



## State of New Jersey

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June 3, 2021

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

Re: Review of Selection and Implementation of Alternatives of the Long Term Control Plan (LTCP)  
North Hudson Sewerage Authority – River Road Wastewater Treatment Plant (WWTP) NJPDES  
Permit No. NJ0025321

Dear Mr. Wolff:

Thank you for your submission dated June 2020 entitled: “Selection and Implementation of Alternatives” as submitted to the New Jersey Department of Environmental Protection as submitted to the New Jersey Department of Environmental Protection (the Department or NJDEP). This report was submitted in a timely manner and was prepared in accordance with Part IV.D.3.b.vi of the above referenced New Jersey Pollutant Discharge Elimination System (NJPDES) permit. This submission was issued in response to the Long-Term Control Plan (LTCP) submittal requirements as due on October 1, 2020.

The overall objective of the LTCP is to identify and select CSO control alternatives that meet the requirements of the Federal CSO Control Policy Section II.C.4, N.J.A.C. 7:14A-11, Appendix C, and the USEPA Combined Sewer Overflows Guidance for Long-Term Control Plan (EPA 832-B-95-002). The Federal CSO Policy establishes a framework for the coordination, planning, selection, and implementation of CSO controls required for permittee compliance with the Clean Water Act. This subject report builds on other previously submitted LTCP reports referenced in Part IV.D.3.b of the NJPDES permit, which includes an approved hydrologic, hydraulic and water quality model and other information in the July 1, 2018 “System Characterization Report” (approved by the Department on May 6, 2019); the July 1, 2018 “Public Participation Process Report for the River Road Wastewater Treatment Plant” (approved by the Department on March 29, 2019); the June 30, 2018 “NJCSO Group Compliance Monitoring Program Report” (approved by the Department on March 1, 2019); the June 2018 “Identification of Sensitive Areas Report” (approved by the Department on April 8, 2019); and the June 25, 2019 Development and Evaluation of Alternatives Report (DEAR) (approved by the Department on March 24, 2020).

The below represents the Department’s initial comments. The Department reserves the right to further comment on these issues. Comments are as follows.

Comment 1: While the Department acknowledges that the LTCP was submitted in June 2020, which is prior to the extension of the due date of October 1, 2020 as granted in a letter dated April 15, 2020, please note that the cover page of the document states “Status: Draft.” Please revise accordingly as part of any revised plan.

In addition, Part IV.D.1.b of your existing CSO permit states the following:

- “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:
  - i. I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for purposely, knowingly, recklessly, or negligently submitting false information”.

Please include this statement as well as a signature certification in a revised report.

## **Executive Summary**

The Executive Summary serves to provide a summary of the overall report. Comments have been incorporated on the specific report sections below; however, any changes as part of a revised LTCP should include revisions to the Executive Summary as appropriate.

Comment 2: Under Background and Objectives of the Long Term Control Plan within the Executive Summary the following is stated:

“...The permit requires the permittee to develop a feasible CSO control plan that will meet water quality standards using either the Presumption Approach or the Demonstration Approach. After review of both approaches, the Authority chose to move forward with the Presumption Approach to achieve permit compliance with the LTCP because this approach is more cost-effective and methods to measure compliance are more feasible.”

The 2015 NJPDES CSO permit requires selection of either the Presumption Approach or the Demonstration Approach. The Federal CSO Control Policy and the NJPDES permit at Part IV.G.4.f.ii specify that wet weather capture is a means of compliance under the Presumption Approach as follows:

- “ii. The elimination of the capture for treatment of no less than 85% by volume of the combined sewage collected in the CSS during precipitation events on a system-wide annual average basis;”

The Department acknowledges the selection of the Presumption Approach to attain compliance with the Federal CSO Control Policy as well as the water quality based and technology based requirements of the Clean Water Act (CWA) consistent with the National Combined Sewer Overflow Control Strategy issued on August 10, 1989 (54 Federal Register 37370).

Comment 3: Under Current Program Status within the Executive Summary there are four topics namely: River Road Service Area Leak Detection Program, Sewer Cleanings and Linings, Green Infrastructure, and Sewer Connection Stormwater Management Requirement. The Department acknowledges these efforts as included within the Executive Summary but these topics should be detailed within the report itself. It is suggested that additional detail be provided in the body of the report or, at a minimum, the Executive Summary should include references to appendices or other reports relevant to these topics. Please provide.

Comment 4: A summary of the River Road Service Area Leak Detection Program and the resultant decrease in I/I as a result of utilization of flow monitoring and closed-circuit television inspections to identify infiltration from water main leaks is included on page iv. Specifically, the following is stated:

“...As part of this process, the Authority has conducted quarterly meetings with Suez Water to isolate and repair these leaks and as a result, the program reduced influent rates to the River Road WWTP from 11 mgd [million gallons per day] to under 8 mgd.”

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 and appreciates NHSA’s efforts in this regard which took place in advance of the LTCP submission. To document this reduction, the Department reviewed Discharge Monitoring Report data for the WWTP, since effluent flow is an indicator of influent flow and influent flow documents the volume of sewage conveyed from the collection system. Please provide an analysis of effluent flow before and after the identification and repair of these leaks including the most recent data.

Comment 5: Green Infrastructure is referenced in the Executive Summary including the following:

“Currently 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.”

Similarly, on page iv the following is referenced under Sewer Connection Stormwater Management Requirement:

“Since 2001, the Authority 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...”

Please expand upon this description by providing a map or listing of existing GI practices or planned GI practices for completeness as a separate section within the report. The Department is in receipt of correspondence dated June 22, 2020 as entitled “Summary of Stormwater Detention Systems and Green Infrastructure Practices.” This comment could be addressed by including the information and attachments within that submittal as part of the LTCP. Revise accordingly.

Comment 6: On page v under Long Term Control Plan there are nine subsections regarding the nine elements of the LTCP including references to Characterization, Monitoring, and Modeling of the Combined Sewer System, Development and Evaluation of Alternatives Report (DEAR) and Public Participation where these reports are included later as Appendices A, B and C, respectively. Please incorporate references to these appendices within these sections for completeness. In addition, please provide a reference to the June 30, 2018 “NJCSO Group Compliance Monitoring Program Report” since it provides a foundation for the LTCP.

**Comment 7:** On page v under Consideration of Sensitive Areas, it is stated that it was determined that there are no sensitive areas within the portion of the Hudson River that is tributary to the River Road WWTP system with a reference to the Identification of Sensitive Areas Report submitted on March 29, 2019 by the NJCSO Group permittees. Please refer to the Department’s December 17, 2018 findings on the permittees’ June 2018 "Baseline Consideration of Sensitive Areas" report and revise this section.

**Comment 8:** The Executive Summary must contain summary information regarding the selected CSO controls given that the selection of alternatives in Section 3 is the overall objective of the LTCP. On page vii under Implementation Schedule, Table ES-1 shows the Authority’s proposed LTCP implementation schedule for both the Adams Street and River Road service areas, including the estimated construction cost. Given the expressed interest by members of the public in the Executive Summary and to promote ease of understanding of the LTCP, please revise this table to be specific to projects that relate to the NHSA – River Road LTCP to attain compliance with the Presumption Approach.

## 1 Introduction

**Comment 9:** Section 1.3, Purpose and Scope, states the following:

“The purpose of this report is to fulfill NJDEP Permit requirements to develop a comprehensive long-term plan expected to accomplish the requirements of the Clean Water Act within the River Road WTP service area...”

The purpose of this report is to present the selection of alternatives and an implementation schedule for the LTCP. While this section references WWTP expansion and storage, increased conveyance to the WWTP and CSO-related bypass, there is no mention of the 8 million gallon (MG) proposed storage tank at the WNY1 outfall. Please correct.

## 2 Methodology

**Comment 10:** Percent capture is discussed in Section 2.2, Existing Percent Capture where it is stated that:

“The statement of combined sewage implies sanitary flow is also included in the calculation and not only wet weather flow. Applying the updated method from the permit and updated model results, the existing percent capture increases when sanitary flow during wet weather is accounted for. The following equation applies this methodology:

$$\text{Percent Capture} = 1 - \frac{\text{Overflow Volume}}{\text{Total Volume in System during Wet Weather}} \quad ,,$$

The following tables show the values utilized within this equation:

**Table 2-1. Combined Sewer Overflow Volume by Drainage Basin in the Typical Year**

Drainage Basin	CSO Volume Typical Year, MG
JOSO	94.4
WNY1	192

JOSO = Joint overflow sewer outlet  
 MG = million gallons  
 WNY = West New York

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

<b>WWTP Flow</b>	<b>Volume Typical Year, MG</b>
Sanitary Flow at WWTP in Dry Weather	236.9
Wet Weather Flow at WWTP	187.9
Total Wet Weather Capture Volume	424.8

The derivation of percent capture is central to a review of this report given that the permittee has selected the Presumption Approach as a means of compliance. The permittee provided additional detail on this issue in a November 9, 2020 submission which served to explain this issue. Supplement this report with a detailed table of the numerical values utilized within the equation that was used to derive the baseline capture results (shown on page 2-2) as well as the projected percent capture results for the selected alternatives to demonstrate compliance from the November 9, 2020 letter. Approval of this report hinges in part on the inputs and results of this equation being clearly demonstrated and reproducible.

Comment 11: In order to further document progress addressing I/I into the collection system, to document compliance with wet weather percent capture, and to assess trends associated with the effects of climate change, the Department is evaluating a requirement to install flow meters at CSO outfalls to assess CSO trends over time in the next NJPDES permit for this facility. This is also based on the fact that NHSA only operates two CSO outfalls for the River Road facility. This would be in addition to the already required reporting of precipitation measures at regional rain gages to be included on monthly monitoring report forms. Flow metering at the outfalls could also be a part of adaptive management to determine if additional CSO reductions are necessary in order to demonstrate compliance with 85% percent capture as an input to future model runs. Please address the viability of flow meters on the outfalls for JOSO and WNY1.

### **3 Selected Alternatives**

Comment 12: Section 3.1, Alternatives Selection Approach states the following:

“There are two outfalls within the River Road WWTP service area. Because the elevation of the JOSO outfall is approximately 100 feet below the interceptor where the flow would need to be conveyed to the WWTP, efforts focused on achieving the target percent capture by conducting the majority of work at the WNY1 outfall. Based on public input and the desire to avoid high costs and disruptive construction of satellite facilities, efforts focused on maximizing capacity at the WWTP and maximizing the conveyance to the WWTP with existing facilities.”

As flooding may be related to elevation, additional information should be included in this section to describe any ongoing flooding within the combined sewer system. While the LTCP does not specifically reference flooding, Section 2.4 within the June 2018, “Combined Sewer System Characterization Report for the River Road Wastewater Treatment Plant” states the following:

“The USGS National Elevation Dataset (NED) One Meter Digital Elevation Model (DEM) was used to valueate the topography of the service area and its vulnerability to flooding (shown in Figure 2-4). The northern corner of the service area is at a much higher elevation than the rest of the service area, and slopes downward towards in the southeasterly direction. At the northeastern corner, elevations are around 250 ft (NAVD88). The majority of the service area is around 170 feet with a steep cliff drop of about 100 feet located around 1,000 feet from the eastern coast. Much of the area east of the cliffs is only about 10 feet above sea level, thus is vulnerable to storm surge and flooding. However, the area

east of the cliffs is separately sewerred with both storm and sanitary sewers thus flooding in these areas does not negatively impact CSOs. There is also a localized low-lying area of elevation 150 feet in the middle of the service area, but NHSA staff have indicated that this area is not vulnerable to flooding...”

The Department maintains that the LTCP should give the utmost priority to the elimination of ongoing flooding, which is a public health issue. Provide additional detail on flooding in the area east of the cliffs and its proximity to the combined sewer area. In addition, please explain if any areas within the combined sewer system are prone to flooding (including adjacent separately sewerred areas) and the cause of such.

Comment 13: The June 25, 2019 DEAR contains extensive information on analyzed alternatives as outlined in Table ES-1, River Road WWTP Service Area – CSO Control Alternatives Comparison. Additional discussion should be added to Section 3, Selected Alternatives, to explain why any of alternatives from the DEAR were not selected in the LTCP or were changed in the LTCP. For example, the 8 MG tank as described in the DEAR was proposed to be located in the Hudson River where no land alternative was presented. While we acknowledge that the river alternative is no longer an option, explain why this tank was relocated to the land. As a second example, the DEAR discussed construction of a linear storage tunnel along Anthony M. DeFino Way; however, the rationale for the elimination of this alternative from the LTCP is not explained. Revise accordingly.

Comment 14: In Section 3.1, Alternatives Selection Approach, it is stated that “The permitting discharge of the WWTP as it currently stands is 10 million gallons per day (MGD). The plant can see flows of 20 MGD during wet weather events.”

The Department issued a major modification to NJPDES permit NJ0025321 on May 1, 2020 to include a permitted flow of 15 MGD at full treatment where activation of this phase is conditional on receipt of a Treatment Works Approval at a future date. Please amend this statement in Section 3.1 to reflect the modified permitted flow capacity of the plant as well as discussion as to how this change in permitted flow may affect the analysis.

Comment 15: Section 3.1.1, Maximizing Capacity at the WWTP describes treatment processes and the associated capacities as follows:

“The treatment bottlenecks at the River Road WWTP are the capacities of the rotary screens, the secondary clarifiers and the chlorine contact chamber. In order to identify improvements at these points in the treatment train, available space was evaluated through the plant. The WWTP is also where the least disruptive construction would occur. For these reasons, maximizing capacity at the WWTP was the major focus of the Alternatives Analysis selection process...”

While the capacities of the Rotary Screens are 30 MGD and Trickling Filters are 20 MGD it is understood that these units present bottlenecks. However, the capacity of the Mechanical Bar Screens is 20 MGD which could also present a bottleneck in the system. Please address. In addition, to aid in ease of understanding of this critical component of the report, please provide a table showing current and proposed capacities for each system treatment unit.

Comment 16: Section 3.1.1.1, Increase Capacity of River Road WWTP to 35 MGD through Blending and High-Rate Treatment includes a construction schedule for plant upgrades and blending as included in Table ES-1, “Increase Capacity to 35 MGD Through Blending and Plant Upgrade.” However, plant upgrades and blending are combined in one task. Please expand on this discussion to separate out the steps for plant upgrades versus blending. In addition, please provide separate timelines for plant upgrades and blending which is also discussed in Section 7.3. Please justify why a date of 2025 was selected for commencement of the WWTP enhancements.

In addition, given the change in flows from the proposed WWTP upgrades from 10 MGD to 15 MGD as well as the potential change to 35 MGD through blending and the plant upgrade, please provide documentation within the report that the existing outfall structure can handle the additional flow as it is stated that “It is recommended to implement these changes after increasing capacity downstream at the WNY1 outfall.” If the outfall can not handle the additional flow, please detail how it will be modified to do so.

Comment 17: Section 3.1.1.1, Increase Capacity of River Road WWTP to 35 MGD through Blending and High-Rate Treatment also states the following:

“...The secondary clarifiers will be decommissioned and replaced with a new higher capacity treatment unit located in the existing footprint. During wet weather, the modified bypass would convey additional wet weather flows up to 15 MGD from the vortex grit chambers directly to the new higher capacity treatment unit located in the footprint of the decommissioned secondary clarifiers...”

Extensive analyses were provided in the June 25, 2019 DEAR for high rate treatment systems including ActiFLO, CoMag, Cloth Media Filtration and Compressible Media Filtration. Please provide additional detail as to why ActiFLO was selected as part of the LTCP as well as additional detail regarding any next steps for installation. In addition, for the purposes of any bypass approval as part of the LTCP, please generally address the criteria at 40 CFR Part 122.41(m)(3) in order for the Department to fully consider bypass as a final LTCP alternative.

Comment 18: Section 3.1.2, Construct 8-MG Storage Tank Near WNY1 Outfall, describes that an 8 MG storage tank will be constructed at a plot of land adjacent to the plant that is currently vacant and being acquired by the Authority. Given the reliance on this option as a key CSO control strategy, please provide an update on the land acquisition timeline and next steps to verify the viability of this selected alternative. It is unclear why such an extensive time span of 2021 for the acquisition of the land versus 2045 for the construction of the 8 MG Storage Tank is needed. Please clarify or add interim dates to break down the various steps.

Comment 19: Given that two of the selected alternatives include the increase of capacity at the River Road WWTP and the construction of an 8 MG storage tank, resiliency is a key factor regarding the design of these alternatives. The State of New Jersey and the Department are working to address and mitigate the impacts of climate change where additional information is available here: <https://www.nj.gov/dep/climatechange/>. Climate change can have an impact on the design for CSO control alternatives and resiliency requirements must be considered in the design of any infrastructure. Specifically, in accordance with the provisions of Executive Order 11988, the USEPA and the New Jersey Water Bank require that funded infrastructure be located outside of floodplains or elevated above the 500-year flood elevation. Where such avoidance is not possible, the following hierarchy of protective measures has been established:

1. Elevation of critical infrastructure above the 500-year floodplain;
2. Flood-proofing of structures and critical infrastructure;
3. Flood-proofing of system components.

Address how the selected CSO control alternatives address climate change and sea level rise for all three municipalities.

Comment 20: Section 3.1.3, is entitled Raise Regulator Weirs at UC1, UC2, and WNY2 but this title does not correspond to the selected alternative in Table ES-1 which says “Raise JOSO Weirs.” Please clarify

that these alternatives are one in the same. The June 25, 2019 DEAR included a second option of “Replace existing JOSO side flow weirs with bending weirs”; however, this alternative seems to have been eliminated from the LTCP. Please clarify the thought process from the DEAR to the LTCP for the selection of this alternative.

Also, regarding Section 3.1.3, the cost of \$2,000,000 varies from the cost provided in the DEAR which was \$120,000 as indicated in Table ES-1. Please clarify.

#### **4 Operational Plan**

Comment 21: Part IV.G.6 of the NJPDES CSO permit states the following regarding Operational Plan:

“a. Upon Departmental approval of the final LTCP and throughout implementation of the approved LTCP as appropriate, the permittee shall modify the O&M Program and Manual in accordance with D.3.a and G.10, to address the final LTCP CSO control facilities and operating strategies, including but not limited to, maintaining Green Infrastructure, staffing and budgeting, I/I, and emergency plans.”

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. While you have provided information regarding the O&M Program and Manual and updates that will be performed in the future for CSO controls, expand upon this section as to how the Operational Plan for the LTCP, including the Emergency Plan and Asset Management Plan, will address effective performance; adequate funding; effective management; adequate staffing and training; regularly scheduled inspections and maintenance; and adequate laboratory/process controls. In addition, acknowledge that an operations and maintenance plan will be prepared for the operation and maintenance of green infrastructure.

#### **5 Public Participation**

Comment 22: Section 5 includes an overview of public participation including public participation that has occurred since the submission of the June 2018 Public Participation Progress Report. Public participation elements as described in this section include a Community Advisory Board; public meetings; advertorials and newsletters; online presence; and public outreach activity where this description provides a robust summary of public participation activities and feedback to date.

Public participation will continue in the next NJPDES permit and could include three primary goals: inform, educate and engage. The Department is evaluating this issue and is in the process of preparing updated NJPDES permit language to advance this issue for the next permit renewal as part of a stakeholder process. Future permit language will likely include specific requirements for advance advertisement of public meetings. Provide any suggestions as to how to better inform the public of meetings. Another element for future public participation could include public input on the siting of green infrastructure projects. Provide input on the viability of public input on this topic.

Comment 23: Section 5.6, Public Input and Effect on Long Term Control Plan, it is stated:

“While compiling the LTCP, 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...For these reasons, 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. Alternatives such as storing or treating outside of the plant, while effective strategies, would cause more disruption to public activity.”

The Department acknowledges and appreciates that the public had input into the selection of CSO control alternatives. However, please clarify if the location of the tank, as described in Section 3.1.2 Construct 8-MG Storage Tank Near WNY1 Outfall was presented to the public.

## 6 Compliance Monitoring

Comment 24: Section 6.2, Combined Sewer Overflow Discharge and Frequency Monitoring states:

“The float sensors in the regulators diverting flow to the Authority’s permitted CSO outfalls during wet weather events will continue to operate and be maintained during and after LTCP implementation. The sensors are connected to the Authority’s supervisory control and data acquisition (SCADA) system logging the frequency and duration of CSO events. The logged data are also incorporated into the public notification system...”

The Department acknowledges and appreciates that there are sensors for the NHSA – River Road outfalls that provide real-time information on CSOs yet also serve to log the frequency and duration of CSO events. In addition to being a component of the public notification system at <http://www.nhudsonsa.com/thrive/waterbody.html>, this system is useful in tracking CSO trends as well as in completion of the existing permit requirement for “Duration of Discharge.” Please provide detail as to whether or not modifications can be performed to the current system to measure volume, in order to serve as an additional performance indicator as discussed in Comment 11.

Comment 25: Section 6.3, Combined Sewer Overflow Water Quality Monitoring states:

“Based on the implementation schedule, water quality monitoring will be conducted at the regulators of the affected outfalls 3 months after construction of a control has been completed to verify effectiveness of the controls. Table 6-1 shows locations where the monitoring will be conducted:

Table 6-1. Water Quality Sampling Locations

Basin ID	Location
WNY1	JF Kennedy Blvd. at Anthony Del Fino Way

Please clarify the intended purpose for this water quality data. Note that the Department approved the Compliance Monitoring Program as submitted by the NJ CSO Group and is in receipt of the “Calibration and Validation of the Pathogen Water Quality Model,” September 2020 as submitted by the NJ CSO Group which is pending review. It is the Department’s understanding that the Compliance Monitoring Program will be supplemented with additional data as time progresses and that modeled results will be used for an assessment of compliance.

If this water quality sampling is intended to supplant the Compliance Monitoring Program, know that evaluating raw data from a monitoring program may not be adequate to address some of the stated objectives above, and hence, a receiving water quality model was recommended due in part to the complexity of the pathogen sources impacting the receiving waters where NJ CSO discharges occur. The advantage of developing a landside model coupled with a receiving water model is their ability to quantify

each source and then establish a linkage between those pathogen source loadings and water column pathogen concentrations. Secondly, the advantage of developing such model was to fill in the gaps so that we don't have to monitor 300+ locations but instead sample at 60+ sites and let the model provide results at locations where sampling sites are lacking.

If NHSA chooses to proceed with Combined Sewer Overflow Water Quality monitoring, NHSA would have to submit a formal work plan with a revised monitoring locations and sampling frequency for approval. Please address.

Comment 26: Section 6.4, Future Flow Metering in the System states the following:

“Flow metering during and after the LTCP is not an express requirement under the permit, however, future monitoring within the CSS system will be conducted when necessary to collect data before, during, or after implementation of LTCP alternatives in order to eliminate data gaps necessary for design or construction. The Authority will submit a flow metering plan, if necessary, to the NJDEP for approval. The locations and numbers of meters will vary based on the LTCP alternative project needs.

The goal of periodic flow metering is to continually update the hydraulic model in order to provide the Authority with a tool for evaluating both the success of an LTCP CSO control and the potential impacts as various LTCP CSO controls are implemented. Flow monitoring will be conducted in any given location for at least 1 year until enough rain events are recorded over the monitoring period...”

The Department supports future flow metering and concurs that a rerun of the model would be appropriate particularly after significant construction projects are completed. This will allow verification of the percent capture calculations as part of Adaptive Management to provide an assessment of compliance against 85% wet weather capture. However, note that any effort to recalibrate the H&H model should be performed after consultation with the Department. Clarify accordingly.

## **7 Implementation Schedule**

Comment 27: Section 7.1, Current Assets and Mission provides the following statement:

“The Authority owns all of the combined sewer infrastructure within both the Adams Street WWTP Service area and River Road WWTP service area...”

Similarly, Section 7.2, Financial Capability Assessment, includes the following information:

“The Authority's focus on both environmental stewardship and fiscal management has resulted in significant infrastructure investments over the years, substantial improvements in wastewater discharges and a significant debt burden. As noted previously in this report, the combined sewage capture rate in the River Road service area is 60% on a volumetric basis; this result reflects investments already made. The financing plan presented herein can focus further attention on the LTCP because of the state-of-good-repair improvements that have been previously been made to existing infrastructure. Recognizing its substantial historical capital improvements, the NHSA must be prudent in the timing of its future investments so as to maintain: 1) a sustainable amount of total debt, 2) a strong credit rating that enables it to efficiently borrow money, and 3) reasonable rates and charges for its customer base. The financing plan is intended to achieve this balance...”

It is unclear why this information is condensed for the entire North Hudson Sewerage Authority area as opposed to being broken down by specific municipality as served by the NHSA River Road STP namely West New York and parts of Weehawken, and Union City. To supplement this section the Department

requests to see in table format in an Excel spreadsheet showing calculations, a year-by-year listing of (1) existing O&M costs and debt service; (2) CSO control program additional O&M costs, capital outlay and loan amounts, additional debt service and other additional costs; (3) current and projected wastewater treatment and CSO costs including residential share, number of households, cost per household; and (4) median household income and resulting residential indicator. A review of the financial capability analysis can not be conducted until this information has been provided.

Comment 28: In Section 7.2, Financial Capability Assessment, it is stated as follows:

“While this report addresses the technical requirements for the Adams Street CSO drainage area, the financial data contained herein reflects the entire Authority service area, including the Adams Street drainage area.”

It appears that the reference to Adams Street is incorrect where River Road was intended. Please clarify.

Comment 29: Regarding Table 7-7, Long Term Control Plan Implementation Schedule, River Road Wastewater Treatment Plant, please provide a more detailed list of projects and steps for incorporation into the permit. For example, the steps included on page 3-3 regarding the construction sequence for the upgrades to the secondary clarification system, should be incorporated into an implementation schedule. Steps should be most detailed for the period of the next five-year NJPDES permit renewal cycle. Provide projected end dates for the specific projects and a Gantt chart specific to River Road WTP to indicate any overlap(s).

Comment 30: Table 7-7 includes the following projects as well as the projected start date:

Land Purchase for WNY1 Storage Tank (2021);  
Increase Capacity at River Road WWTP to 35 MGD (2025);  
Raise JOSO Weirs (2029); and  
Construct 8-MG Storage Tank (2045)

Justify why a schedule of 24 years has been proposed. Describe any laws or legislation that constrains NHTA’s expenditures.

## **8 Summary**

Comment 31: Section 8, Summary, includes the following:

“...The proposed program listed in this report apply under the specific conditions stated here and any deviations to the assumptions listed may result in a change in the overall result of implementation, cost, and scheduling.”

The Department acknowledges that changing conditions could support an Adaptive Management approach that could serve as a compliance “check in” as the projects proceed and an Adaptive Management requirement could be a component of a future NJPDES permit action. Adaptive Management could also allow flexibility from the perspective of treatment technology advancements and compliance provided the resultant percent capture requirement is attained. However, while flexibility can be a component of each five year permit cycle, the permittee is obligated to set forth a path for compliance with the Federal CSO Control Policy through measures set forth in the LTCP. Note that any changes to projects set forth in the NJPDES permit as part of the LTCP will require a NJPDES permit modification or renewal. While this comment does not necessitate a response at this time, the Department hereby notes this information for the Administrative Record.

Please incorporate these changes to the report and submit a revised version to the Department no later than 60 days from the date of this letter. Thank you for your continued cooperation.

Sincerely,

A handwritten signature in black ink on a light blue rectangular background. The signature appears to read "Joseph Mannick".

Joseph Mannick  
CSO Team Leader  
Bureau of Surface Water & Pretreatment Permitting

- C: Marzooq Alebus, Bureau of Surface Water & Pretreatment Permitting  
Dwayne Kobesky, Bureau of Surface Water & Pretreatment Permitting  
Johnathan Lakhicharran, Bureau of Surface Water & Pretreatment Permitting  
Susan Rosenwinkel, Bureau of Surface Water & Pretreatment Permitting  
Adam Sarafan, Bureau of Surface Water & Pretreatment Permitting  
Stephen Seeberger, Bureau of Surface Water & Pretreatment Permitting