Permit NJ0025321, issued January 22, 2018, and effective on March 1, 2018.

5. Major Modification to NJPDES/DSW Permit NJ0025321, 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 NJ0025321, issued February 2, 2018, which serves to stay Part IV.F.1.h of the existing permit.
7. Stay to NJPDES/DSW Permit NJ0025321, issued April 15, 2020, which serves to extend the LTCP submission date.

LTCP Report Submissions:

1. "System Characterization Work Plan" dated December 31, 2015, revised June 17, 2016.
2. "System Characterization Report for the River Road WWTP" dated June 1, 2018, revised April 1, 2019 and May 2, 2019.
3. "NJCSO Group Compliance Monitoring Program Quality Assurance Project Plan (QAPP)" dated December 31, 2015, revised February 19, 2016 and May 10, 2016
4. "NJCSO Group Compliance Monitoring Program Report" dated June 30, 2018, revised October 5, 2018.
5. "Public Participation Process Report for the River Road WWTP" dated July 1, 2018, revised January 9, 2019.
6. "Identification of Sensitive Areas Report" dated June 2018, revised October 19, 2018, January 31, 2019 and March 29, 2019.
7. "Alternatives Development and Evaluation: River Road Wastewater Treatment Plant" dated June 25, 2019, revised November 2019 and January 2020.
8. "Selection and Implementation of Alternatives" dated June 2020, revised August 2021, May 2022 and January 2023.

Correspondences:

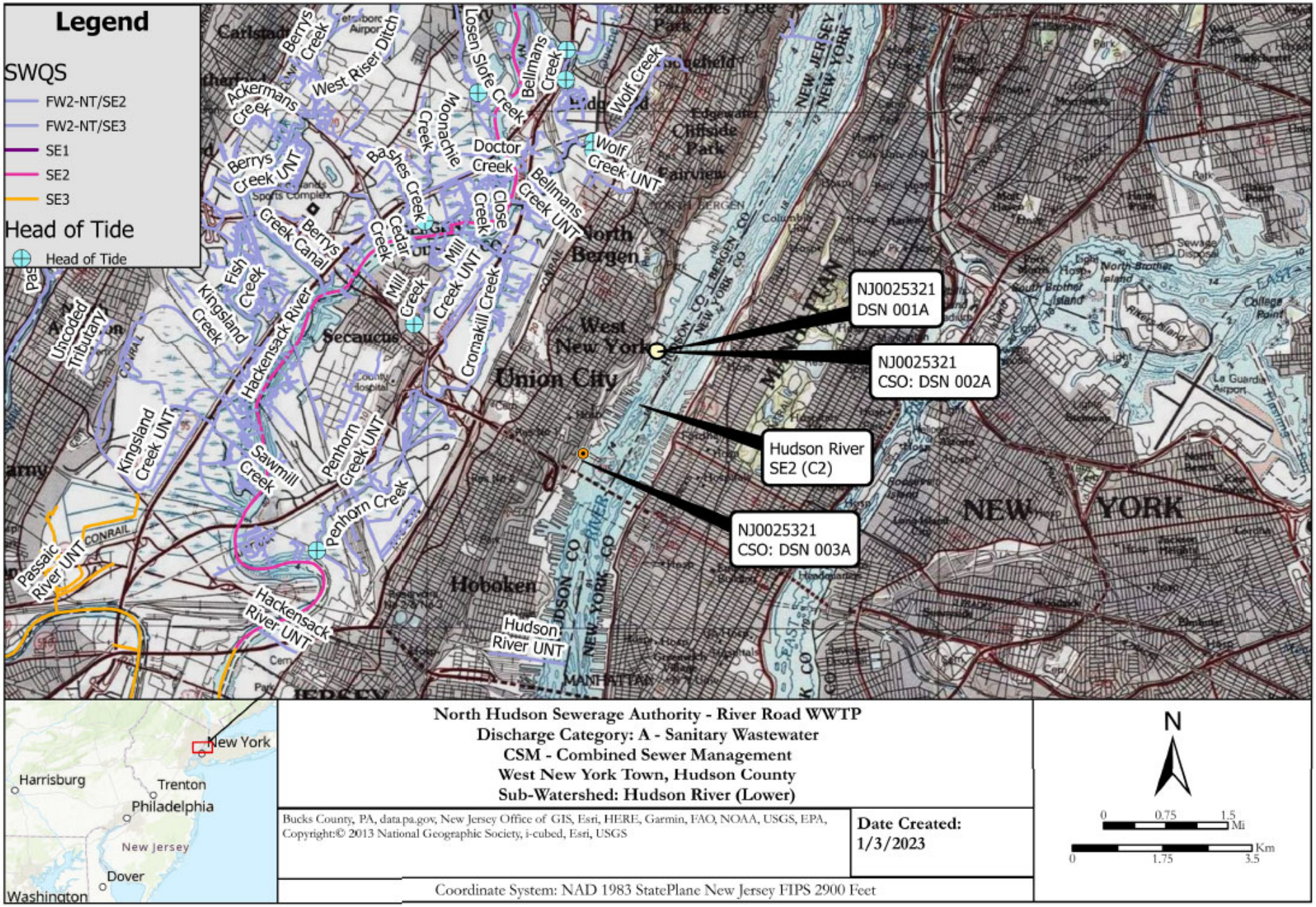
1. Technical Comments on the "System Characterization Work Plan" dated January 28, 2016 and June 30, 2016 with the approval letter dated August 4, 2016.
2. Technical Comments on the "System Characterization Report for the River Road WWTP" dated January 24, 2019 and April 23, 2019 with the approval letter dated May 6, 2019.
3. Technical Comments on the "NJCSO Group Compliance Monitoring Program QAPP" dated January 22, 2016, with the approval letter dated February 24, 2016.
4. Technical Comments on the "NJCSO Group Compliance Monitoring Program Report" dated September 7, 2019, with the approval letter dated March 1, 2019.
5. Technical Comments on the "Public Participation Process Report for the River Road WWTP" dated November 9, 2018, with the approval letter dated March 29, 2019.
6. Technical Comments on the "Identification of Sensitive Areas Report" dated September 20, 2018 and March 1, 2019, with the approval letter dated April 8, 2019.
7. Technical Comments on the "Alternatives Development and Evaluation: River Road Wastewater Treatment Plant" dated September 20, 2019 and December 13, 2019, with the approval letter dated March 24, 2019.
8. "NHSA LTCP Responses to 11/23/20 Meeting with NJDEP" letter dated January 7, 2021.
9. Technical Comments on the "Selection and Implementation of Alternatives" dated June 17, 2021.
10. "NHSA Response Selection and Implementation of Alternatives, River Road WWTP" letter dated November 9, 2021 and May 20, 2022.

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/.


Legend
SWQS
FW2-NT/SE2
FW2-NT/SE3
SE1
SE2
SE3
Head of Tide
Head of Tide
NJ0025321
DSN 001A
NJ0025321
CSO: DSN 002A
Hudson River
SE2 (C2)
NJ0025321
CSO: DSN 003A
Carlstadt
Secaucus
North Bergen
West New York
Union City
Weehawken
Cliffside Park
Fairview
Edgewater
Hoboken
NEW YORK
Berrys Creek
West Riser Ditch
Losen Slote Creek
Bellmans Creek
Wolf Creek
Ackermans Creek
Berrys Creek UNT
Bashes Creek
Moonachie Creek
Doctor Creek
Wolf Creek UNT
Bellmans Creek UNT
Close Creek
Cedar Creek
Mill Creek
Mill Creek UNT
Cromakill Creek
Fish Creek
Kingsland Creek
Hackensack River
Kingsland Creek UNT
Sawmill Creek
Penhorn Creek UNT
Penhorn Creek
Passaic River UNT
Hackensack River UNT
Hudson River UNT
Uncoded Tributary
CONRAIL
New York
Harrisburg
Trenton
Philadelphia
New Jersey
Dover
Washington
North Hudson Sewerage Authority - River Road WWTP
Discharge Category: A - Sanitary Wastewater
CSM - Combined Sewer Management
West New York Town, Hudson County
Sub-Watershed: Hudson River (Lower)
Bucks County, PA, data.pa.gov, New Jersey Office of GIS, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, Copyright:© 2013 National Geographic Society, i-cubed, Esri, USGS
Date Created:
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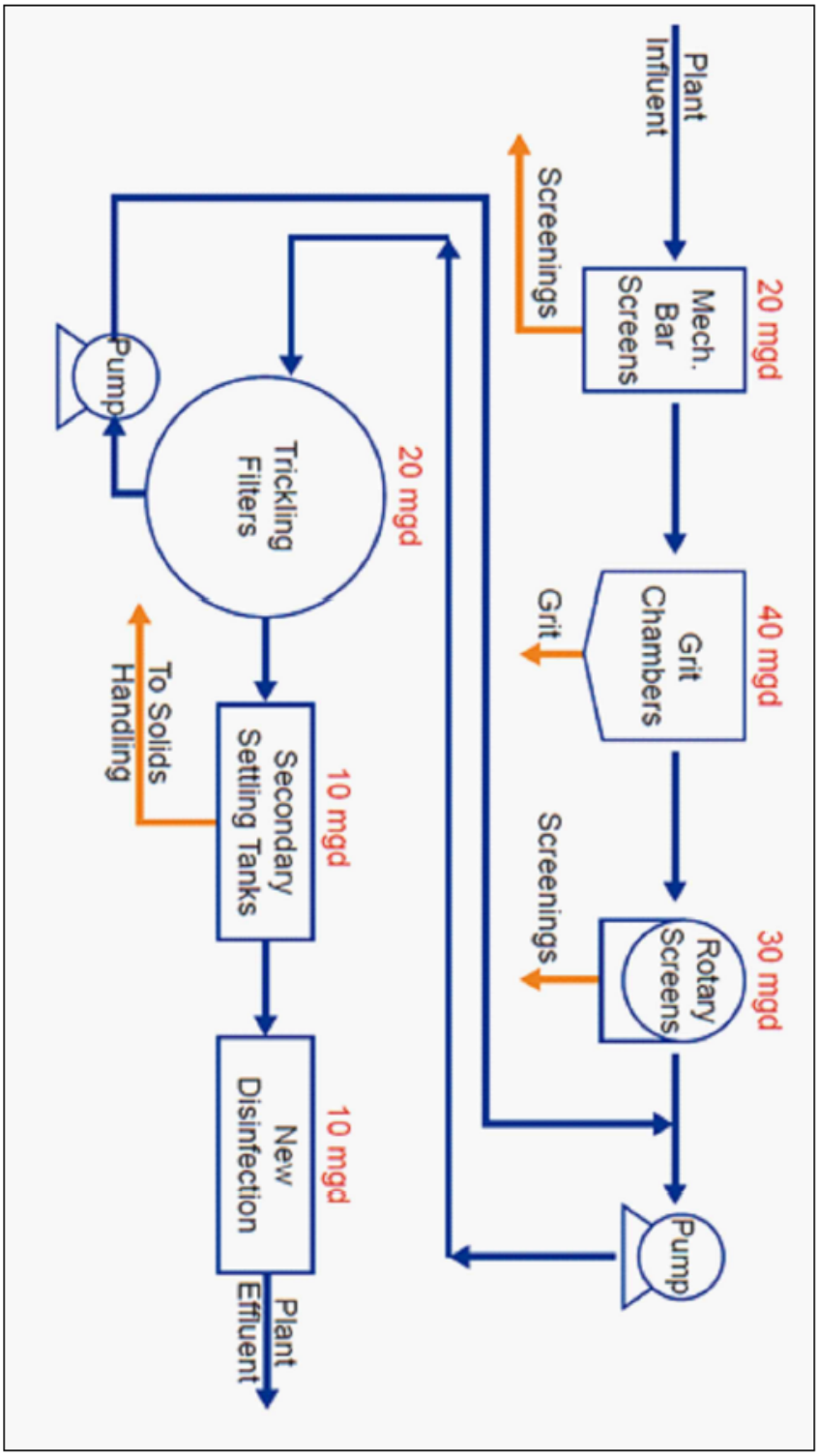

M MOTT MACDONALD
Certificate No. 24GA28016600

111 Wood Avenue South
Iselin, New Jersey 08830–4112

NORTH HUDSON SEWERAGE AUTHORITY
HUDSON COUNTY, NEW JERSEY

RIVER ROAD
WASTE WATER TREATMENT PLANT
PROCESS FLOW DIAGRAM

Designed	Drawn	Checked	Approved	Date
RE	RE	KK		

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: NJ0025321

Draft: Surface Water Renewal Permit Action

Permittee:
North Hudson Sewerage Authority
1600 Adams Street
Hoboken, NJ 07030

Co-Permittee:

Property Owner:
North Hudson Sewerage Authority
1600 Adams Street
Hoboken, NJ 07030

Location of Activity:
River Road Wastewater Treatment Plant
6400 Anthony M Defino Way
West New York Town, Hudson County, NJ 07030

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
Bureau Chief
Bureau of Surface Water & Pretreatment Permitting

(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 expiration date.

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. Effective December 21, 2020, the below identified documents and reports shall be electronically submitted to the NJDEP via the Department's designated Electronic Submission Service.

i. 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.

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 combined sewer overflows(see Part II.B.3).

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 condtion 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 Surface Water Outfall	Hudson River	SE2(C2)	A - Sanitary Wastewater (IP)

Location Description

The influent monitoring location shall be before any treatment, other than degritting, and before the addition of any internal waste streams. The effluent monitoring location shall be post dechlorination at DSN001A. DSN001A discharges into the Hudson River at Latitude N: 40 degrees 47 minutes 12.56 seconds and Longitude W: 73 degrees 59 minutes 53.46 seconds.

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:

For 3-Final Phase (flow of 15 MGD with CSO bypass conditions): Duration of discharge shall be reported as the # of calendar days/ month that a bypass event occurs. Continuous flow metering for flows into the plant shall be reported as Flow, In Conduit or Thru Treatment Plant as Raw Sew/Influent.

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	*****	*****	*****	*****	Continuous	Metered
January thru December	QL	***	***		***	***	***			
pH	Raw Sew/influent	*****	*****	*****	REPORT Report Per Minimum	*****	REPORT Report Per Maximum	SU	3/Day	Grab
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Report Per Minimum	*****	9.0 Report Per Maximum	SU	3/Day	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	3/Week	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:

For 3-Final Phase (flow of 15 MGD with CSO bypass conditions): Duration of discharge shall be reported as the # of calendar days/ month that a bypass event occurs. Continuous flow metering for flows into the plant shall be reported as Flow, In Conduit or Thru Treatment Plant as Raw Sew/Influent.

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	1136 Monthly Average	1703 Weekly Average	KG/DAY	*****	30 Monthly Average	45 Weekly Average	MG/L	3/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	3/Week	Calculated
January thru December	QL	***	***		***	***	***			
Oil and Grease	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Instant Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Nitrogen, Ammonia 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	***	***		***	***	***			
Coliform, Fecal General	Effluent Gross Value	*****	*****	*****	*****	200 Monthly Geo Avg	400 Weekly Geometric	#/100ML	8/Month	Grab
January thru December	QL	***	***		***	***	***			
BOD, Carbonaceous 5 Day, 20oC	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	3/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, Carbonaceous 5 Day, 20oC	Effluent Gross Value	950 Monthly Average	1500 Weekly Average	KG/DAY	*****	25 Monthly Average	40 Weekly Average	MG/L	3/Week	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:

For 3-Final Phase (flow of 15 MGD with CSO bypass conditions): Duration of discharge shall be reported as the # of calendar days/ month that a bypass event occurs. Continuous flow metering for flows into the plant shall be reported as Flow, In Conduit or Thru Treatment Plant as Raw Sew/Influent.

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	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	3/Week	Calculated
January thru December	QL	***	***		***	***	***			
LC50 Statre 96hr Acu Mysid Bahia	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	*****	*****	%EFFL	1/Quarter	Composite
January thru December	AL	***	***		50	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	3.05 Monthly Average	9.54 Daily Maximum	KG/DAY	*****	0.08 Monthly Average	0.25 Daily Maximum	MG/L	3/Day	Grab
January thru December	QL	***	***		***	***	***			
Temperature, oC	Raw Sew/influent	*****	*****	*****	REPORT Report Per Minimum	REPORT Monthly Average	REPORT Report Per Maximum	DEG.C	3/Day	Grab
January thru December	QL	***	***		***	***	***			
Temperature, oC	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	REPORT Monthly Average	REPORT Report Per Maximum	DEG.C	3/Day	Grab
January thru December	QL	***	***		***	***	***			
Oxygen, Dissolved (DO)	Effluent Gross Value	*****	*****	*****	REPORT Daily Minimum	*****	4.0 Instant Minimum	MG/L	3/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:

For 3-Final Phase (flow of 15 MGD with CSO bypass conditions): Duration of discharge shall be reported as the # of calendar days/ month that a bypass event occurs. Continuous flow metering for flows into the plant shall be reported as Flow, In Conduit or Thru Treatment Plant as Raw Sew/Influent.

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
Mercury Total Recoverable	Effluent Gross Value	20 Monthly Average	REPORT Daily Maximum	GR/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	24 Hour Composite
January thru December	QL	***	***		***	***	***			

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	*****	*****	*****	*****	Continuous	Metered
January thru December	QL	***	***		***	***	***			
pH	Raw Sew/influent	*****	*****	*****	REPORT Report Per Minimum	*****	REPORT Report Per Maximum	SU	3/Day	Grab
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Report Per Minimum	*****	9.0 Report Per Maximum	SU	3/Day	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	3/Week	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:

For 3-Final Phase (flow of 15 MGD with CSO bypass conditions): Duration of discharge shall be reported as the # of calendar days/ month that a bypass event occurs. Continuous flow metering for flows into the plant shall be reported as Flow, In Conduit or Thru Treatment Plant as Raw Sew/Influent.

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	1136 Monthly Average	1703 Weekly Average	KG/DAY	*****	30 Monthly Average	45 Weekly Average	MG/L	3/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	3/Week	Calculated
January thru December	QL	***	***		***	***	***			
Oil and Grease	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Instant Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Nitrogen, Ammonia 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	***	***		***	***	***			
Coliform, Fecal General	Effluent Gross Value	*****	*****	*****	*****	200 Monthly Geo Avg	400 Weekly Geometric	#/100ML	8/Month	Grab
January thru December	QL	***	***		***	***	***			
BOD, Carbonaceous 5 Day, 20oC	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	3/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, Carbonaceous 5 Day, 20oC	Effluent Gross Value	950 Monthly Average	1500 Weekly Average	KG/DAY	*****	25 Monthly Average	40 Weekly Average	MG/L	3/Week	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:

For 3-Final Phase (flow of 15 MGD with CSO bypass conditions): Duration of discharge shall be reported as the # of calendar days/ month that a bypass event occurs. Continuous flow metering for flows into the plant shall be reported as Flow, In Conduit or Thru Treatment Plant as Raw Sew/Influent.

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	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	3/Week	Calculated
January thru December	QL	***	***		***	***	***			
LC50 Statre 96hr Acu Mysid Bahia	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	*****	*****	%EFFL	1/Quarter	Composite
January thru December	AL	***	***		50	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	3.05 Monthly Average	9.54 Daily Maximum	KG/DAY	*****	0.08 Monthly Average	0.25 Daily Maximum	MG/L	3/Day	Grab
January thru December	QL	***	***		***	***	***			
Temperature, oC	Raw Sew/influent	*****	*****	*****	REPORT Report Per Minimum	REPORT Monthly Average	REPORT Report Per Maximum	DEG.C	3/Day	Grab
January thru December	QL	***	***		***	***	***			
Temperature, oC	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	REPORT Monthly Average	REPORT Report Per Maximum	DEG.C	3/Day	Grab
January thru December	QL	***	***		***	***	***			
Oxygen, Dissolved (DO)	Effluent Gross Value	*****	*****	*****	REPORT Daily Minimum	*****	4.0 Instant Minimum	MG/L	3/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:

For 3-Final Phase (flow of 15 MGD with CSO bypass conditions): Duration of discharge shall be reported as the # of calendar days/ month that a bypass event occurs. Continuous flow metering for flows into the plant shall be reported as Flow, In Conduit or Thru Treatment Plant as Raw Sew/Influent.

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
Mercury Total Recoverable	Effluent Gross Value	20 Monthly Average	REPORT Daily Maximum	GR/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			

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	Internal Monitoring	*****	*****	*****	*****	REPORT Monthly Total	*****	# OF DAYS	1/Month	Metered
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	***	***		***	***	***			
pH	Raw Sew/influent	*****	*****	*****	REPORT Report Per Minimum	*****	REPORT Report Per Maximum	SU	3/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:

For 3-Final Phase (flow of 15 MGD with CSO bypass conditions): Duration of discharge shall be reported as the # of calendar days/ month that a bypass event occurs. Continuous flow metering for flows into the plant shall be reported as Flow, In Conduit or Thru Treatment Plant as Raw Sew/Influent.

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	Effluent Gross Value	*****	*****	*****	6.0 Report Per Minimum	*****	9.0 Report Per Maximum	SU	3/Day	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Weekly Average	MG/L	3/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	1136 Monthly Average	1703 Weekly Average	KG/DAY	*****	30 Monthly Average	45 Weekly Average	MG/L	3/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	3/Week	Calculated
January thru December	QL	***	***		***	***	***			
Oil and Grease	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Instant Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Nitrogen, Ammonia 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	***	***		***	***	***			
Coliform, Fecal General	Effluent Gross Value	*****	*****	*****	*****	200 Monthly Geo Avg	400 Weekly Geometric	#/100ML	8/Month	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:

For 3-Final Phase (flow of 15 MGD with CSO bypass conditions): Duration of discharge shall be reported as the # of calendar days/ month that a bypass event occurs. Continuous flow metering for flows into the plant shall be reported as Flow, In Conduit or Thru Treatment Plant as Raw Sew/Influent.

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
BOD, Carbonaceous 5 Day, 20oC	Raw Sew/influent	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	3/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, Carbonaceous 5 Day, 20oC	Effluent Gross Value	950 Monthly Average	1500 Weekly Average	KG/DAY	*****	25 Monthly Average	40 Weekly Average	MG/L	3/Week	24 Hour Composite
January thru December	QL	***	***		***	***	***			
BOD, Carbonaceous 5 Day, 20oC	Percent Removal	*****	*****	*****	85 Monthly Av Minimum	*****	*****	PERCENT	3/Week	Calculated
January thru December	QL	***	***		***	***	***			
LC50 Statre 96hr Acu Mysid Bahia	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	*****	*****	%EFFL	1/Quarter	Composite
January thru December	AL	***	***		50	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	3.05 Monthly Average	9.54 Daily Maximum	KG/DAY	*****	0.08 Monthly Average	0.25 Daily Maximum	MG/L	3/Day	Grab
January thru December	QL	***	***		***	***	***			
Temperature, oC	Raw Sew/influent	*****	*****	*****	REPORT Report Per Minimum	REPORT Monthly Average	REPORT Report Per Maximum	DEG.C	3/Day	Grab
January thru December	QL	***	***		***	***	***			
Temperature, oC	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	REPORT Monthly Average	REPORT Report Per Maximum	DEG.C	3/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:

For 3-Final Phase (flow of 15 MGD with CSO bypass conditions): Duration of discharge shall be reported as the # of calendar days/ month that a bypass event occurs. Continuous flow metering for flows into the plant shall be reported as Flow, In Conduit or Thru Treatment Plant as Raw Sew/Influent.

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
Oxygen, Dissolved (DO)	Effluent Gross Value	*****	*****	*****	REPORT Daily Minimum	*****	4.0 Instant Minimum	MG/L	3/Week	Grab
January thru December	QL	***	***		***	***	***			
Mercury Total Recoverable	Effluent Gross Value	20 Monthly Average	REPORT Daily Maximum	GR/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			

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).

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
Alpha Endosulfan	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

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).

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
Alpha BHC	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
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

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).

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
Manganese, Total (as Mn)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Cyanide, Total (as CN)	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).

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
Arsenic, Total (as As)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Beryllium, Total (as Be)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Cadmium, Total (as Cd)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Chromium, Total (as Cr)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Copper, Total (as Cu)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Lead, Total (as Pb)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Thallium, Total (as Tl)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Nickel, Total (as Ni)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Silver, Total (as Ag)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Zinc, Total (as Zn)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Antimony, Total (as Sb)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Selenium, Total (as Se)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Chromium, Hexavalent Dissolved (as Cr)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	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

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).

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
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
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

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).

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
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
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

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).

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
1,4-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
2,4-Dinitrotoluene	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
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
Bis(2-ethylhexyl) phthalate	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

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).

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
1,3-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
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
Chloroform	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Toluene	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

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).

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
Methyl Bromide	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Methyl Chloride	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Methylene 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
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

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).

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
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
Asbestos (Fibrous)	Effluent Gross Value	REPORT	FIBERS/L	24 Hour Composite	January thru December
Parachloro-m-cresol	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
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
Endrin Aldehyde	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1016 (Arochlor 1016)	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'-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

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).

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
Aldrin	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
Endosulfans, Total (alpha and beta)	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
PCB-1221 (Arochlor 1221)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1232 (Arochlor 1232)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1242 (Arochlor 1242)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1248 (Arochlor 1248)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1254 (Arochlor 1254)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
PCB-1260 (Arochlor 1260)	Effluent Gross Value	REPORT	UG/L	24 Hour Composite	January thru December
Polychlorinated Biphenyls (PCBs)	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

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).

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-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
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):
002A CSO	Hudson River	SE2(C2)	CSM - Combined Sewer Management (IP)

Location Description

The permittee is authorized to discharge combined sewage from Outfall 002A (WNY-1) located to the east of Harbor Place in West New York into the Hudson River at:
Latitude N: 40d 47m 12.56s
Longitude W: 73d 59m 53.46s

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:

Precipitation shall be reported from a rain gauge representative of the area. Solids/Floatables shall be reported when the solid waste is measured for disposal. Duration of Discharge shall be reported as a 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):
003A CSO	Hudson River	SE2(C2)	CSM - Combined Sewer Management (IP)

Location Description

The permittee is authorized to discharge combined sewage from Outfall 003A (JOSO) located to the east of Henley Place in Weehawken into the Hudson River at:
Latitude N: 40d 46m 15s
Longitude W: 74d 00m 53s

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:

Duration of Discharge shall be reported as a whole day for any day when a discharge occurs.

Table III - C - 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
Duration Of Discharge	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Total	*****	# OF DAYS	1/Month	Estimated
January thru December	QL	***	***		***	***	***			

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 Federal 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. In September 2014, EPA codified the use of sufficiently sensitive test methods. Because of this rule update, the Department is removing the existing Required Quantitation Level in this permit as this level does not comply with these regulatory changes. Due to adoption of the sufficiently sensitive test methods rule a new Recommended Quantitation Level (RQL) for CPO of 0.02 mg/L has been developed which has been shown to be attainable using an EPA approved standard method. Specifically, the Department has determined that this RQL is routinely achievable using a handheld colorimetric test (DPD Colorimetric Method (4500-Cl G-11)) where this method is well described in the Standard Methods for the Examination of Water and Wastewater, available at www.standardmethods.org. This method is standard practice in testing for CPO and has been available for decades.

e. 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.

f. All monitoring shall be conducted as specified in Part III.

g. 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.

h. 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.

i. Monitoring for Wastewater Characterization Report parameters shall be conducted concurrently with the Whole Effluent Toxicity (WET) monitoring, when feasible.

j. Any influent and effluent sampling for toxic pollutant analyses shall be collected concurrently.

k. 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

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. New Jersey Polychlorinated Biphenyls (PCB) Requirements

a. The permittee has completed sampling for PCBs as required in a previous permit action. The Department is currently reviewing the sampling data for this and other facilities to determine which facilities are discharging at more elevated levels. Once the Department completes this review and if the permittee's effluent is discharging PCBs at more elevated levels, the Department will require the permittee to develop and submit a PMP for approval by the date specified and the Departments determination consistent with the provisions of N.J.A.C. 7:14 A-16.4.

b. PCB Pollutant Minimization Plan (PMP) Requirement

i. If, based on the review of the Final Report, the Department determines that a PMP is required and incorporates such a requirement via a major modification pursuant to N.J.A.C. 7:14A-16.4, the permittee shall prepare and submit a PMP to the Department within 12 months from the effective date of the permit action the requirement is incorporated in.

ii. The permittee shall implement the PMP within 30 days after written notification by the Department that the PMP is complete.

iii. The PMP shall be developed to achieve maximum practical reduction in accordance with the PMP Technical Manual.

c. PCB PMP Annual Report Requirement

i. The permittee shall submit an annual report in accordance with the Annual Report Guidance Document every 12 months from the implementation of the PMP.

ii. Any revisions to the PMP as a result of the ongoing work shall be reported in the annual report.

iii. The annual report shall contain, at a minimum, a detailed discussion of the specific progress and actions taken by the permittee during the previous twelve month period that addresses PCB loadings and implementation of the PMP.

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. Interstate Environmental Commission

a. The permittee shall comply with the Interstate Environmental Commission's (IEC) "Water Quality Regulations." Although no monitoring requirements specific to the IEC are included in this permit, compliance may be determined by the IEC based on its own sampling events. IEC effluent requirements shall not be considered effluent limitations for the purpose of mandatory penalties under N.J.S.A. 58:10A-10.1.

3. Applicability of Discharge Limitations and Effective Dates

a. Surface Water Discharge Monitoring Report (DMR) Form Requirements

i. The effluent limitations and monitoring conditions contained in Part IIII apply for the 1-Initial phase for the flow of 10 MGD. This permit also includes requirements for a flow of 15 MGD for the 2-Interim phase and a flow of 20 MGD with CSO related bypass for the 3-Final phase. Before the 2-Interim and 3-Final phases can be activated, which would authorize discharge at the higher flows of 15 MGD and 20 MGD respectively, 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 operating at the higher flow in order to activate the 2-Interim and 3-Final phases.

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 - Acute 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. Acute toxicity tests shall be conducted using the test species and method identified in Part III of this permit.

c. Part III of this permit contains an Action Level (AL) for acute Whole Effluent Toxicity. Toxicity Reduction and Implementation Requirements may be triggered based on exceedences of this Action Level. See Toxicity Reduction and Implementation Requirements section below for more details.

d. Any test that does not meet the specifications of N.J.A.C. 7:18, laboratory certification regulations, 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.

e. 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.

f. The permittee shall resubmit an Acute Methodology Questionnaire within 60 days of any change in laboratory.

g. Test reports shall be submitted to:

   i. biomonitoring@dep.nj.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 exceedence 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 exceedence 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 AppendixA, these sections are inactive and not effective until a permit action where Appendix A 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 A 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 A. 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 A. 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 at a minimum weekly. 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 / at a minimum weekly]. 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 A. 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 at a minimum weekly. 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 A. 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. Requirement to Identify and Locate Industrial Users

a. The Permittee shall identify all indirect users which meet the significant indirect user definition in N.J.A.C. 7:14A-1.2 or have reasonable potential to:

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

2. Notification Requirements

a. The permittee shall provide adequate notice to the NJDEP, Division of Water Quality, Bureau of Surface Water and Pretreatment Permitting, of the name, address, telephone number and facility contact of all:

i. new SIUs at the time the proposed user applies to the permittee for connection to the permittee's system,

ii. any substantial change or proposed change in the volume or character of pollutants being introduced into the POTW by existing SIUs, or

iii. any substantial change or proposed change in the volume or character of pollutants being introduced into the POTW by a user that causes the user to become an SIU.

b. For purposes of this subsection, adequate notice shall include information on the quality and quantity of effluent introduced into the POTW and any anticipated impact of such change on the quantity or quality of effluent to be discharged from the POTW.

3. Requirement to Develop Local Limits

a. If necessary to ensure compliance with the requirements in paragraph ii following, the permittee shall perform a headworks analysis in order to develop local limits or demonstrate that local limits are not necessary. The headworks analysis and, if necessary, development of local limits shall:

i. be conducted in accordance with the Local Limits Development Guidance (July 2004, USEPA Office of Wastewater Management), including all supplements and amendments thereto, including: identifying the sources and pollutants which should be limited in order to address environmental protection criteria of paragraph ii.; characterizing industrial discharges; reviewing applicable environmental protection criteria and pollutant effects data; monitoring of IU discharges, POTW collection system and treatment plant; and calculating local limits for the identified pollutants of concern;

ii. ensure compliance with the following minimum environmental protection criteria: the numerical effluent limitations in the Part III; The local agency's process inhibition and upset criteria; the local agency's worker health and safety protection criteria; the sludge quality criteria for a chosen method(s) of sludge management; and the limitations in the local agency's Air Pollution Control permit, where applicable.

4. Submittal Requirements

a. The permittee shall submit updates to its Local Sewer Use Ordinance within 30 days of modification.

b. The permittee shall prepare an Annual Pretreatment Program Report which consists of a listing of all indirect users which meet the significant indirect user definition in N.J.A.C. 7:14A-1.2. The report shall include the name, address, and type of business for each facility. The report shall be on the form provided by the Department. The form is available on the Department’s web site at http://www.nj.gov/dep/dwq/pdf/non-dla-pt-annual-report-form.pdf

c. Submit the Annual Pretreatment Program Report annually beginning on EDP + 1 year.

d. The reports shall be submitted to: NJDEP, Mail Code - 401-02B, Bureau of Surface Water and Pretreatment Permitting, 401 East State Street, P. O. Box 420, Trenton, NJ. 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.

G. Custom Requirement

1. 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 trickling filters is prohibited except during wet weather events when influent flows exceed approximately 20 MGD as an instantaneous maximum. 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.

2. 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 NJDEP 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 electronically through the Department's Monitoring Report Form (MRF) submission service.

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 format as 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/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/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 publically 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 Februrary 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. Interstate Environmental Commission (IEC)

a. The permittee shall comply with the Interstate Environmental Commission's (IEC) "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 North Hudson River Road the total system is 31 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 sahll 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 permitteee 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 NHSA:

- 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.

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 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 B, 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 B.

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 NJ0025321.
- Discharge Serial No. (eg. 001A).
- 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, NHSA submitted the “System Characterization Work Plan" dated December 31, 2015, revised June 17, 2016 and the “Service Area System Characterization Report for the River Road WWTP” dated June 1, 2018, revised April 1, 2019 and May 2, 2019. The work plan and the System Characterization Report were approved by the Department on August 4, 2016, and May 6, 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 NHSA, 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 for NHSA.

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. Cliamate 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): Basis of Design Engineering to Increase Capacity of River Road WWTP to 35 MGD Through Blending and Plant Upgrade.

ii. Year Two (EDP + 1 year to EDP + 2 years): No required projects for River Road WWTP.

iii. Year Three (EDP + 2 years to EDP + 3 years): Increase Capacity of River Road WWTP to 35 MGD Through Blending and Plant Upgrade.

iv. Year Four (EDP + 3 years to EDP + 4 years): Raise JOSO Weirs.

v. Year Five (EDP + 4 years to EDP + 5 years): No required projects for River Road WWTP.

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 Program (BCMP) Report dated June 30, 2018 was submitted and subsequently approved by the Department on March 1, 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 contain data from the on-going New Jersey Harbor Discharger Group Monitoring Network. This data is required to supplement the existing data to represent future conditions. This will ensure consistency for sampling stations, parameters etc.

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.

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 Newark Liberty 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.

Masterfile #: 6845 **PI #:** 47081

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	None	Not 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	None	Not Approved
RA-CM	Dust Control	None	Not Approved
RA-CM	Fire Protection	None	Not Approved
RA-CM	Vehicle Washing (at STP or DPW)	None	Not Approved
RA-CM	Composting	None	Not Approved
RA-IS	Sanitary Sewer Jetting	MUA 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	North Hudson Sewerage Authority – River Road WWTP	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:
Mail Code 401 – 02B
Division of Water Quality
Bureau of Surface Water Permitting
P.O. Box 420
Trenton, NJ 08625-0420

For electronic copies:
ramanathan.asokan@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:
Mail Code 401 – 02B
Division of Water Quality
Bureau of Surface Water Permitting
P.O. Box 420
Trenton, NJ 08625-0420

For electronic copies:
ramanathan.asokan@dep.nj.gov

APPENDIX B

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.